UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2020

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 001-38841

Precision BioSciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-4206017**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
302 East Pettigrew St., Suite A-100 Durham, North Carolina	**27701**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (919) 314-5512

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.000005 per share	DTIL	The Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). YES ☒ NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. YES ☐ NO ☒

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on The Nasdaq Global Select Market on June 30, 2020, was $382.8 million.

The number of shares of Registrant's common stock outstanding as of March 2, 2021 was 56,986,188.

DOCUMENTS INCORPORATED BY REFERENCE

None.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of present and historical facts contained in this Annual Report on Form 10-K, including without limitation, statements regarding our future results of operations and financial position, business strategy and approach, including related results, prospective products, planned preclinical or greenhouse studies and clinical or field trials, the status and results of our preclinical and clinical studies, expected release of interim data, expectations regarding our allogeneic chimeric antigen receptor T cell immunotherapy product candidates, expectations regarding the use and effects of ARCUS, including in connection with *in vivo* genome editing, potential new partnerships or alternative opportunities for our product candidates, capabilities of our manufacturing facility, regulatory approvals, research and development costs, timing, expected results and likelihood of success, plans and objectives of management for future operations, as well as the impact of the COVID-19 pandemic may be forward-looking statements. Without limiting the foregoing, in some cases, you can identify forward-looking statements by terms such as "aim," "may," "will," "should," "expect," "exploring," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential," "seeks," or "continue" or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words. No forward-looking statement is a guarantee of future results, performance, or achievements, and one should avoid placing undue reliance on such statements.

Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to us. Such beliefs and assumptions may or may not prove to be correct. Additionally, such forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various factors, including, but not limited to, those identified in Part I. Item 1A. "Risk Factors" and Part II. Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations." These risks and uncertainties include, but are not limited to:

- our ability to become profitable;
- our ability to procure sufficient funding and requirements under our current debt instruments and effects of restrictions thereunder;
- risks associated with raising additional capital;
- our operating expenses and our ability to predict what those expenses will be;
- our limited operating history;
- the success of our programs and product candidates in which we expend our resources;
- our dependence on our ARCUS technology;
- the risk that other genome-editing technologies may provide significant advantages over our ARCUS technology;
- the initiation, cost, timing, progress, achievement of milestones and results of research and development activities, preclinical or greenhouse studies and clinical or field trials;
- public perception about genome editing technology and its applications;
- competition in the genome editing, biopharmaceutical, biotechnology and agricultural biotechnology fields;
- our or our collaborators' ability to identify, develop and commercialize product candidates;
- pending and potential liability lawsuits and penalties against us or our collaborators related to our technology and our product candidates;
- the U.S. and foreign regulatory landscape applicable to our and our collaborators' development of product candidates;
- our or our collaborators' ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations and/or warnings in the label of an approved product candidate;
- our or our collaborators' ability to advance product candidates into, and successfully design, implement and complete, clinical or field trials;
- potential manufacturing problems associated with the development or commercialization of any of our product candidates;
- our ability to obtain an adequate supply of T cells from qualified donors;

- our ability to achieve our anticipated operating efficiencies at our manufacturing facility;
- delays or difficulties in our and our collaborators' ability to enroll patients;
- changes in interim "top-line" data that we announce or publish;
- if our product candidates do not work as intended or cause undesirable side effects;
- risks associated with applicable healthcare, data privacy and security regulations and our compliance therewith;
- the rate and degree of market acceptance of any of our product candidates;
- the success of our existing collaboration agreements, and our ability to enter into new collaboration arrangements;
- our current and future relationships with third parties including suppliers and manufacturers;
- our ability to obtain and maintain intellectual property protection for our technology and any of our product candidates;
- potential litigation relating to infringement or misappropriation of intellectual property rights;
- our ability to effectively manage the growth of our operations;
- our ability to attract, retain, and motivate key scientific and management personnel;
- market and economic conditions;
- effects of system failures and security breaches;
- effects of natural and manmade disasters, public health emergencies and other natural catastrophic events;
- effects of COVID-19, or any pandemic, epidemic, or outbreak of an infectious disease;
- insurance expenses and exposure to uninsured liabilities;
- effects of tax rules; and
- risks related to ownership of our common stock, including fluctuations in our stock price.

Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties.

You should read this Annual Report on Form 10-K and the documents that we reference herein completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements. All forward-looking statements contained herein speak only as of the date of this Annual Report on Form 10-K. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

As used in this Annual Report on Form 10-K, unless otherwise stated or the context requires otherwise, references to "Precision," the "Company," "we," "us," and "our," refer to Precision BioSciences, Inc. and its subsidiaries on a consolidated basis.

RISK FACTOR SUMMARY

Our business is subject to numerous risks and uncertainties, including those described in Part I. Item 1A. "Risk Factors" in this Annual Report on Form 10-K. You should carefully consider these risks and uncertainties when investing in our common stock. Some of the principal risks and uncertainties include the following.

- *We have incurred significant operating losses since our inception and expect to continue to incur losses for the foreseeable future. We have never been profitable, and may never achieve or maintain profitability.*
- *We will need substantial additional funding, and if we are unable to raise a sufficient amount of capital when needed on acceptable terms, or at all, we may be forced to delay, reduce or eliminate some or all of our research programs, product development activities and commercialization efforts.*
- *We have a limited operating history, which makes it difficult to evaluate our current business and future prospects and may increase the risk of your investment.*
- *ARCUS is a novel technology, making it difficult to predict the time, cost and potential success of product candidate development. We have not yet been able to assess the safety and efficacy of most of our product candidates in humans, and have only limited safety and efficacy information in humans to date regarding one of our product candidates.*
- *We are heavily dependent on the successful development and translation of ARCUS, and due to the early stages of our product development operations, we cannot give any assurance that any product candidates will be successfully developed and commercialized.*
- *Adverse public perception of genome editing may negatively impact the developmental progress or commercial success of products that we develop alone or with collaborators.*
- *We face significant competition in industries experiencing rapid technological change, and there is a possibility that our competitors may achieve regulatory approval before us or develop product candidates or treatments that are safer or more effective than ours, which may harm our financial condition and our ability to successfully market or commercialize any of our product candidates.*
- *Our future profitability, if any, depends in part on our and our collaborators' ability to penetrate global markets, where we would be subject to additional regulatory burdens and other risks and uncertainties associated with international operations that could materially adversely affect our business.*
- *Product liability lawsuits against us could cause us to incur substantial liabilities and could limit commercialization of any products that we develop alone or with collaborators.*
- *The regulatory landscape that will apply to development of therapeutic product candidates by us or our collaborators is rigorous, complex, uncertain and subject to change, which could result in delays or termination of development of such product candidates or unexpected costs in obtaining regulatory approvals.*
- *Clinical trials are difficult to design and implement, expensive, time-consuming and involve an uncertain outcome, and the inability to successfully and timely conduct clinical trials and obtain regulatory approval for our product candidates would substantially harm our business.*
- *Even if we obtain regulatory approval for any products that we develop alone or with collaborators, such products will remain subject to ongoing regulatory requirements, which may result in significant additional expense.*
- *Even if any product we develop alone or with collaborators receives marketing approval, such product may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors and others in the medical community necessary for commercial success.*
- *The ongoing novel coronavirus disease, COVID-19 has impacted our business and any other pandemic, epidemic or outbreak of an infectious disease may materially and adversely impact our business, including our preclinical studies and clinical trials.*

PART I

Item 1. Business.

We are a life sciences company dedicated to improving life through the application of our pioneering, proprietary ARCUS genome editing platform. We leverage ARCUS in the development of our product candidates, which are designed to treat human diseases and create healthy and sustainable food and agricultural solutions. We are actively developing product candidates in three innovative areas: allogeneic CAR T cell immunotherapy, *in vivo* gene correction, and food. We are currently conducting a Phase 1/2a clinical trial of PBCAR0191 in adult patients with relapsed or refractory, or R/R, non-Hodgkin lymphoma, or NHL, or R/R B-cell precursor acute lymphoblastic leukemia, or B-ALL. PBCAR0191 is our first gene-edited allogeneic chimeric antigen receptor, or CAR, T cell therapy candidate targeting CD19 and is being developed in collaboration with Les Laboratoires Servier, or Servier, pursuant to a development and commercial license agreement, as amended (the "Servier Agreement"). We have received orphan drug designation, for PBCAR0191 from the U.S. Food and Drug Administration ("FDA"), for the treatment of acute lymphoblastic leukemia, or ALL. In August 2020, the FDA granted Fast Track Designation for PBCAR0191 for the treatment of B-ALL. The NHL cohort will include patients with mantle cell lymphoma ("MCL"), an aggressive subtype of NHL, for which we have received orphan drug designation from the FDA. Made from donor-derived T cells modified using our ARCUS genome editing technology, PBCAR0191 recognizes the well characterized tumor cell surface protein CD19, an important and validated target in several B-cell cancers, and is designed to avoid graft-versus-host disease, or GvHD, a significant complication associated with donor-derived, cell-based therapies. We believe that this trial, which is designed to assess the safety and tolerability of PBCAR0191 at increasing dose levels, as well as to evaluate anti-tumor activity, is the first U.S.-based clinical trial to evaluate an allogeneic CAR T therapy for R/R NHL. Furthermore, we believe that our proprietary, one-step engineering process for producing allogeneic CAR T cells with a potentially optimized cell phenotype, at large scale in a cost-effective manner, will enable us to overcome the fundamental clinical and manufacturing challenges that have limited the CAR T field to date. We expect to report updated interim data for the PBCAR0191 study in mid-year 2021.

In April 2020, we commenced patient dosing in a Phase 1/2a clinical trial with our second allogeneic CAR T cell therapy product candidate, PBCAR20A. PBCAR20A is wholly owned by us and targets the validated tumor cell surface target CD20. It is being investigated in R/R NHL, including those with R/R chronic lymphocytic leukemia, CLL, or R/R small lymphocytic lymphoma, or SLL. A subset of the NHL patients will have the diagnosis of MCL and we have received orphan drug designation for PBCAR20A from the FDA for the treatment of this disease. Based on the safety profile observed to date with PBCAR0191, the FDA allowed us to commence dosing with PBCAR20A directly at 1 x 10^6 cells/kg. The study has continued to escalate through dose level two (3 x 10^6 cells/kg), and, in February 2021, we commenced patient dosing at dose level 3 (480 x 10^6 cell fixed dose) with a max dose of 6 x 10^6 cells/kg. We expect to report interim data for the PBCAR20A study in 2021.

In June 2020, we commenced patient dosing in a Phase 1/2a clinical trial with our third allogenic CAR T cell therapy product candidate, PBCAR269A. The starting dose of PBCAR269A is 6 x 10^5 cells/kg. PBCAR269A is wholly owned by us and is designed to target the validated tumor cell surface target BCMA. It is being investigated in subjects with R/R multiple myeloma and we have received orphan drug designation and Fast Track Designation from the FDA for this indication. In September 2020, we announced that we entered into a clinical trial collaboration with SpringWorks Therapeutics, Inc. ("SpringWorks"), a clinical-stage biopharmaceutical company focused on developing medicines for patients with severe rare diseases and cancer. Pursuant to the collaboration, PBCAR269A will be evaluated in combination with nirogacestat, SpringWorks' investigational gamma secretase inhibitor ("GSI"), in patients with R/R multiple myeloma, which is expected to commence in the first half of 2021. In February 2021, we commenced patient dosing at the highest dose cohort, dose level 3 of 6 x 10^6 cells/kg and we expect to report interim data on the PBCAR269A trial in 2021.

Additionally, in June 2020, Elo Life Systems ("Elo"), our wholly-owned subsidiary, established a strategic partnership with the Dole Food Company ("Dole") and entered into a Research, Development, and Commercialization Agreement with Dole, with the aim to co-develop banana varieties resistant to Fusarium oxysporum f. sp cubense Tropical race 4 ("Foc TR4"), utilizing proprietary computational biology workflows and the ARCUS genome editing platform. The disease caused by Foc TR4, commonly known as Fusarium wilt, threatens the continued cultivation of the world's most popular variety of banana called Cavendish, which is of considerable economic significance as this variety is used to produce export bananas for key markets around the globe and Dole is one of the largest producers in the industry. Fungicides, or other traditional means of disease control have failed as the pandemic continues to spread across vital banana growing economies.

In September 2020, we regained full clinical development and commercialization rights, and all data we generated for the *in vivo* chronic hepatitis B virus ("HBV") program developed under our 2018 collaboration agreement with Gilead Sciences. We are exploring partnership or alternative opportunities to enable the continued development of ARCUS-based HBV therapies.

In October 2020, we announced the U.S. Patent and Trademark Office's Patent Trial and Appeal Board ("PTAB") issued judgements in our favor in two patent interference proceedings that challenged nine U.S. patents we owned. The patents, which issued in 2018, relate to allogeneic CAR T cells produced by inserting a gene encoding a CAR into the T cell receptor ("TCR") alpha chain ("TRAC")

locus, as well as methods of using those cells for cancer immunotherapy. In the interference proceedings, a third party argued that it had invented the technology in 2012. The PTAB, however, found that the third-party patent application did not satisfy the written description requirement and rejected these claims while maintaining the claims in all nine of our patents.

In November 2020, we announced a research collaboration and exclusive license agreement with Eli Lilly and Company ("Lilly") to utilize ARCUS for the research and development of potential *in vivo* therapies for genetic disorders, with an initial focus on Duchenne muscular dystrophy ("DMD") and two other undisclosed gene targets. Under the agreement, Lilly has the right to nominate up to three additional gene targets for genetic disorders over the first four years of the Development and License Agreement, which may be extended to six years upon Lilly's election and payment of an extension fee.

In December 2020, we announced interim clinical results from our Phase 1/2a study of PBCAR0191 as a treatment of R/R NHL and R/R B-ALL. As of the November 16, 2020 cutoff, 27 patients including 16 patients with aggressive NHL and 11 patients with aggressive B-ALL were enrolled and evaluated. In this dose escalation and dose expansion study, PBCAR0191 had an acceptable safety profile with no cases of graft versus host disease, no cases of Grade ≥ 3 cytokine release syndrome, and no cases of Grade ≥ 3 neurotoxicity. PBCAR0191 demonstrated longest durability of response to 11 months in B-ALL. PBCAR0191 with enhanced lymphodepletion ("eLD") resulted in objective response rate of 83% (5/6) in NHL and B-ALL as compared to 33% (3/9) in NHL with standard lymphodepletion ("sLD").

Additionally, in December 2020, researchers at Elo in collaboration with Alan Chambers, Ph.D., and the Tropical Research and Education Center at the University of Florida published a paper in *Nature Food*, reporting a chromosome-scale, phased *Vanilla planifolia* genome, which revealed sequence variants for genes that may impact the vanillin pathway, and therefore influence bean quality, including its productivity, flower anatomy, and disease resistance.

In January 2021, we announced that the FDA has accepted our Initial New Drug ("IND") application for PBCAR19B, our next-generation, stealth cell, CD19 allogenic CAR T candidate for Non-Hodgkin Lymphoma, and we expect to begin the Phase 1 study by mid-2021. Additionally, in January 2021, we announced that we received a Notice of Allowance from the U.S. Patent and Trademark Office for a patent application covering PBCAR19B. The allowed composition claims of this patent application encompass genetically-modified human T cells comprising the PBCAR19B construct, which is inserted within the T cell receptor alpha constant locus. Once issued, patents arising from this patent family will have standard expiration dates in April 2040. In preclinical studies, PBCAR19B has shown to delay both T cell and natural killer cell mediated allogeneic rejection in vitro and may improve the persistence of allogeneic CAR T cells.

We expect to advance a program targeting the rare genetic disease primary hyperoxaluria type 1 ("PH1") as our lead wholly owned *in vivo* gene correction program. PH1 affects approximately 1-3 people per million in the United States and is caused by loss of function mutations in the AGXT gene, leading to the accumulation of calcium oxalate crystals in the kidneys. Patients suffer from painful kidney stones which may ultimately lead to renal failure. Using ARCUS, we are developing a potential therapeutic approach to PH1 that involves knocking out a gene called HAO1 which acts upstream of AGXT. Suppressing HAO1 has been shown in preclinical models by us to prevent the formation of calcium oxalate. We therefore believe that a one-time administration of an ARCUS nuclease targeting HAO1 may be a viable strategy for a durable treatment of PH1 patients. Pre-clinical research has continued to progress, and we expect to provide an update on this program in the first half of 2021.

In January 2021, we disclosed our intention to spinout our wholly owned subsidiary, Elo. We are continuing to explore our strategic options, and the timing of any such sale, spinout or other treatment of Elo remains uncertain.

Our Pipeline

Allogeneic CAR T Immunotherapy

We believe that we have developed a transformative allogeneic CAR T immunotherapy platform with the potential to overcome certain limitations of autologous CAR T cell therapies and significantly increase patient access to these cutting-edge treatments. Cancer immunotherapy is a type of cancer treatment that uses the body's immune system to fight the disease. CAR T is a form of immunotherapy in which a specific type of immune cell, called a "T cell", is genetically engineered to recognize and kill cancer cells. Current commercially available CAR T therapies are autologous, meaning the T cells used as the starting material for this engineering process are derived directly from the patient. As a consequence, the therapy is highly personalized, difficult to scale, and expensive. Our allogeneic approach uses donor-derived T cells that are gene edited using ARCUS and are designed for safe delivery to an unrelated patient. We believe that this donor-derived approach will allow us to consistently produce a potent product by selecting donors with high quality T cells and will lessen the product-to-product variability seen in autologous therapies. We are able to produce allogeneic CAR T cells at a large scale in a cost-effective manner and have the potential to overcome the "one patient: one product" burden of autologous CAR T cell therapies.

Leveraging the unique gene editing capabilities of ARCUS, we have developed a one-step cell engineering process for allogeneic CAR T cells that is designed to maintain naïve and central memory T cell phenotypes throughout the CAR T manufacturing process, which we believe to be important for an optimized CAR T therapy. Due to our one-step editing method and the decision early in the development of our allogeneic CAR T immunotherapy platform to invest in process development, we have scaled our manufacturing process and are currently producing allogeneic CAR T cells at large scale in accordance with current good manufacturing practice, or cGMP.

In February 2016, we entered into the Servier Agreement. Pursuant to this agreement we have agreed to perform early-stage research and development on individual T cell modifications for five unique antigen targets. Servier selected one target at the Servier Agreement's inception and, during 2020, selected two additional hematological cancer targets beyond CD19 and two new solid tumor targets. With the addition of these new targets, we received development milestone payments in 2020 and may be eligible to receive additional development milestone payments in 2021. Upon selection of an antigen target, we have agreed to develop the resulting therapeutic product candidates through Phase 1 clinical trials and prepare the clinical supply of such product candidates for use in Phase 2 clinical trials. We have the ability to opt-in to a 50/50 co-development and co-promotion agreement in the United States on all licensed products under the Servier Agreement.

Our most advanced program, PBCAR0191, is an allogeneic CAR T cell therapy candidate targeting the well-validated tumor target CD19 and is being developed for the treatment of adult patients with NHL and B-ALL. CD19 is a protein that is expressed on the surface of B cells. The FDA has granted PBCAR0191 orphan drug designation for the treatment of ALL and, in August 2020 granted PBCAR0191 Fast Track Designation for treatment of B-ALL.

We reported updated interim data from our ongoing Phase 1/2a clinical trial of PBCAR0191 including response rates across R/R NHL and R/R B-ALL patient cohorts as further described in "Our Allogeneic CAR T Immunotherapy Pipeline."

PBCAR0191, which incorporates our patented N6 co-stimulatory domain, demonstrated a clear dose dependent increase in peak cell expansion. Compared to sLD, eLD with PBCAR0191 at DL3 resulted in approximately 95-fold increase in peak cell expansion, and approximately 45-fold increase in area under the curve. This was associated with a higher CR rate in NHL (75%).

In this dose escalation and dose expansion study, PBCAR0191 had an acceptable safety profile with no cases of graft versus host disease, no cases of Grade ≥ 3 cytokine release syndrome, and no cases of Grade ≥ 3 immune effector cell neurotoxicity.

One NHL patient who was treated with PBCAR0191 and eLD had previously received nine prior lines of therapy before entering the trial. The patient presented with persistent cytopenias at baseline and a history of infections, including bacterial sepsis. The patient had an episode of sepsis at day 27 which appeared to have resolved at day 33, following which a partial response was achieved at day 34. Unfortunately, the patient died at day 42 with grade 5 sepsis. We reported the serious adverse event to the FDA and reported the patient death.

We are enrolling additional patients with eLD and plan to present updated interim data on this study by mid-2021.

***In vivo* Gene Correction.** Our goal is to cure genetic diseases by correcting the DNA errors responsible for causing them. *In vivo* gene corrections are gene corrections that take place in a living organism. We have advanced a deep portfolio of diverse programs toward preclinical efficacy and toxicity studies. We have generated a significant large animal dataset that we believe to be the most comprehensive of any in the field and have observed high-efficiency *in vivo* genome editing in non-human primates ("NHPs") in our preclinical studies, as highlighted in our July 2018 publication in *Nature Biotechnology*. We believe this is the first peer-reviewed publication of *in vivo* genome editing data in NHPs. In our preclinical studies, we observed the high-efficiency editing of the PCSK9 gene in NHPs using ARCUS and, even at the highest dose, the treatment was observed to be well-tolerated. As published in *Molecular Therapy* in February 2021, the NHPs have been monitored for more than three years and have continued to show a sustained reduction in low density lipoprotein cholesterol levels while maintaining stable gene editing without any obvious adverse effects. After the one-time vector administration more than three years ago, NHPs treated with ARCUS have experienced stable reductions of up to 85% in PCSK9 protein levels and a 56% reduction of low-density lipoprotein ("LDL") cholesterol levels.

We expect to advance a program for the treatment of the rare genetic disease PH1 as our lead wholly owned gene correction program, based on preclinical data we have generated high efficiency knock out of the HAO1 target gene in NHPs using ARCUS, and evidence from a mouse model of clinically meaningful biomarker changes using our approach. We expect to provide an update on this program during the first half of 2021.

As discussed above, in November 2020, we announced a research collaboration and exclusive license agreement with Lilly, pursuant to which we will be responsible for conducting certain pre-clinical research and IND-enabling activities with respect to the gene targets nominated by Lilly. Lilly will be responsible for conducting clinical development and commercialization activities for licensed products resulting from the collaboration and may engage with us for additional clinical and/or initial commercial manufacture of licensed products.

We expect to advance a program for the treatment of the rare genetic disease PH1 as our lead wholly owned gene correction program, based on preclinical data we have generated high efficiency knock out of the HAO1 target gene in NHPs using ARCUS, and evidence from a mouse model of clinically meaningful biomarker changes using our approach. We expect to provide an update on this program during the first half of 2021.

We are also in the discovery stage for other *in vivo* indications: lipoprotein lipase deficiency, familial amyloid polyneuropathy, familial hypercholesterolemia, and autosomal dominant retinitis pigmentosa.

Food. Our food platform, which we operate through our wholly owned subsidiary, Elo, is an integrated suite of gene discovery and crop engineering technologies that is designed to generate products in collaboration with leading food producers. Elo has a team with in-depth experience in crop genome editing. Over the last decade, Elo has worked with some of the largest plant biotechnology companies to edit gene targets and develop potential product candidates in a variety of crop plants. By combining the power of the ARCUS technology platform with target discovery, transformation and high throughput trait evaluation, Elo has enabling our partners to potentially address critical issues in food and agriculture created by climate change and dramatic shifts in consumer preference toward healthier eating. Elo's collaboration-driven business model enables Elo to remain capital efficient throughout the product development cycle while generating revenue through various revenue-sharing models. Elo achieved proof of concept with its ZeroMelon™ watermelon-based sweetener program and advanced the program to greenhouse trials. This program is intended to leverage ARCUS to develop a scalable low-calorie sweetener. As discussed above, Elo also entered into a Research, Development, and Commercialization Agreement with Dole. with the aim to co-develop banana varieties resistant to FOC TR4, utilizing proprietary computational biology workflows and the ARCUS genome editing platform. Elo's ClimateSmart Chickpea program addresses the effect of climate change as a foundational trait for the plant-based protein industry. Edited chickpea plants were successfully created at a subsidiary of Elo in Australia in collaboration with the Queensland University of Technology. Genotypic and phenotypic screens are in progress.

Our Team

We believe that our team, whom we call Precisioneers, has among the deepest scientific experience and capabilities of all genome editing companies. Derek Jantz, Ph.D., our Chief Scientific Officer and a co-founder of Precision, and Jeff Smith, Ph.D., our Chief Technology Officer and also a co-founder of Precision, have been working with genome editing technology for more than 15 years. They are pioneers in the genome editing field and developed the ARCUS genome editing platform to address what they perceived as limitations in the existing genome editing technologies. Our Chief Executive Officer, Matthew Kane, also a co-founder of Precision, has almost 20 years' experience in life sciences, most of which has been working in genome editing.

We have selectively expanded our team of Precisioneers to include individuals with extensive industry experience and expertise in the discovery, development and manufacture of cell and gene therapies and the creation of innovative solutions to myriad problems affecting food systems. As of December 31, 2020, our team of Precisioneers included more than 57 scientists with Ph.D. degrees.

We are a purpose-driven organization, and we have carefully promoted a culture that values innovation, accountability, respect, adaptability and perseverance. We strive to ensure that our open, collaborative culture empowers Precisioneers to be their best selves and do their best work. We strongly believe that our shared values will help our team navigate and overcome challenges we may experience as we pursue our mission of improving life through genome editing. Our culture has helped build a world-class team with industry-leading experience in genome editing and continually attracts new talent to further build our capabilities. Our team is a group of motivated individuals that value the opportunity to contribute their time and talents toward the pursuit of improving life. Precisioneers appreciate high-quality research and are moved by the opportunity to translate their work into treatments and solutions that will impact human health.

Our Strategy

We are dedicated to improving life. Our goal is to broadly translate the potential of genome editing into permanent genetic solutions for significant unmet needs. Our strategy to achieve this goal includes the following key elements:

- **Create a fully integrated genome editing company capable of delivering solutions that address unmet needs impacting human health.** We believe that to be a leader in the field of genome editing and maximize the impact of our ARCUS genome editing platform, we must be able to control those elements of our business that may provide us with certain strategic advantages or operational efficiencies. We intend to continue to invest in comprehensive research, development, manufacturing and commercial capabilities that provide control and oversight of our product candidates from discovery through commercialization.

- **Capitalize on our emerging leadership position in allogeneic CAR T immunotherapies.** We believe that we have developed the first allogeneic CAR T cell platform capable of producing drug product at scale, with a potentially optimal cell profile for therapeutic efficacy and true off-the-shelf delivery without the need for harsh and potentially toxic lymphodepletion. We have selected three validated CAR T cell targets that we believe offer the greatest chance of clinical success for our initial product candidates. Our CAR T platform is modular, which we believe will allow us to leverage proof-of-concept from our ongoing and planned initial human trials for multiple other CAR T programs. We believe the combination of these factors, along with our unique ARCUS technology, puts us in a differentiated position to be the leader in the development of allogeneic CAR T therapies.

- **Advance ARCUS-based *in vivo* gene correction programs into human clinical trials.** In our preclinical studies, we observed the high-efficiency and tolerability of *in vivo* genome editing using ARCUS in a non-human primate model, as published in *Nature Biotechnology* in July 2018 and *Molecular Therapy* in February 2021. To our knowledge, we are the first company to complete this milestone, which we believe to be critical to successful *in vivo* genome editing therapeutic development. We have built on this early success by diligently advancing a diverse portfolio of preclinical *in vivo* gene correction programs through additional large animal studies, focusing initially on gene targets occurring in the liver and eye. As discussed above, in November 2020, we also announced a research collaboration and exclusive license agreement with Lilly to utilize ARCUS for the research and development of potential in vivo therapies for genetic disorders, with an initial focus on DMD and two other undisclosed gene targets.

- **Continue investing in the optimization of ARCUS and enabling technologies.** We believe that a key to our future success is the quality of the genome editing tools that we produce. Since our founding, we have devoted ourselves to continuously refining the precision and efficiency of our core genome editing platform. We intend to continue this investment in ARCUS while surrounding it with enabling technologies and expertise to retain what we believe is a leadership position in the field.

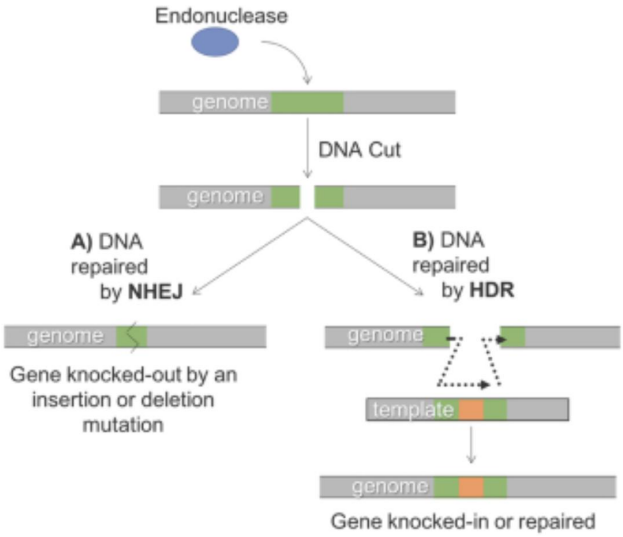
- **Create an environment that is a destination of choice for premier talent within the life sciences industry.** We believe that we currently have among the deepest and strongest skill set within the genome editing industry and credit much of our past success to our commitment to our team and culture. Our future success will depend on our ability to continue to attract and retain world-class talent within our markets of interest. We intend to consciously invest in fostering an environment within our company that is both challenging and supportive and inspires our team to broadly translate genome editing into permanent genetic solutions.

- **Expand the breadth of our operations through additional product platforms and strategic relationships.** We believe that the ARCUS genome editing platform has broad utility beyond our current areas of focus. We intend to invest in the development of additional product platforms and seek collaborations with companies with additive expertise in areas outside of our current target markets to maximize the value of our company.

Overview of Genome Editing

Deoxyribonucleic acid, or DNA, carries the genetic instructions for all basic functions of a living cell. These instructions are encoded in four different molecules, called bases, which are strung together in specific sequences to form genes. Each gene is responsible for a specific function in a cell, and the complete set of genes in a cell, which can consist of tens of thousands of genes and billions of individual bases, is known as a genome. The complete genome sequence has been determined for many organisms, including humans. This allows scientists to identify specific genes and determine how their unique sequences contribute to a particular cellular function. Studying variations in gene sequences further informs an understanding of why a cell behaves a certain way, which can greatly enhance understanding of what causes and how to treat aberrant behavior that leads to disease.

Genome editing is a biotechnology process that removes, inserts or repairs a portion of DNA at a specific location in a cell's genome. Early applications of genome editing focused on advancing genetic research. As genome editing technologies have advanced, their application is moving beyond understanding disease to treating or preventing disease by editing DNA. Genome editing is accomplished by delivering a DNA cutting enzyme, called an endonuclease, to a targeted segment of genetic code. Once the endonuclease cuts the DNA, the cell has to repair the break to survive and will generally do so in one of two ways, as shown below.



There are two primary mechanisms of DNA repair, non-homologous end joining, or NHEJ, and homology directed repair, or HDR. As shown in A) above, NHEJ is a pathway that repairs breaks in DNA without a template. NHEJ is the less precise method of repair that prioritizes speed over accuracy, making it prone to leaving insertions and/or deletions of DNA bases at the cut site. These insertions or deletions can disrupt the gene sequence and can be used to inactivate or "knock out" the function of the gene. Accordingly, genome editing technologies can be used to permanently knock out a gene in a cell or organism by creating a break in the DNA sequence of that gene.

As shown in B) above, HDR is a mechanism of DNA repair whereby the cell uses a second DNA molecule with a sequence similar to that of the cut DNA molecule to guide the repair process. Since HDR uses a "template" of similar genetic information to guide the repair process, it is the more precise mechanism of cellular repair. HDR results in the sequence of the template being copied permanently into the genome at the site of the DNA cut. If we provide a template DNA molecule directly to the edited cell and the cell repairs itself using HDR, a new gene can be incorporated or "knocked in" at a precise location in the genome. Alternatively, the use of HDR can "repair" a DNA mutation by correcting it to the proper functioning sequence when repairing the break. Thus, genome editing endonucleases can be used to introduce a variety of different changes to the genetic code of a cell or organism including gene knockout, gene insertion and gene repair.

There are several genome editing technologies, including ARCUS, zinc-finger nucleases, or ZFNs, TAL-effector nucleases, or TALENs, and CRISPR/Cas9. These technologies differ from one another principally in the properties of the endonuclease that they each employ. The different endonucleases have fundamentally different mechanisms of recognizing and cutting their DNA targets, which gives each technology advantages and disadvantages depending on how each is used.

Our Approach to Genome Editing

We are pioneers in the field of genome editing and have extensive experience with a breadth of genome editing technologies. Our ARCUS platform was developed to address limitations of other editing technologies that could impair their deployment for therapeutic applications. We looked to nature for examples of genome editing and found the I-CreI endonuclease from the algae *Chlamydomonas reinhardtii*. Unlike ZFN, TALEN or CRISPR/Cas9, I-CreI is a natural enzyme that evolved to edit a large, complex genome. In nature, it is responsible for modifying a specific location in the algae genome by inserting a gene using the HDR process, according to scientific literature.

We believe that I-CreI has a number of attributes that make it attractive for the development of novel genome editing endonucleases, such as:

- **Specificity.** Complex genome editing applications, especially those involving the human body, require a high level of endonuclease specificity to limit the likelihood that the endonuclease will recognize and edit any genetic sequence other than its intended target. Based on scientific literature, we believe that several attributes of I-CreI naturally inhibit off-target cutting. I-CreI.
- **Efficiency.** Most applications of genome editing technology require that a sufficient portion of the targeted cells are edited to achieve the desired result. The activity level of the endonuclease is one factor that can affect how many cells are edited. The slow catalytic mechanism of I-CreI imparts specificity but does not impact its on-target efficiency for genome editing purposes because genome editing involves cutting only a single site in a cell. As such, I-CreI is able to achieve a high level of on-target editing while rarely cutting off-target, as supported by scientific literature.

- **Delivery.** Size and structural simplicity affect the ease with which endonucleases can be delivered to cells for editing. I-CreI is very small relative to other genome editing endonucleases. It is approximately one quarter to one sixth of the size of the ZFN, TALEN and CRISPR/Cas9 endonucleases. Unlike those endonucleases, I-CreI can be delivered as a single gene. As such, we believe it is compatible with many different delivery mechanisms. Additionally, I-CreI's size and structure facilitate the simultaneous delivery of multiple engineered endonucleases to introduce more than one edit to a cell. Both of these properties significantly broaden the spectrum of potential applications for I-CreI-based genome editing endonucleases.

- **Type of Cut.** The three prime, or 3', overhangs created when I-CreI cuts DNA have been shown to promote DNA repair through a mechanism called "homology directed repair," or HDR. 3' overhangs are stretches of unpaired nucleotides in the end of a DNA molecule. A genome editing technology that facilitates cellular repair through HDR enables applications that require a gene insertion or gene repair. Unlike other editing endonucleases, I-CreI creates four base 3' overhangs when it cuts its DNA site, which increases the likelihood that the cell will repair the DNA cut through HDR. As such, the DNA cuts created by I-CreI can be exploited to efficiently insert or repair DNA, consistent with the natural role of I-CreI in catalyzing the targeted insertion of a gene in algae.

- **Programmability.** I-CreI recognizes its DNA target site through a complex network of interactions that is challenging to re-program for new editing applications involving different DNA sequences. The challenges associated with re-programming I-CreI have, historically, hampered its adoption by the genome editing community in favor of more easily engineered endonucleases. This engineering challenge represents a high barrier to entry and has enabled us to secure a strong intellectual property position and control over what we believe to be a superior genome editing technology.

Other than the key programming challenge, we believed that the differentiated properties of I-CreI cited above made it an ideal "scaffold" for the development of novel genome editing tools. Moreover, we believed those properties were differentiated enough from other editing technologies to merit substantial investment in overcoming the key challenge of programmability. To that end, we invested 15 years of research effort to develop a robust, proprietary protein engineering method that now enables us to consistently re-program I-CreI to direct it to targeted sites in a genome. We call our approach ARCUS.

Our ARCUS Genome Editing Platform

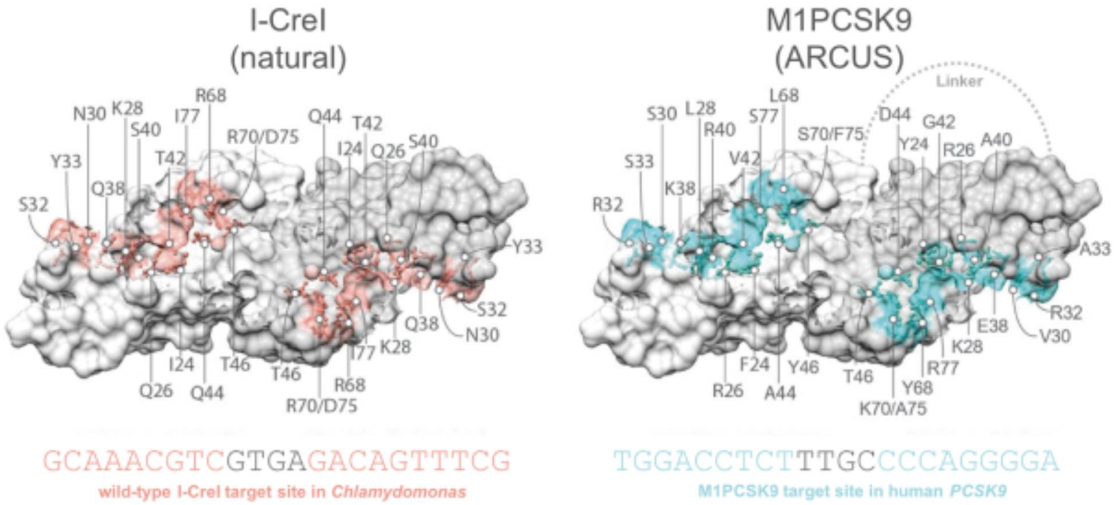
ARCUS is a collection of protein engineering methods that we developed specifically to re-program the DNA recognition properties of I-CreI. In nature, the I-CreI endonuclease recognizes and cuts a DNA sequence in the genome of algae. To apply I-CreI to genome editing in other cells or organisms, we must modify it to recognize and cut a different DNA sequence for each new application we pursue. Since the I-CreI endonuclease evolved to recognize its target sequence in the algae genome with a high degree of selectivity, as supported by scientific literature, it was necessary for us to develop sophisticated protein engineering methods to re-engineer I-CreI endonucleases to bind and cut a different DNA sequence. Using the ARCUS process, we create customized endonucleases for particular applications. We call these custom endonucleases "ARCUS nucleases." Our process is proprietary and core components are claimed in an extensive international patent portfolio. Moreover, since the ARCUS process involves a sophisticated blend of protein engineering art and science, each ARCUS nuclease we create is novel and, we believe, patentable. As of December 31, 2020, we have

obtained U.S. patents with claims directed to six ARCUS nucleases as compositions of matter, and currently claim over 290 ARCUS nucleases as compositions of matter in pending U.S. and foreign patent applications.

Our objective with ARCUS is to redirect I-CreI to a new location in a genome without compromising its editing abilities. To accomplish this, we modify the parts of the enzyme that, as reported by scientific literature, are involved in recognizing the specific DNA target site. These enzyme parts are also reported to comprise the I-CreI active site and to be involved in anchoring the enzyme to its DNA site in the algae genome. In our preclinical studies, we have observed that these modifications allowed us to control how tightly an engineered variant of I-CreI binds to its intended DNA site, as well as how quickly it cuts, in a plant or animal cell. By adjusting these two parameters, we observed that we can generally control the efficiency with which the engineered endonuclease cuts its intended target site or any potential off-target sites.

The natural I-CreI target site is pseudo-palindromic, meaning the first half of the sequence is approximately a mirror image of the second half of the sequence. Palindromic DNA sites are rare in most genomes so it was necessary for us to develop additional technology that would overcome this limitation on the diversity of DNA sites that we can target. To this end, the ARCUS process involves the production of *two* re-programmed I-CreI proteins for each target site. These two different proteins are then linked together into a single protein that can be expressed from a single gene. This approach, called a "single-chain endonuclease," represents a major advancement in I-CreI engineering because it enables our ARCUS nucleases to recognize and cut *non*-palindromic target sites using an endonuclease that, like natural I-CreI, is very small and easy to deliver to cells.

The graphic below depicts the molecular structure of natural I-CreI in comparison to an engineered ARCUS nuclease called "M1PCSK9." The regions of the structures colored in pink or cyan represent the amino acid building blocks that are responsible for contacting the DNA target site and determining the sequence of DNA bases that the endonuclease recognizes and cuts. The DNA target sites recognized by the two endonucleases are shown below the structures.



Since creating an ARCUS nuclease requires such extensive reengineering of I-CreI, it is, generally, an iterative process that involves multiple cycles of design and testing. We can typically produce a first-generation ARCUS nuclease in seven weeks. First-generation nucleases are suitable for research and development, proof-of-concept studies or other non-therapeutic applications. For therapeutic applications requiring the lowest possible off-targeting, however, we are rarely satisfied with generation one and each endonuclease undergoes extensive optimization. To this end, we thoroughly interrogate the nuclease with respect to its on-and off-target cutting properties using ultra-sensitive tests that we developed specifically for use with ARCUS. These results then inform our design of a second-generation nuclease with the goal of optimizing on-target efficiency while minimizing off-target cutting. Therapeutic ARCUS nucleases typically require two to four cycles of design and testing, often resulting in off-target cutting frequencies that are below the limit of detection with our most sensitive assays. This process can take six months or longer and has resulted in development of "therapeutic-grade" editing endonucleases.

The ARCUS process is robust and reproducible. It enables us to create engineered variants of the I-CreI endonuclease that recognize and cut DNA sites that bear little resemblance to I-CreI's natural target site. Importantly, however, ARCUS retains the attributes of I-CreI that we believe make it highly suitable as a genome editing endonuclease for complex commercial applications. We expect ARCUS nucleases to be exquisitely specific as a result of the natural structure of I-CreI and the intricate design process we employ to create them. We believe ARCUS nucleases are the smallest and easiest to deliver genome editing endonucleases. Like I-CreI, in our preclinical studies, ARCUS nucleases have been observed to produce DNA cuts with 3' overhangs that promote HDR, facilitating

gene insertions and gene repairs in addition to gene knockouts. We believe that these attributes will enable us to translate ARCUS into patient-based clinical trials and a wide array of product candidates that have the potential to address the limitations of other genome editing technologies and improve life.

We believe that ARCUS is a leading genome editing platform for therapeutic and food applications. Realizing the potential of ARCUS, however, requires supporting technologies and capabilities. To facilitate the potential commercial deployment of ARCUS in different fields, we surround it with ancillary technologies, domain expertise and infrastructure specific to that area of development. Our goal is to leverage ARCUS to build additional product-development platforms designed to rapidly generate new products in a given field.

Our Allogeneic CAR T Immunotherapy Platform

We are leveraging the properties of ARCUS in an integrated platform for the development and large-scale production of off-the-shelf (allogeneic) CAR T cell immunotherapies. A key to the success of this platform is our proprietary, one-step method for modifying the genetics of T cells from a healthy donor to make them detect and kill cancer cells. This method allows us to produce allogeneic CAR T therapy candidates with a potentially optimal phenotype for clinical development and scaled manufacturing. We have demonstrated that our approach yields an allogeneic product with a high proportion of naïve and central memory CAR T cells, which are the T cell phenotypes that have previously correlated best with good clinical benefit and fewer adverse events compared with terminally differentiated effector T cells. Additionally, because these cells are derived from healthy donors and maintain the phenotypic characteristics described, it is our hypothesis that they will be more capable of controlled *in vivo* expansion and tumor killing without requiring harsh lymphodepletion regimens to be administered to the patient. As such, we believe that our allogeneic CAR T cell platform will greatly increase patient access to these cutting-edge treatments.

CAR T Cell Therapies

CAR T cell therapy is a form of cancer immunotherapy that uses a patient's immune system to kill cancer cells. T cells are a component of the immune system that can distinguish pathogen-infected or tumor cells from healthy cells and kill them. Recognition of pathogen-infected cells or tumor cells occurs through a protein called a TCR, that is expressed on the surface of T cells. Tumor cells, however, have evolved numerous ways to evade TCR-mediated killing by T cells. In CAR T cell therapy, T cells are engineered *ex vivo* to express a protein called a chimeric antigen receptor, or CAR, that recognizes specific tumor cell surface targets and allows the T cells to function independently of the TCR, thus circumventing tumor cells' evasion of the TCR. CAR T cell therapy has been shown in clinical trials to be an effective treatment for patients who have not responded to traditional cancer treatments, and there are now two FDA approved CAR T cell products available to treat certain types of leukemia and lymphoma.

The most common form of CAR T cell therapy, which includes the two approved therapies, is referred to as "autologous" CAR T cell therapy because the CAR T cells are generated using T cells taken directly from the cancer patient. T cells are harvested from the patient, genetically engineered *ex vivo* to express a CAR, and then injected back into the patient. While autologous CAR T cell therapy has been shown to be effective for treating certain tumor types, it has several significant drawbacks:

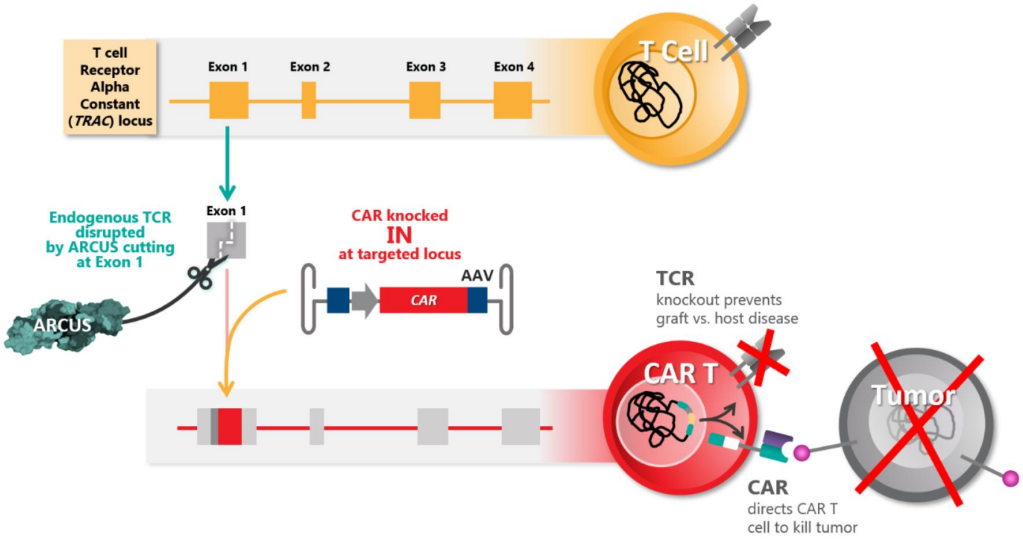
- **Patient eligibility.** Many patients may not be eligible for the treatment because their cancer has lowered their T cell numbers and T cell quality, or because the risk of undergoing the process to harvest T cells is too great.
- **Consistency.** Since each autologous therapy is, by definition, unique, it is difficult to define standards of safety and efficacy or to thoroughly assess the quality of the product prior to infusion into the patient.
- **Delay in treatment.** Because the process to make autologous CAR T cells can take several weeks, there is a significant delay in treating what can often be very aggressive tumors. Patients' disease often progresses before they can receive the CAR T therapy, or if manufacturing complications such as contamination, mislabeling or low yield are encountered, the patient may not survive long enough to attempt manufacturing a second time.
- **Cost.** The autologous CAR T cell manufacturing process is complex and expensive and must be performed, in its entirety, for each patient. As such, scaling of the manufacturing process is exceedingly difficult, and the cost of product manufacturing has resulted in high treatment costs per patient. This high cost of treatment, along with the practical complexities described above, limits the availability of autologous CAR T cell therapies to patients.

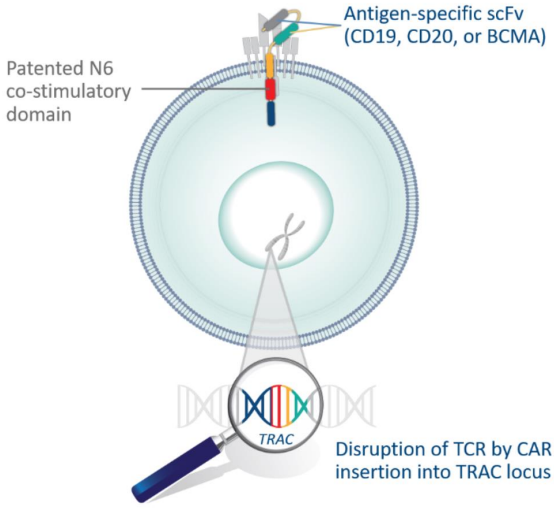
Our Approach to Allogeneic CAR T Cells

We believe that the use of allogeneic, or donor-derived, CAR T cells will address many of the challenges associated with autologous CAR T cell therapy. An allogeneic approach allows selection of donors using specific criteria to define "healthy" T cells possessing specific phenotypes, which we believe are important to clinical efficacy and which may lessen the product-to-product variability seen in autologous therapies. Donor-derived cells could be used in any patient, eliminating the "one patient: one product" burden of autologous CAR T cell therapies. Because healthy donors would provide the starting material, patients that were too sick or otherwise unqualified for an autologous approach may benefit from an allogeneic CAR T cell therapy. Additionally, patients receiving an off-the-shelf allogeneic treatment would not have to wait for the manufacture of a personalized autologous treatment, which could be further delayed by manufacturing difficulties. By scaling the manufacturing of CAR T cells and optimizing the manufacturing process for a specific pool of donors, we believe that allogeneic CAR T cells can be manufactured at costs that are significantly lower than autologous CAR T cells and that will, over time, approach the manufacturing costs for conventional biologic drugs. These potential advantages of an allogeneic approach should allow for a safer, more predictable product with defined quality standards and significantly increase patient access.

We have used the unique qualities of ARCUS to create a one-step cell engineering process for allogeneic CAR T cells that we believe yields a well-defined cell product and is designed to maintain naïve and central memory T cell phenotypes throughout the CAR T manufacturing process; we believe this is of paramount importance for an optimized CAR T therapy. To produce an allogeneic CAR T cell, it is necessary to make two changes to the DNA of T cells from a healthy donor. First, it is necessary to knock out the gene that encodes the TCR to prevent the donor-derived T cells from eliciting GvHD in the patient. The TCR is actually a complex of several different components encoded by different genes, and knocking out any one of them is generally sufficient to prevent the TCR from functioning. Second, it is necessary to add, or knock in, a gene that encodes the CAR to give the T cells the ability to recognize and kill cancer cells. We developed a proprietary, one-step method for achieving both genetic changes simultaneously. This method, aspects of which are protected by nine issued U.S. patents, involves the use of ARCUS to target the insertion of a CAR gene directly into the gene that encodes the alpha subunit of the TCR. This approach adds the DNA encoding the CAR while simultaneously disrupting the DNA encoding the TCR, essentially replacing one gene with the other.

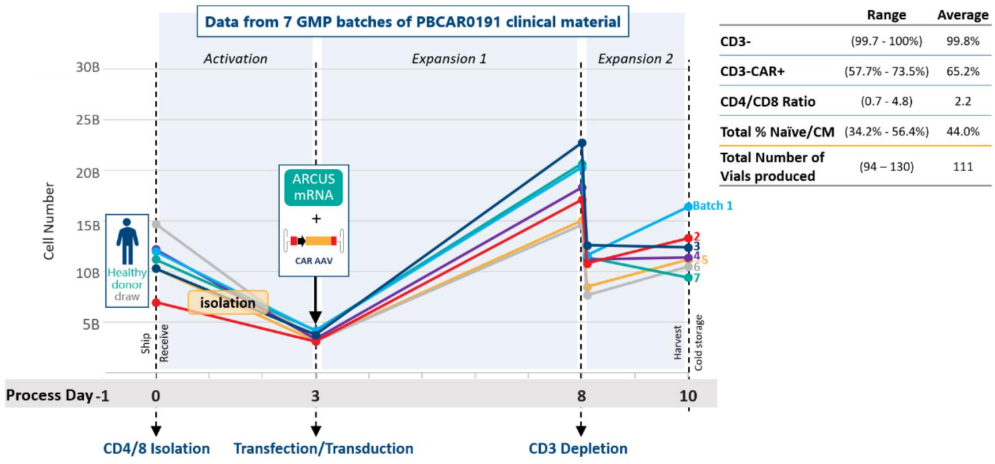
One-step engineered allogeneic CAR T cells





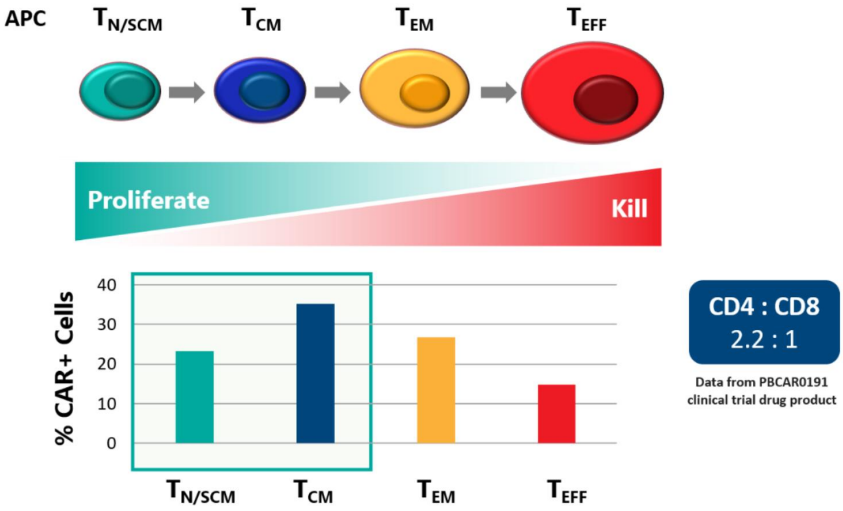
We believe that our one-step engineering approach, and the differentiated attributes of the ARCUS nuclease used to implement it, will overcome many of the critical challenges associated with allogeneic CAR T cell production as follows:

- **T cell phenotype.** According to scientific literature, T cell phenotype has a profound impact on the efficacy of CAR T cell therapy. Specifically, "young" CAR T cells with naïve and central memory phenotypes have been observed to undergo the most robust expansion following administration, which leads to a therapeutic effect. Therefore, we have established a T cell platform that is designed to maximize the percentage of cells with these ideal phenotypes. Our process starts with carefully screening donors to identify individuals with high percentages of naïve or central memory T cells and a ratio of CD4:CD8 T cells that we believe should yield the most potent cell product. To this end, we have developed our own set of analytics for screening candidate donors and have put significant effort into identifying individuals with the desired T cell profiles. We then use proprietary growth strategies and media to maintain naïve and central memory T cell phenotypes throughout the CAR T manufacturing process. We believe this is of paramount importance for an optimized CAR T therapy. Importantly, our one-step genome editing approach avoids making multiple breaks to the T cell's DNA and also contributes to minimizing cell processing time, which helps prevent the CAR T cells from differentiating during the process. We believe our 10-day allogeneic manufacturing process is the shortest established process in the industry. The figure below shows results from seven full-scale manufacturing campaigns, each of which produced a cGMP batch of PBCAR0191 with desired product specifications.

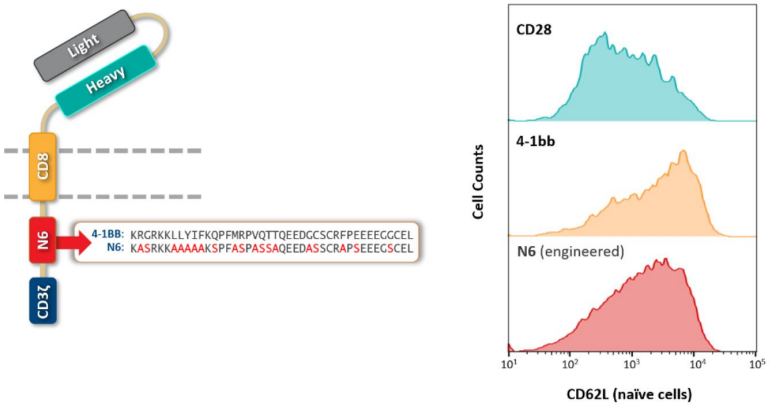


	Range	Average
CD3-	(99.7 - 100%)	99.8%
CD3-CAR+	(57.7% - 73.5%)	65.2%
CD4/CD8 Ratio	(0.7 - 4.8)	2.2
Total % Naïve/CM	(34.2% - 56.4%)	44.0%
Total Number of Vials produced	(94 – 130)	111

The figure below shows phenotype data from PBCAR0191 CAR T cells that were produced as drug product for our ongoing Phase 1/2a clinical trial in adult patients with R/R NHL and R/R B-ALL. The drug product comprises naïve ($T_{N/SCM}$) and central memory (T_{CM}) T cells.



- **Novel co-stimulatory domain.** Our genetically engineered CAR T cells incorporate a novel, proprietary, costimulatory domain called N6, which enables us to enhance cell proliferation and effector function while preserving cell phenotype. We engineered N6 to improve on the function of the 4-1bb costimulatory domain commonly used in autologous CAR T products. Our preclinical data suggests that, compared to 4-1bb, N6 provides an activation signal to the CAR T cells that better preserves cell expansion potential while maintaining naïve cell phenotype following exposure to cancer cells. We also believe N6 can help avoid CAR T cell hyperstimulation, which can contribute to adverse events seen with autologous products.

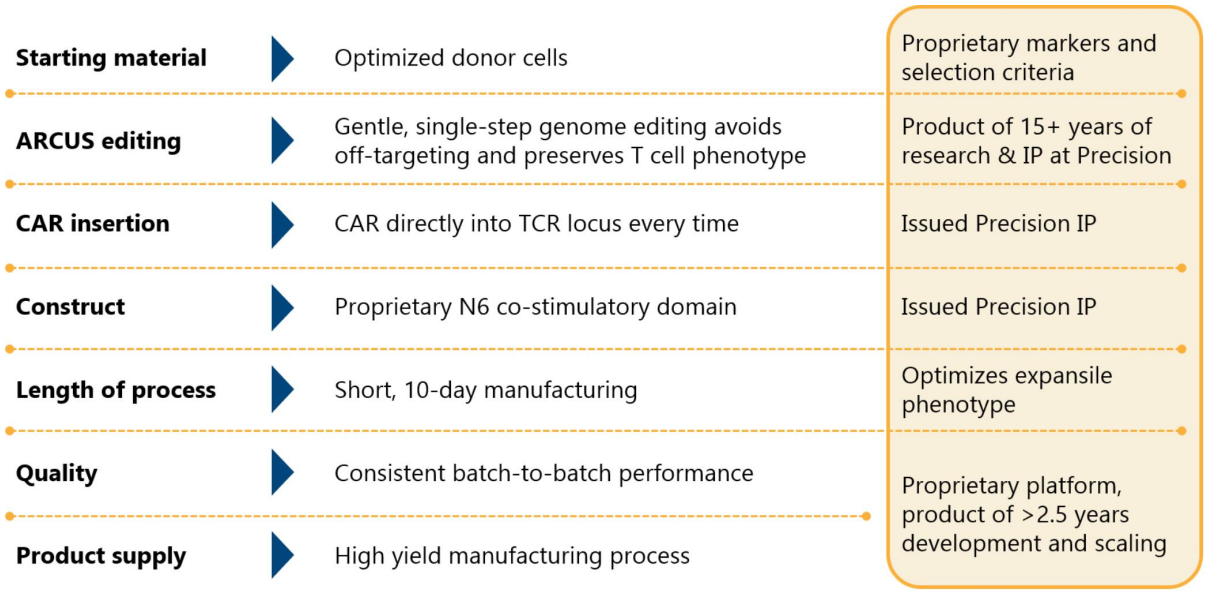


- **Consistency.** By consistently targeting the same insertion of the CAR gene to a defined location in the DNA of the cell, we are able to produce populations of T cells that are identical at the DNA level. This makes the cells in our CAR T cell drug formulation less heterogeneous as compared to manufacturing processes that use lentiviral vectors. Importantly, our genome editing process gives us greater control over the amount of CAR that is expressed on the surface of each CAR T cell, which determines how easily the CAR T cell is activated once it encounters a cancer cell. This allows us to "fine-tune" the CAR T cells to ensure that they respond appropriately to the cancer but do not become hyper-activated or exhausted. The below comparison demonstrates the difference in consistency achieved by using lentivirus delivery compared with targeted delivery through an ARCUS nuclease. CAR T cells produced using ARCUS exhibit reduced cell-to-cell variability as well as more controlled levels of CAR gene expression depending on whether the cells are tuned for high expression or low expression.

- **Scalability.** To realize the potential benefits of allogeneic CAR T cell therapy, it will be important to manufacture as many cells as possible in each batch in accordance with cGMP. Scaling efficiently requires scale-up at every step in the process and, as with all drug manufacturing, process development takes significant time and capital. In July 2019, we opened our

Manufacturing Center for Advanced Therapeutics ("MCAT") facility, which we believe is the first in-house cGMP compliant manufacturing facility dedicated to genome-edited, off-the-shelf CAR T cell therapy product candidates in the United States. We made the decision early in the development of our CAR T cell platform to invest in process development and manufacturing rather than initiating clinical trials with a process that would not fully support development and commercialization. We did this, in part, because we believed that several attributes of ARCUS, such as high specificity and high knock-in efficiency, would allow us to scale manufacturing more effectively than our competitors. As a consequence of our early investment and the one-step editing method enabled by ARCUS, we have scaled our manufacturing process today, adding in-house capabilities through the opening of our MCAT facility. During 2020, we completed technology transfer of PBCAR0191 and PBCAR20A to MCAT, as well as manufactured the first batch and clinical trial material for PBCAR269A and produced clinical trial material for PBCAR19B stealth cell.

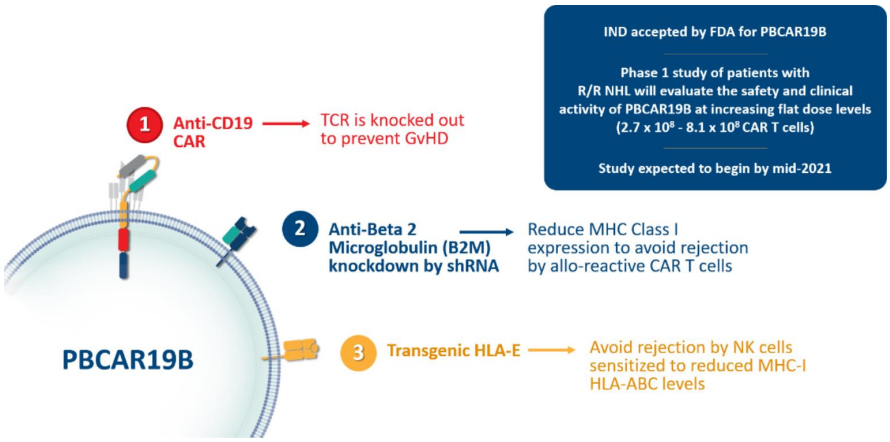
Key features of Precision's allogeneic CAR T platform



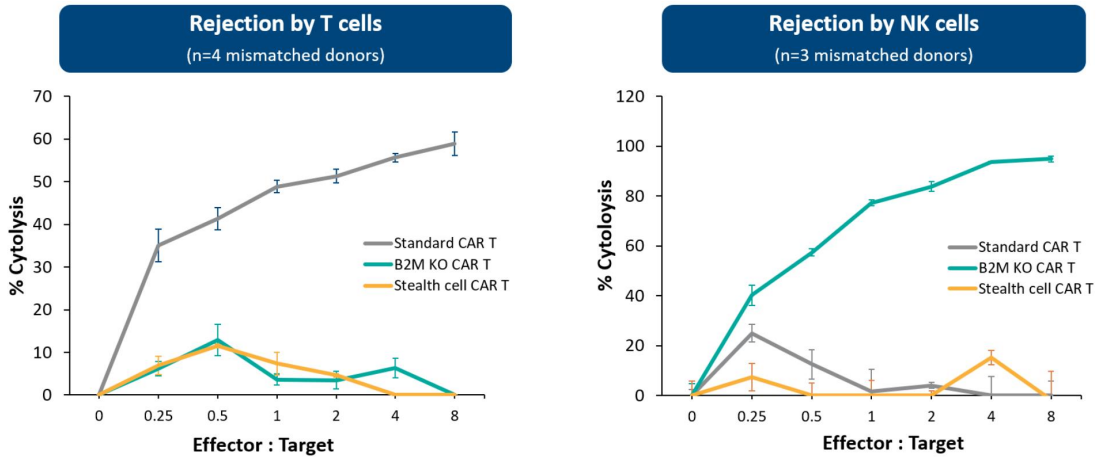
Preventing CAR T Cell Rejection

A patient's immune system is expected to recognize allogeneic CAR T cells as foreign and destroy or reject the cells. This rejection could limit the efficacy of the CAR T therapy if the cells do not persist long enough in the patient to eradicate the tumor. Patients who receive CAR T therapy are typically preconditioned prior to being given the cell therapy using lymphodepleting drugs such as cyclophosphamide or fludarabine, which suppress the immune system of the patient. We believe that the degree of preconditioning can be modified by adjusting the doses of the cyclophosphamide or fludarabine to prevent CAR T cell rejection by patients who receive our treatments due to our unique approach to producing CAR T cells. Our CAR T production process preserves T cell phenotypes that we believe are highly expansile *in vivo* and therefore do not require an aggressive lymphodepletion regime to survive and proliferate in the body.

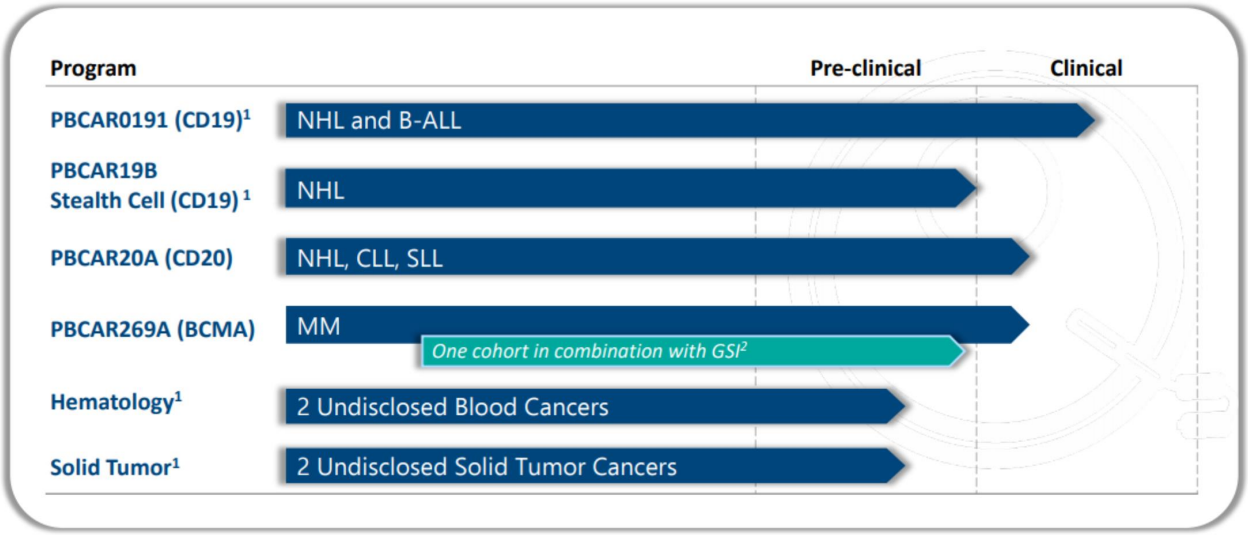
We expect to begin the Phase 1 study of PBCAR19B, our next-generation, stealth cell, CD19 allogenic CAR T candidate for Non-Hodgkin Lymphoma by mid-2021. The stealth cell technology is a modified CAR T vector that is designed to suppress expression of a gene called beta-2-microglobulin, or B2M, in CAR T cells using a short-hairpin RNA, or shRNA, and enable expression of a transgenic HLA-E molecule on the cell surface. B2M is a component of the major histocompatibility complex type 1 ("MHC-I"), a cell surface receptor which enables alloreactive T cell recognition and activation. Suppression of B2M expression leads to reduced cell-surface expression of major histocompatibility complex components HLA-A, HLA-B, and HLA-C. In preclinical studies, we and others have observed that suppression or elimination of B2M reduces the rejection of CAR T cells by alloreactive T cells from an unrelated individual. However, we have found that reduction of cell-surface HLA-A, HLA-B, and HLA-C expression provokes rejection of the CAR T cells by an alternative immune cell called natural killer, or NK cells. Decreased expression of HLA-A, HLA-B, and HLA-C therefore necessitates an additional modification to enable overexpression of HLA-E, a non-classical MHC -I that inhibits cytotoxic killing by NK cells by interacting with inhibitory receptors on the NK cell surface (Gornalusse et al, 2017; Lanza et al, 2019). Thus, the "stealth cell" is designed to avoid rejection by both alloreactive cytotoxic T cells and NK cells, which we believe has the potential to increase the ability of these cells to expand, persist, and mediate anti-tumor activity in unrelated recipients as summarized in the figure below.



Pre-clinical studies showed anti-CD19 stealth CAR T cells resisted rejection by allo-reactive T cells and NKs in mixed-lymphocyte reactions



Our Allogeneic CAR T Immunotherapy Pipeline



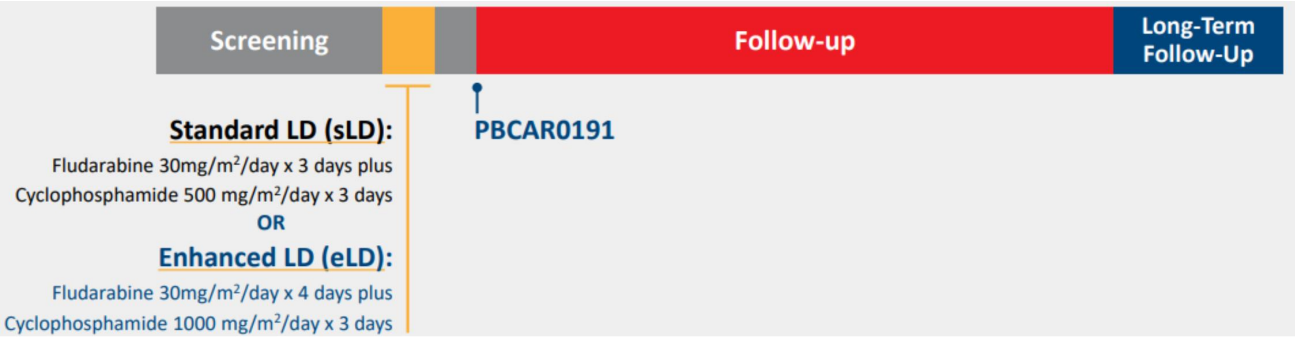
[1] In partnership with Servier.
[2] In combination with gamma secretase inhibitor from SpringWorks Therapeutics.

We are leveraging our CAR T cell platform to develop product candidates against validated CAR T cell targets. By focusing on validated targets, we seek to avoid many technical hurdles associated with early clinical development and can validate our allogeneic platform in patients with fewer variables. This approach also allows us to leverage the abundance of available public resources for these targets, including CARs, cell and animal models, and clinical protocols. We believe that our modular CAR T platform will allow us to leverage proof-of-concept from our ongoing and planned initial human trials for multiple other CAR T programs. We believe that we have developed the first allogeneic CAR T cell platform capable of producing drug product at scale, with a potentially optimal cell profile for therapeutic efficacy and true off-the-shelf delivery without the need for harsh and potentially toxic lymphodepletion. We believe that the combination of these factors, along with our next generation ARCUS technology, puts us in a differentiated position to become the leader in the development of allogeneic CAR T therapies.

The first four product candidates in our allogeneic CAR T cell development pipeline are:

- **PBCAR0191**. We are developing PBCAR0191, an allogeneic anti-CD19 CAR T cell product candidate for the treatment of adult R/R NHL and adult R/R B-cell precursor ALL. CD19 is a protein that is expressed on the surface of B cells and is a well-validated target for CAR T cell therapy. The three currently marketed autologous CAR T cell therapy products also target CD19. In February 2016, we entered into the Servier Agreement, pursuant to which we have agreed to develop allogeneic CAR T cell therapies for CD19.

We are currently evaluating patients in a Phase 1/2a clinical trial of PBCAR0191 in adult patients with R/R NHL or R/R B-cell precursor ALL, the trial design of which is shown in the figure below. The primary objective of this trial is to evaluate the safety and tolerability of PBCAR0191, as well as to determine the maximum tolerated dose. Secondary objectives include evaluating the anti-tumor activity of PBCAR0191. We are also evaluating the expansion, trafficking and persistence of PBCAR0191 in this trial. NHL and ALL cohorts are evaluated independently. The base trial design included up to three dose levels: 3.0 x 10^5 cells/kg, 1.0 x 10^6 cells/kg and 3.0 x 10^6 cells/kg. Recently, we have added higher dose levels in flat doses (DL4b: 500 x 10^6 cells and DL5: 750 x 10^6 cells). Patients will be further evaluated for a follow-up period of 11 months. Additionally, alternative lymphodepletion regimens, including enhanced doses of fludarabine and cyclophosphamide, are also being explored. Finally, repeat dosing after initial response and progression and scheduled repeat dosing, both with repeat lymphodepletion, are also being explored. The trial is being conducted at the multiple sites around the United States. A listing of these sites can be found at https://clinicaltrials.gov/ct2/show/NCT03666000.



Updated Interim Data from Phase 1/2a Trial of PBCAR0191 in R/R NHL and R/R B-ALL

In December 2020, we reported updated interim data from our ongoing Phase 1/2a clinical trial of PBCAR0191. As of the November 16, 2020 cutoff, 27 patients including 16 patients with R/R NHL and 11 patients with R/R B-ALL had been enrolled and evaluated. For this study, in which patients received either sLD or eLD, response rates across R/R NHL and R/R B-ALL patient cohorts were as follows:

- 83% objective response rate ("ORR") at day 28 or later for patients across NHL (n=4) and B-ALL (n=2) who received PBCAR0191 when coupled with eLD.
- At day 28 or later, 75% (3/4) of NHL patients who received PBCAR0191 with eLD achieved a complete response ("CR"). Meanwhile, 33% of NHL patients (n=9) across DL2 and DL3 using sLD achieved a CR.
- The longest demonstrated response was > 11 months in a B-ALL patient at DL2.

Response Rates at Day ≥28	NHL (n=16)		B-ALL (n=11)	
	ORR	**CR**	**ORR**	**CR**
DL1 (3x10^5 cells) + sLD	67% (2/3)	0% (0/3)	-	-
DL2 (1x10^6 cells) + sLD	67% (2/3)	33% (1/3)	33% (1/3)	33% (1/3)
DL3 (3x10^6 cells) + sLD	50% (3/6)	33% (2/6)	25% (1/4)	25% (1/4)
DL4 (2 doses at 3x10^6 cells) + sLD	-	-	50% (1/2)	50% (1/2)
Enhanced LD Regimen	100% (4/4)	75% (3/4)	50% (1/2)	50% (1/2)

PBCAR0191, which incorporates our patented N6 co-stimulatory domain, demonstrated a clear dose dependent increase in peak cell expansion. Compared to sLD, patients undergoing eLD with PBCAR0191 at DL3 resulted in approximately 95-fold increase in peak cell expansion, and approximately 45-fold increase in area under the curve. This was associated with a higher CR rate in NHL (75%).

In this dose escalation and dose expansion study, PBCAR0191 had an acceptable safety profile with no cases of graft versus host disease, no cases of Grade ≥ 3 cytokine release syndrome, and no cases of Grade ≥ 3 immune effector cell neurotoxicity.

One NHL patient who was treated with PBCAR0191 and eLD had previously received nine prior lines of therapy before entering the trial. The patient presented with persistent cytopenias at baseline and a history of infections, including bacterial sepsis. The patient had an episode of sepsis at day 27 which appeared to have resolved at day 33, following which a partial response was achieved at day 34. Unfortunately, the patient died at day 42 with grade 5 sepsis. We reported the serious adverse event to the FDA and reported the patient death.

We are enrolling additional patients with eLD and plan to present updated interim data on this study by mid-2021.

Additionally, the FDA has accepted our IND application for PBCAR19B, our next-generation, stealth cell, CD19 allogeneic CAR T candidate for Non-Hodgkin Lymphoma, and we expect to begin the Phase 1 study by mid-2021. In preclinical studies, PBCAR19B has been shown to delay both T cell and natural killer cell mediated allogeneic rejection *in vitro* and may improve the persistence of allogeneic CAR T cells in recipients after infusion.

PBCAR20A. Our second allogeneic CAR T therapy candidate is PBCAR20A, an allogeneic anti-CD20 CAR T cell product candidate for the treatment of NHL, including chronic lymphocytic leukemia, or CLL, and small lymphocytic lymphoma, or SLL. Like CD19, CD20 is a protein expressed on the surface of B cells. It is a validated target for cancer treatment and several CD20-targeted therapies, such as the monoclonal antibody Rituxan, have long histories of clinical and commercial success. In April 2020, we commenced patient dosing in a Phase 1/2a clinical trial of PBCAR20A. The trial will include patients with NHL, of which a subset will have the diagnosis of mantle cell lymphoma, or MCL. We have received orphan drug designation for the treatment of MCL.

In our Phase 1/2a clinical trial, the primary objective is to evaluate the safety and tolerability of PBCAR20A, as well as to determine the maximum tolerated dose. Secondary objectives will include evaluating the anti-tumor activity of PBCAR20A. We also plan to evaluate the expansion, trafficking and persistence of PBCAR20A in this trial. Based on the safety profile observed to date with PBCAR0191, the FDA allowed us to commence dosing with PBCAR20A directly at 1 x 10^6 cells/kg. The study has continued to dose escalate through dose level two (3 x 10^6 cells/kg), and in February 2021, we commenced patient dosing at dose level 3 (480 x 10^6 cell fixed dose) with a max dose of 6 x 10^6 cells/kg. We expect to report interim data for the PBCAR20A study in 2021.

Our accepted IND for PBCAR20A included data from our preclinical study in mice measuring cell proliferation, cytotoxic killing, and production of effector cytokines in response to co-culture with CD20+ or CD20- target cells. PBCAR20A CAR T cells were observed to proliferate in response to stimulation by CD20+ K20 cells (K562 myelogenous leukemia cells transfected to express human CD20) at a wide range of doses (effector to target ratios ranging from 1:1 to 1:9). These observations show that, in this study, PBCAR20A cells became activated by and killed CD20+ cells at a wide range of cell doses. In this study, we observed that PBCAR20A cells did not proliferate in response to co-culture with CD20 negative cell K562 cells.

We also evaluated the potency of PBCAR20A *in vivo*. PBCAR20A was observed to prolong survival in a mouse model of lymphoma (Raji Sub-Q model) at both doses tested (1.0 x 10^6 and 5.0 x 10^6 cells per mouse), which we believe supports further development. PBCAR20A was observed to be well-tolerated in this study.

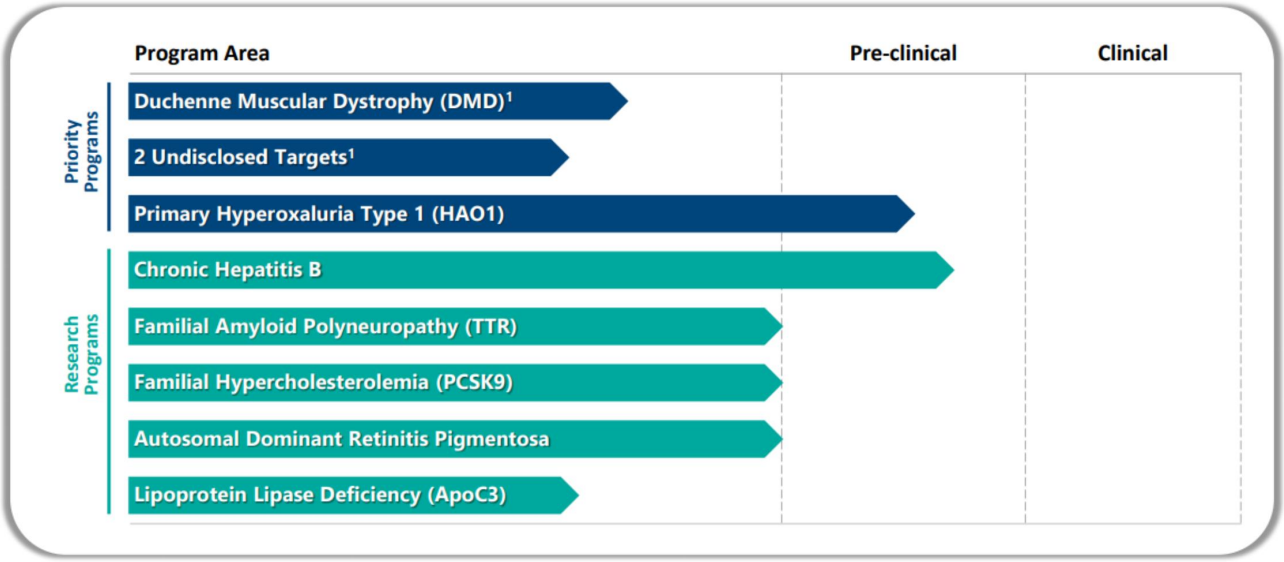
PBCAR269A. We are developing PBCAR269A as an allogeneic anti-BCMA CAR T cell product candidate for the treatment of R/R multiple myeloma. BCMA is a protein that is expressed on the surface of mature B cells called “plasma cells” that are responsible for the disease and is a validated CAR T cell target. In January 2020, the FDA cleared our IND for PBCAR269A.

In June 2020, we commenced a Phase 1/2a open-label, multi-center, dose-escalation clinical trial in patients with R/R multiple myeloma. In this trial, the primary objective will be to evaluate the safety and tolerability of PBCAR269A, as well as to determine the maximum tolerated dose. Secondary objectives will include evaluating the anti-tumor activity of PBCAR269A. We also plan to evaluate the expansion, trafficking and persistence of PBCAR269A in this trial. We expect to investigate up to three dose levels: 6.0 x 10^5 cells/kg, 2.0 x 10^6 cells/kg and 6.0 x 10^6 cells/kg and we expect to report interim data on the PBCAR269A trial in 2021.

We evaluated the potency of PBCAR269A CAR T cells in a preclinical study in mice by measuring cell proliferation, cytotoxic killing and production of effector cytokines in response to co-culture with BCMA+ or BCMA- target cells. In this study, PBCAR269A CAR T cells were observed to proliferate in response to stimulation by BCMA+ target cells including MM.1S (a human multiple myeloma cell line) and KBCMA (K562 myelogenous leukemia cells transfected to express human BCMA) at a wide range of doses (effector to target ratios ranging from 1:1 to 1:8). These observations show that, in this study, PBCAR269A cells became activated by and killed BCMA+ cells at a wide range of cell doses. We further observed that PBCAR269A cells did not proliferate in response to co-culture with BCMA- K562 cells.

We also evaluated the potency of PBCAR269A *in vivo*. PBCAR269A was observed to prolong survival in a mouse model of multiple myeloma, which we believe supports further development. PBCAR269A was observed to be well-tolerated in this study.

Our *in vivo* Gene Correction Platform



[1] In partnership with Lilly

Overview

We expect *in vivo* genome editing to be a significant focus of our operations long-term because the differentiated attributes of ARCUS are particularly advantageous for this type of application. *In vivo* gene correction involves the delivery of ARCUS nucleases directly into a patient's cells to treat disease at the level of the underlying DNA. *In vivo* genome editing is more complex and challenging than *ex vivo* approaches like CAR T cells due to the need to safely deliver ARCUS directly to cells in the body. We believe that *in vivo* applications are particularly well suited to ARCUS because they require extremely low levels of off-target editing and efficient delivery.

Due to the demands of *in vivo* editing, we are taking a highly disciplined approach to managing our project portfolio that emphasizes studies in large animals, using both viral and non-viral delivery technologies. Thus, we are generating a large animal dataset that, we believe, is the most comprehensive of any in the field. Our two most advanced programs in this area are focused on PH1 which we wholly own and DMD in partnership with Lilly.

Treatment of Genetic Disease

Genetic diseases are caused by errors in the DNA that lead to dysfunction of a cell or tissue. While the underlying cause of a particular genetic disease can often be complex and variable, DNA errors generally fall into two categories: loss-of-function or gain-of-function. Genetic diseases are most frequently caused by loss-of-function errors in which a particular gene is mutated at the DNA level in such a way that it is either non-functional or less functional than it should be. In these cases, treating the disease requires *adding* the function that the cell or tissue is otherwise lacking. Gain of function genetic disorders are the result of DNA errors that cause a gene to acquire a new, harmful function that leads to disease. In these cases, it is necessary to remove the unwanted function to treat the disorder.

Genetic disease is a very active area of therapeutic development, and the therapies that are available or in development are, to a large extent, as variable and specialized as the diseases themselves. There are, however, gene therapy platform approaches that are being broadly applied to the treatment of multiple genetic disorders. For the treatment of loss-of-function diseases, AAV-based gene therapy can often be an effective treatment. AAV is a non-integrating virus that can be used to deliver DNA to a wide range of different cell types in a patient. The virus can be engineered to deliver a functional copy of a gene that is otherwise missing or under-performing in the cell. This approach can, in some cases, restore normal function to the cell and alleviate the symptoms of the disease.

While a number of AAV-based gene therapies appear to be showing great promise in clinical trials, the approach is subject to a number of limitations. Many patients have antibodies in their blood that recognize and inactivate the AAV virus before it can deliver the DNA into the patient's cells. In addition, among patients who do *not* have antibodies upon initial treatment with the virus, most will develop antibodies following the first dose. Therefore, in most cases, it is only possible to dose a patient one time. Most importantly, although AAV-based gene therapy can be an effective treatment, it is probably not a permanent *cure* because AAV-delivered genes do not generally persist for more than a few years in the body. While the duration of virus persistence varies from cell-to-cell and from patient-to-patient, it is not believed to be permanent and symptoms of the disease can return once the virus is no longer present in the body.

Our Approach to in vivo Gene Correction

Our goal is to cure genetic diseases by correcting the DNA errors responsible for causing them. In principle, *in vivo* genome editing can likely be used to cure any genetic disorder. In practice, however, *in vivo* genome editing is limited by several challenges that, we believe, are best addressed using ARCUS:

- **Specificity.** *In vivo* genome editing requires an extremely high degree of precision to minimize the occurrence of any unwanted off-target editing. Off-target changes to the DNA could, potentially, have significant safety implications that may not manifest themselves until well after administration of the therapy. As described above, we believe that the differentiated attributes of ARCUS enable us to create endonucleases that have a high degree of specificity and minimal levels of off-target editing to address this significant safety concern.

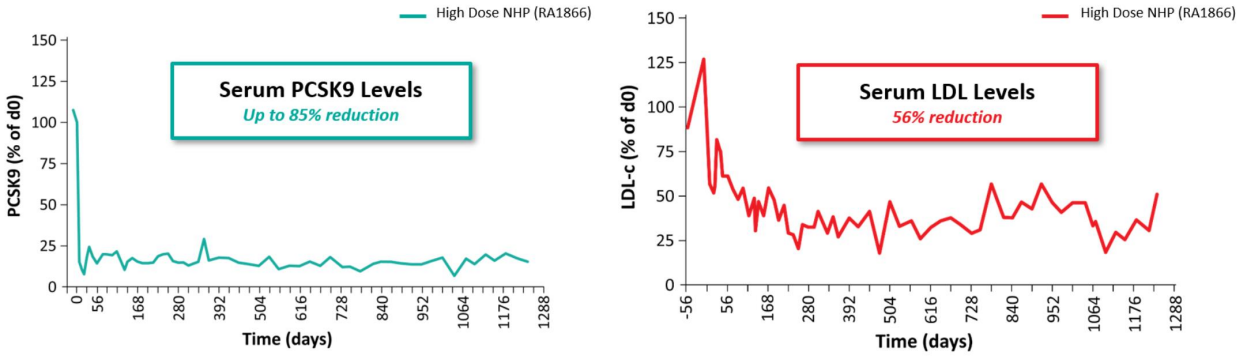
- **Delivery.** Gene therapy delivery technologies suitable for the delivery of genome editing tools to tissues *in vivo* have not been developed for all tissues. Delivery challenges are particularly pronounced for editing applications that require promoting DNA repair by HDR because it is necessary to deliver both the nuclease and the DNA "donor" template for HDR. We have focused our initial development efforts on genetic disorders of the liver and eye, two tissues for which we believe we have good options for delivery and in which we have shown ARCUS to be effective in preclinical studies. We believe the small size of our ARCUS nucleases and their ability to efficiently promote HDR will enable us to address a greater variety of genetic diseases requiring more complex delivery strategies.

- **Efficiency.** Genome editing efficiency is a critical parameter for *in vivo* therapeutic efficacy because the requisite edit must be achieved in a sufficient number of cells to have therapeutic benefit. Efficiency is best measured *in vivo* in animals because it is affected by multiple parameters including delivery, endonuclease activity and the accessibility of the DNA target site in the organism. Moreover, we believe that only large animals such as NHPs accurately model these different parameters and are representative of the human condition. As such, we have placed significant emphasis on large animal studies and have demonstrated, we believe, therapeutic levels of editing efficiency using ARCUS in the most relevant models. This gives us greater confidence that ARCUS will translate from the lab bench to the clinic.

The potential of ARCUS for *in vivo* genome editing is highlighted in a July 2018 publication in *Nature Biotechnology* that describes a research project performed as part of a sponsored research collaboration between our company with Dr. Jim Wilson and the Gene Therapy Program at the University of Pennsylvania. Co-authors of the publication include Derek Jantz and Jeff Smith, two of our co-founders. This publication is, to our knowledge, the first peer-reviewed publication of *in vivo* genome editing data in NHPs. We reported well-tolerated, long-term, high-efficiency editing of the PCSK9 gene in NHPs using ARCUS. A single IV administration of an AAV vector encoding a PCSK9-specific ARCUS nuclease was able to efficiently knock out the gene in the livers of Rhesus macaques, a species of monkey. Importantly, even at the highest dose the treatment was observed to be well tolerated in the study.

As published in *Molecular Therapy* in February 2021, we have continued to monitor the NHPs for more than three years and have continued to show a sustained reduction in LDL cholesterol levels while maintaining stable gene editing without any obvious adverse effects. After the one-time vector administration more than three years ago, NHPs treated with ARCUS have experienced stable reductions of up to 85% in PCSK9 protein levels and a 56% reduction of LDL cholesterol levels.

PCSK9 and LDL Serum Levels



[1]Wang et al, *Molecular Therapy*, 2021.

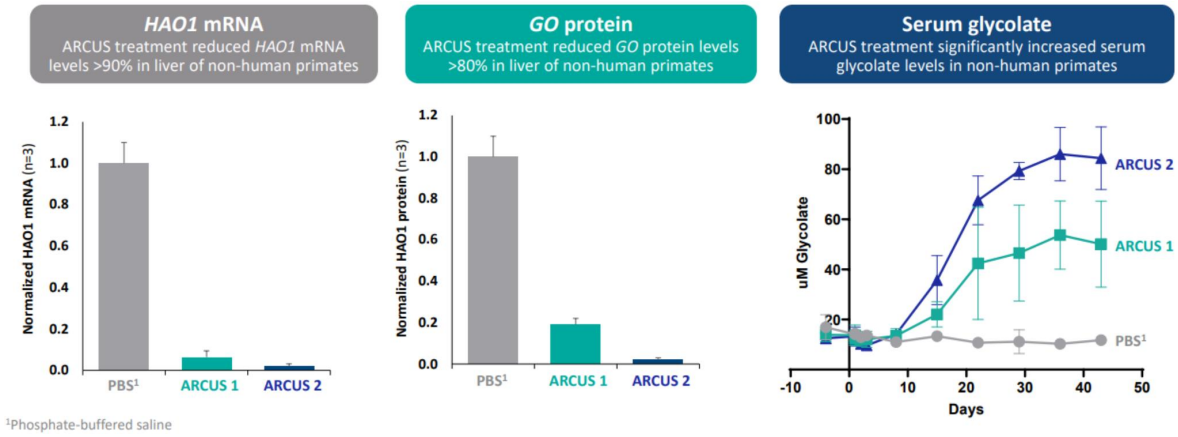
We believe that establishing collaborations with other groups that have additive domain expertise and access to the most relevant animal models will be important to advancing our *in vivo* gene correction platform, and we have entered into a number of collaborations and licensing agreements with third parties to help us advance our *in vivo* editing portfolio.

Primary Hyperoxaluria Type 1 (PH1) Program

We plan to advance a program designed to target the rare genetic disease PH1 as our lead wholly owned *in vivo* gene correction program. PH1 affects approximately 1-3 people per million in the United States and is caused by loss of function mutations in the AGXT gene. This gene encodes an enzyme which is involved in the production of the amino acid glycine in the liver. In patients with PH1 who lack this enzyme, crystals of calcium oxalate form in the kidneys leading to painful kidney stones which may ultimately lead to renal failure. Approximately 40% of PH1 patients are found to have already progressed to end stage renal disease at the point of diagnosis, requiring a combined liver-kidney transplant.

Using ARCUS, we are developing a potential therapeutic approach to PH1 that involves knocking out a gene called HAO1 which acts upstream of AGXT. Suppressing HAO1 has been shown in preclinical models to prevent the formation of calcium oxalate. We therefore believe that a one-time administration of an ARCUS nuclease targeting HAO1 may be a viable strategy for a durable treatment of PH1 patients.

In preclinical studies we have demonstrated that ARCUS efficiently knocked out the HAO1 gene in NHPs. We have also demonstrated in a mouse model of PH1 that administration of an ARCUS nuclease targeting HAO1 resulted in approximately 70% reduction in urine calcium oxalate levels. We have also demonstrated that ARCUS efficiently reduced HAO1 mRNA levels by greater than 90% in the liver of NHPs. Pre-clinical research has continued to progress, and we expect to provide an update on this program in the first half of 2021.



Manufacturing

We believe that we have strong internal scientific process development and manufacturing capabilities, including our MCAT, an in-house cGMP compliant manufacturing facility supporting our therapeutic product development platforms which we opened in 2019. We believe that MCAT is the first in-house cGMP compliant manufacturing facility in the United States dedicated to genome-edited, off-the-shelf CAR T cell therapy products. We believe that having internal manufacturing capacity and expertise is a competitive advantage that enables enhanced control over process development timelines, costs and intellectual property.

We have leased over 33,800 square feet of space for our MCAT facility at a location approximately seven miles from our headquarters in Durham, North Carolina. We have four cleanroom production suites for CAR T cell, mRNA and AAV production for process development for our allogeneic CAR T immunotherapy platform. Our manufacturing facility leverages single-use, disposable, closed-system operations aligned to our technology platforms to ensure both flexibility and cost effectiveness. The initial scope is creating clinical trial material for certain of our planned clinical trials. In the longer term, we believe MCAT has the potential to be a commercial launch facility. During 2020, we completed tech transfer of PBCAR0191 and PBCAR20A to MCAT, as well as manufactured the first batch and clinical trial material for PBCAR269A and produced clinical trial material for PBCAR19B stealth cell.

We currently contract with third parties for the manufacturing of materials used in the production of our product candidates. To date, our third-party manufacturers have met our manufacturing requirements. We believe that there are alternate sources of supply that can satisfy our requirements.

The manufacturing process for our allogeneic CAR T immunotherapy platform utilizes a one-step cell engineering method in which a CAR gene is targeted directly into the TRAC locus. We believe this approach greatly streamlines the manufacturing process and have entered into a license agreement with a principal supplier for research and clinical licensed technology used in such process. Commercial raw materials and reagents for this production are readily available. Our manufacturing strategy for our *in vivo* gene correction platform and our food platform is to internally control process development and manufacturing to safeguard the proprietary nature of our technology and facilitate our ability to function as an integrated life sciences company.

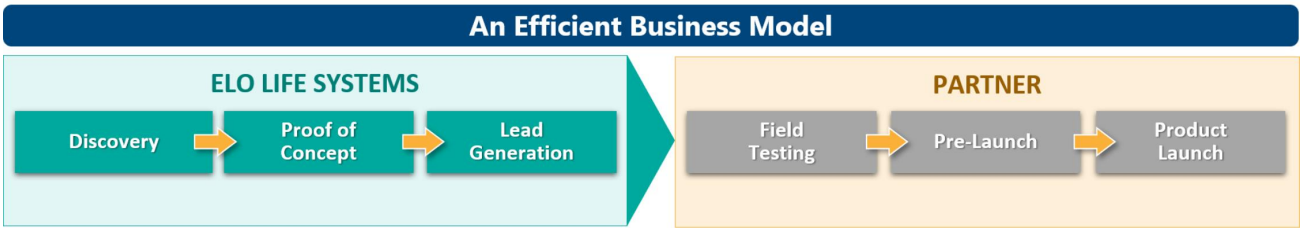
Our Food Platform

Technology-Centric Solutions to Meet Changing Demands in Food and Agriculture

The total global food and agriculture market, estimated to be worth $5 trillion (2015), is heavily influenced by the availability of critical raw material ingredients and changing consumer behavior. With the global population projected to reach 8.5 billion by 2030, demand for basic food and nutrition needs has already put a lot of pressure on traditional food production systems. Many staple foods and critical ingredients, such as citrus, bananas and coffee, are under threat from environmental changes and the new pathogens it can bring. The food and agriculture industry has also seen significant shifts in consumer preferences in which consumers are actively transitioning to high quality and healthier foods and beverages, while rejecting artificial ingredients, sugar and salt, creating a demand for natural and holistic ingredients built on a sustainable supply chain. Traditional approaches to agricultural innovation are slow, siloed, rely heavily on non-scalable academic advancements and continue to use inefficient crop improvement practices. We believe that many of the current pressures on the food and agriculture industry from climate-related threats and changing consumer preferences can be effectively addressed using biotechnology.

Elo Life Systems: Innovation-Focused Technology Platform and Business Model

Elo Life Systems is our wholly owned subsidiary, dedicated to addressing the needs of consumers and consumer-facing industries in the food and agriculture sector. Our business model is heavily partner-focused. In the food and agriculture industry, timelines to market are long and the field is dominated by a relatively small number of entrenched companies. Therefore, it is a very difficult to bring a product to market without a larger partner. Thus, we seek partnerships early in the product development process to optimize our chances of market success. Under this partnership model, we are responsible for the early phases of the project, starting from concept through production of a "lead," which is typically a gene edited plant that has the desired trait in greenhouse testing and is ready for scale-up and testing in the field. At that point, our partners typically assume responsibility for subsequent development and commercialization. In general, our partners are responsible for financing all or a portion of our development costs, which greatly reduces our capital requirements. We are then generally eligible to share in revenues derived from successfully commercialized products developed under these partnerships.



Elo's Technology Platform

At the core of our food platform is our ARCUS editing technology. We are one of the first to apply genome editing technology to crop plants and we believe we have the most in-depth experience in crop genome editing in the industry. Over the last decade, we have developed highly efficient methods to improve delivery and functionality of ARCUS nucleases in plants to edit DNA. These nucleases have been successfully validated in collaborative projects with major food and agriculture companies like Dole, Cargill, BASF, Bayer CropScience and DuPont Pioneer Hi-bred. Importantly, ARCUS can be used to create small deletions or insertions in plants using a non-plant pest- or pathogen-based delivery approach. As such, we believe that many of the food and agriculture product candidates we may develop have the potential to obtain nonregulated status in the United States and other territories and thereby avoid GMO labels. This aspect of the technology platform is critical to food producers, particularly as they respond to consumer demands for healthier products. In addition to ARCUS, Elo's in-house capabilities include:

- **Genomics.** Many of the most attractive opportunities for Elo involve emerging and under-studied crops, such as stevia and monk fruit. We have integrated genome sequencing and bioinformatic platforms in-house in order to identify the genome sequence of plants, enabling us to identify targets for editing with ARCUS nucleases.

- **Target discovery and validation.** Our informatics platform is built on principles of machine learning that allow us to synthesize, sequence and phenotype information from both public and internal datasets to correlate genome sequence with plant characteristics. This allows us to identify genetic targets for ARCUS editing that are predicted to yield a desired phenotype. These targets can then be validated in specific crops and at least partially validated in model systems such as tobacco and Arabidopsis using different molecular approaches such as editing or RNAi.

- **Multi-crop transformation.** Most of the crops of interest to Elo and our partners do not have established transformation protocols and are not readily amenable to gene editing. To this end, we have developed a sophisticated collection of plant transformation vectors and protocols over the last decade that allow us to rapidly develop gene-edited variants of otherwise intractable species. This technology allows us to overcome what is otherwise a significant barrier to entry into a new crop species.

- **Plant growth infrastructure.** Elo has a dedicated facility and capabilities of cultivating gene edited plants from incubator to greenhouse.

Fusarium wilt resistant banana varieties (in collaboration with Dole Food Company)

Fusarium wilt, caused by the Tropical Race 4 (TR4) strain of a plant pathogenic fungus called Fusarium, is a fast-spreading pandemic threatening the continued cultivation of the world's most popular fruit in a $25 billion banana industry. The disease was detected in Colombia in August 2019 and is expected to spread throughout Latin America.

Through our collaboration agreement with Dole, Elo intends to use its proprietary suite of tools, including cutting-edge knowledge mining platform, gene discovery pipeline, trait validation workflows, and end-to-end expertise in translational agriculture, in

combination with its proprietary homing endonuclease-based genome editing platform to develop potential TR4-resistant banana varieties in this important clonally propagated crop.

Plant-Based Proteins

In 2018, we launched Elo Life Systems Australia, a subsidiary of Elo that will support research programs in Australia. Elo Life Systems Australia's primary focus is developing climate-resilient legumes with improved protein and nutritional profiles, starting with chickpea. Multiple edited events in chickpeas have been generated and are being screened in the laboratory. Through this program, we aim for the resulting products to make a significant contribution towards the increasing demand for sustainable plant-based proteins as a healthful alternative to animal protein.

License and Collaboration Agreements

Eli Lilly and Company

In November 2020, we entered into a research collaboration and exclusive license agreement (the "Development and License Agreement") with Lilly to utilize ARCUS for the research and development of potential *in vivo* therapies for genetic disorders. Lilly has initially nominated DMD and two gene targets for other genetic disorders, and has the right to nominate up to three additional gene targets for genetic disorders over the first four years of the Development and License Agreement (the "Nomination Period"). Lilly may extend the Nomination Period for an additional two years from the date on which such initial Nomination Period ends, upon Lilly's election and payment of an extension fee. Under the terms of the Development and License Agreement, Lilly will receive an exclusive license to research, develop, manufacture and commercialize the resulting licensed products to diagnose, prevent and treat any and all diseases by in vivo gene editing directed against the applicable gene target. The Development and License Agreement provides that we will be responsible for conducting certain pre-clinical research and IND-enabling activities with respect to the gene targets nominated by Lilly to be subject to the collaboration, including manufacture of initial clinical trial material for the first licensed product. Lilly will be responsible for, and must use commercially reasonable efforts with respect to, conducting clinical development and commercialization activities for licensed products resulting from the collaboration, and may engage us for additional clinical and/or initial commercial manufacture of licensed products.

In January 2021, we and Lilly closed the Development and License Agreement following clearance under the Hart-Scott Rodino Antitrust Improvements Act of 1976, as amended (the "HSR Act"). In connection with the closing, we received an upfront cash payment of $100.0 million as well as $35.0 million from Lilly's purchase of 3,762,190 newly issued shares of our common stock pursuant to a stock purchase agreement as described below (the "Stock Purchase Agreement"). These cash receipts are not included in the cash and cash equivalents portion of the audited consolidated balance sheet included elsewhere in this Annual Report on Form 10-K. We will also be eligible to receive milestone payments of up to an aggregate of $420 million per licensed product as well as nomination fees for additional targets and certain research funding. If licensed products resulting from the collaboration are approved and sold, we will also be entitled to receive tiered royalties ranging from the mid-single digit percentages to the low-teens percentages on world-wide net sales of the licensed products, subject to customary potential reductions. Lilly's obligation to pay royalties to us expires on a country-by-country and licensed product-by-licensed product basis, upon the latest to occur of certain events related to expiration of patents, regulatory exclusivity or a period of ten years following first commercial sale of the licensed product.

We have the right to elect to co-fund the clinical development of one licensed product, which may be selected from among the third or any subsequent licensed products to reach IND filing. If we elect to co-fund such licensed product, we would reimburse Lilly for a portion of the clinical development expenses for such product and, in exchange, each royalty tier with respect to net sales of such licensed product would be increased by a low single digit percentage. During the term of the Development and License Agreement, we may not (and may not license or collaborate with any third party to) research, develop, or commercialize any *in vivo* gene editing product directed against any gene targets that have been nominated and are subject to the Development and License Agreement.

Unless earlier terminated, the Development and License Agreement will remain in effect on a licensed product-by-licensed product and country-by-country basis until the expiration of a defined royalty term for each licensed product and country. Lilly has the right to terminate the Development and License Agreement for convenience by providing advance notice to us. Either party may terminate the Development and License Agreement (i) for material breach by the other party and a failure to cure such breach within the time period specified in the agreement or (ii) due to a challenge to its patents brought by the other party.

Servier

In February 2016, as further described above, we entered into the Servier Agreement. Pursuant to this Servier Agreement, we have agreed to develop allogeneic chimeric antigen receptor T cell therapies for five unique antigen targets. Servier selected one target at the Servier Agreement's inception and, during 2020, selected two additional hematological cancer targets beyond CD19 and two new solid tumor targets. With the addition of these new targets, we received development milestone payments in 2020 and may be eligible

to receive additional development milestone payments in 2021. Upon selection of an antigen target, we perform early-stage research and development on individual T cell modifications for the selected target, develop the resulting therapeutic product candidates through Phase 1 clinical trials and manufacture clinical trial material for use in Phase 2 clinical trials.

We received an upfront payment of $105.0 million under the Servier Agreement in 2016. At Phase 2 readiness for any product candidate covered by the Servier Agreement, Servier may exercise a commercial option to proceed with development and commercialization of the product candidate. Following the exercise of any such commercial option, Servier must use commercially reasonable efforts to develop and commercialize the product candidate. We have the ability to receive total payments, including the upfront payment, option fees and milestone payments, in the aggregate across all five targets of up to approximately $1.4 billion. This includes up to $1.3 billion in milestone payments, consisting of up to $329.3 million in development milestone payments and up to $925.0 million in commercial milestone payments. We are also entitled to receive tiered royalties ranging from the mid-single digit percentages to sub-teen percentages on worldwide net sales of any products developed under the Servier Agreement, subject to customary potential reductions. Servier's obligation to pay royalties to us expires on a country-by-country and licensed product-by-licensed product basis upon the latest of (1) the expiration of the last to expire valid claim of all Precision patents covering a licensed product, (2) expiration of all regulatory exclusivity with respect to a licensed product in the applicable country of sale, and (3) the expiration of 10 years following the first commercial sale of such licensed product in such country. We also have the right to participate in the development and commercialization of any licensed products resulting from the collaboration through a 50/50 co-development and co-promotion option in the United States, subject to our payment of an option fee, which is exercisable after Servier's commercial option exercise. So long as Servier holds a commercial license with respect to any particular licensed product, we may not develop, manufacture or commercialize any engineered human CAR T cells for use in humans directed to the same antigen target as the target of that licensed product.

Unless terminated earlier, the Servier Agreement expires upon the first to occur of (1) the expiration of the period in which Servier may nominate antigen targets, if there are no included targets under the agreement, (2) the expiration of the period in which Servier may exercise a commercial option on a licensed product candidate, if no commercial options have been exercised by Servier, or (3) the expiration of the last to expire royalty term for the licensed products and satisfaction of all of Servier's payment obligations under the agreement. Servier has the right to terminate the agreement for convenience, either in its entirety or on a target-by-target or product-by-product basis, by providing advance notice to us. We may terminate immediately upon notice to Servier if Servier (itself or through the use of certain affiliates or a third party) or any sublicensee initiates or participates in a patent challenge against our patents licensed by Servier under the agreement. In addition, the Servier Agreement may be terminated (a) by either party for the other party's material breach that remains uncured as specified in the agreement, (b) by either party upon the occurrence of certain insolvency-related events of the other party and (c) upon mutual agreement of the parties in the event either party suffers an event of force majeure as specified in the agreement. If Servier terminates the agreement for our uncured material breach of provisions in the agreement that restrict development, manufacture or commercialization of engineered human T cells with chimeric antigen receptors for use in humans directed to a target selected by Servier, certain licenses we grant to Servier will become royalty-free, fully paid-up, perpetual and irrevocable with respect to the licensed product candidates and licensed products directed to the target that was the subject of such breach, and Servier will be deemed to have previously exercised its commercial option for any then-existing licensed product candidates directed to such target.

Gilead

On July 6, 2020, Gilead Sciences ("Gilead") notified us of its termination of the collaboration and license agreement dated September 10, 2018, subsequently amended by Amendment No. 1 dated March 10, 2020 or (the "Gilead Agreement"), to develop genome editing tools using ARCUS to target viral DNA associated with the hepatitis B virus. Pursuant to the termination notice, the Gilead Agreement terminated on September 4, 2020. Upon termination, we regained full rights and all data we generated for the *in vivo* chronic hepatitis B program developed under the Gilead Agreement.

Duke University

In April 2006, we entered into the Duke License, pursuant to which Duke University ("Duke") granted us an exclusive (subject to certain non-commercial rights reserved by Duke), sublicensable, worldwide license under certain patents related to certain meganucleases and methods of making such meganucleases owned by Duke to develop, manufacture, use and commercialize products and processes that are covered by such patents, in all fields and in all applications. The patents that we license pursuant to the Duke License have been generated through the use of U.S. government funding and are therefore subject to certain federal regulations. See Part I, Item 1A. "Risk Factors— Risks Related to Intellectual Property—Some of our in-licensed intellectual property has been discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies, and compliance with such regulations may limit our exclusive rights and limit our ability to contract with non-U.S. manufacturers."

Under the Duke License, in addition to upfront licensing fees, we are also required to pay Duke (1) a total of $0.3 million in milestone payments, a portion of which we paid upon the completion of our Series A financing, a further portion of which we paid upon our first signed partnership in excess of $1 million, and the remainder of which we will be required to pay upon successful commercialization of seed traits and human therapeutics, (2) royalties in the low single digit percentages on net sales of licensed products and licensed processes sold by us and our affiliates, subject to certain reductions in certain circumstances, with certain annual minimum royalties, and (3) certain percentages of sublicensing revenue received under sublicenses granted to third parties, which are creditable against annual minimum royalties and are subject to certain reductions in certain circumstances. For sublicenses of non-commercial products, the percentage of sublicensing revenue payable to Duke is in the mid-teen percentages for sublicense revenues owed from royalties received and low double-digits for sublicense revenues owed from non-royalty payments. For sublicenses of commercial products created by us and derivatives thereof, the percentage is determined by the highest negotiated royalty rate in such sublicense. If the highest negotiated royalty rate between us and our sublicensee exceeds a mid-single digit percentage, the percentage of sublicensing revenue payable to Duke will be high single digit, decreasing to low single digit as the highest negotiated royalty rate in such sublicense increases.

We closed the transactions under the Lilly Agreement on January 6, 2021 following receipt of clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and, as a result we are required to make $3.0 million in payments under the Duke License in 2021, net of any outstanding credits. See Note 14 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information regarding the Lilly Agreement.

The Duke License will expire upon the expiration of the last-to-expire patent that is licensed to us. We may terminate the Duke License by providing advance written notice as specified in the Duke License. Either party may terminate the Duke License in the event of the other party's uncured material breach or for the other party's fraud, willful misconduct or illegal conduct with respect to the subject matter of the Duke License.

Cellectis S.A.

In January 2014, we entered into a cross-license agreement with Cellectis S.A., which we refer to as the Cellectis License, in connection with a settlement of litigation matters (1) between Cellectis and us and (2) among Cellectis, Duke and us. Cellectis granted us a non-exclusive, sublicensable, worldwide, fully paid, royalty-free license to certain modified I-CreI homing endonuclease patents and Cellectis patents asserted in the litigation, to make, use and commercialize modified I-CreI homing nucleases and products developed using such nucleases, in all fields. The license we received from Cellectis is subject to the rights of a preexisting license agreement that Cellectis entered into with a third party, and the license granted to us excludes any rights exclusively granted by Cellectis under such preexisting license, which preexisting license is limited to certain specific applications unrelated to the fields of human therapeutics and plant agriculture, for so long as the rights under the preexisting license remain exclusive.

We granted Cellectis a non-exclusive, sublicensable, worldwide, fully paid-up, royalty-free license to certain modified I CreI homing endonuclease patents and our patents asserted in the litigation matters (1) between Cellectis and us and (2) among Cellectis, Duke and us to make, use and commercialize modified I-CreI homing nucleases and products developing using such nucleases, in all fields except those for which we did not receive rights from Cellectis due to the preexisting license.

The Cellectis License will expire upon the expiration of the last-to-expire valid claim of all of the patents licensed to or from each of the parties to the agreement. Either party may terminate any of the licenses granted under the agreement (1) in the event of the other party's material breach, subject to an opportunity to cure within the time period specified in the Cellectis License, or (2) if the other party directly or indirectly challenges a patent licensed to it by the other party.

Competition

As a diversified life sciences company, we compete in multiple different fields. The biotechnology, pharmaceutical and agricultural biotechnology industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on intellectual property and proprietary products. We principally compete with others developing and utilizing genome editing technology in the human health and plant sciences sectors, including companies such as Allogene Therapeutics, Inc., Alnylam Pharmaceuticals, Inc., Caribou Biosciences, Inc., Cellectis S.A., CRISPR Therapeutics, AG, Dicerna Pharmaceuticals, Inc., Editas Medicine, Inc., Intellia Therapeutics, Inc., Sangamo Therapeutics, Inc., and Beam Therapeutics, Inc.

We compete with many biotechnology and pharmaceutical companies, academic research institutions, governmental agencies and public and private research institutions. We expect that our operations focused on CAR T cell product candidate development and commercialization will face substantial competition from those focusing on immunotherapy solutions. Several companies, including Novartis Pharmaceuticals Corp. and Gilead have obtained FDA approval for autologous cell therapies, and a number of companies, including Cellectis S.A., Celgene Corp., Allogene Therapeutics and CRISPR Therapeutics AG, are pursuing allogeneic cell therapies. We expect that our operations focused on developing products for *in vivo* treatment of genetic disease will face substantial competition from others focusing on gene therapy treatments, especially those that may focus on conditions that our product candidates target. Moreover, any human therapeutics products that we may develop will compete with existing standards of care for the diseases and conditions that our product candidates target and other types of treatments, such as small molecule, antibody or protein therapies.

Many of our current or potential competitors in the therapeutics space, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials and marketing approved products than we do. In addition to competing on the bases of safety, efficacy, timing of development and commercialization, convenience, cost, availability of reimbursement and rate of adoption of potential product candidates, we may also compete with these competitors in recruiting and retaining qualified personnel, establishing clinical sites, establishing relationships with collaborators or other third parties, registering patients for clinical trials and acquiring technologies complementary to, or necessary for, our product development platforms. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market.

Many of our current or potential competitors in the agricultural biotechnology space, either alone or with others, have significantly greater financial resources and expertise in research and development, manufacturing, testing and marketing approved products than we do. Mergers and acquisitions in the plant science, specialty food ingredient and agricultural biotechnology, seed and chemical industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through strategic relationships with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring technologies complementary to, or necessary for, our food platform.

Furthermore, we rely upon a combination of patents and trade secret protection, as well as license and confidentiality agreements to protect the intellectual property related to our proprietary technologies, product candidate development programs and product candidates. Our success depends in large part on our ability to secure and maintain patent protection in the United States and other countries with respect to the ARCUS nucleases used in our existing allogeneic CAR T immunotherapy, *in vivo* gene correction and food programs, as well as any future product candidates. Moreover, the industries in which we operate are characterized by the existence of large numbers of patents and frequent allegations of patent infringement. If, therefore, we are unable to obtain and maintain patent protection for our technology and product candidates, or if the scope of the patent protection obtained or in-licensed is not sufficiently broad or if the validity of such patent protection is threatened, we may not be able to compete effectively, as it could create opportunities for competitors to enter the market or dissuade other companies from collaborating with us to develop products and technology, any of which would hurt our competitive position and could impair our ability to successfully commercialize our product candidates in any indication for which they are approved.

Intellectual property

Our success depends in part on our abilities to (1) obtain and maintain proprietary protection for ARCUS, (2) defend and enforce our intellectual property rights, in particular, our patent rights, (3) preserve the confidentiality of our know-how and trade secrets, and (4) operate without infringing valid and enforceable intellectual property rights of others. We seek to protect our proprietary position by, among other things, exclusively licensing U.S. and certain foreign patent applications, and filing U.S. and certain foreign patent applications related to ARCUS, existing and planned programs, and improvements that are important to the development of our business. We also rely on trademarks, trade secrets, know-how, continuing technological innovation and confidential information, and the pursuit of licensing opportunities, to develop and maintain our proprietary position and protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors and others who may have access to proprietary information, under which they are bound to assign to us inventions made during the term of their employment or term of service. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems.

We cannot be sure that patents will be granted with respect to any patent applications we have licensed or filed or may license or file in the future, and we cannot be sure that any patents we have licensed or which have been granted to us, or patents that may be licensed or granted to us in the future, will not be challenged, invalidated or circumvented or that such patents will be commercially useful in protecting our technology. Moreover, trade secrets can be difficult to protect. While we have confidence in the measures we take to protect and preserve our trade secrets, such measures can be breached, and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. For more information regarding the risks related to our intellectual property, see Part I, Item 1A. “Risk Factors—Risks Related to Intellectual Property.”

Our patent portfolio consists of a combination of issued patents and pending patent applications that are owned by us or licensed by us from third parties. As of December 31, 2020, we have an exclusive license from Duke under 12 issued U.S. patents and one pending U.S. patent application. In addition, as of December 31, 2020, we own 26 issued U.S. patents, 27 pending non-provisional U.S. patent applications, and 13 pending Patent Cooperation Treaty (“PCT”) international patent applications. We also exclusively license from Duke or own many corresponding patents and patent applications outside the United States, as described below. We intend to pursue, when possible, additional patent protection, including composition of matter, method of use and process claims, related to ARCUS. We also intend to obtain rights to existing delivery technologies through one or more licenses from third parties.

ARCUS Platform Patent Families

We license one patent family from Duke and own three patent families that are directed to the core technologies employed in our ARCUS platform for nuclease design. Thus, each of our product candidates is protected by one or more patents in these families.

The first family, licensed from Duke, includes 12 issued U.S. patents, nine issued European patents, three issued Japanese patents, and one issued patent in each of Australia and Canada. This family also includes pending patent applications in each of the United States, Europe, Canada, and two pending patent applications in Japan. Patents in this family include claims directed to (1) recombinant meganucleases having altered cleavage specificity, altered heterodimer formation, and/or altered DNA binding affinity, (2) methods for cleaving target recognition sites in DNA using such meganucleases, and (3) methods for producing genetically modified eukaryotic cells using such meganucleases. Patents in this family have a standard expiration date of October 18, 2026, subject to potential extensions.

The second family, which we own, includes four issued U.S. patents, three issued patents in Europe, two issued patents in Japan, and one issued patent in Australia. This family also includes two pending patent applications in the United States, and pending patent applications in each of Europe, Japan and Australia. Patents in this family include claims directed to (1) recombinant single-chain meganucleases, and (2) methods for producing isolated genetically modified eukaryotic cells using such meganucleases. Patents in this family have a standard expiration date of October 31, 2028, subject to potential extensions.

The third family, which we own, includes three issued patents in the United States, and two issued patents in each of Europe and Australia. This family also includes two pending patent applications in the United States and one pending patent application in Europe. Patents in this family include claims directed to methods of cleaving DNA at specific four base pair sites using a recombinant meganuclease. Patents in this family have a standard expiration date of July 14, 2029, subject to potential extensions.

The fourth family, which we own, includes a pending PCT international patent application. Patent applications in this family include claims directed to recombinant meganucleases engineered to cleave recognition sequences having specific four base pair sites. Patents in this family, if issued, will have a standard expiration date of May 7, 2040, subject to potential extensions.

Immunotherapy Patent Families

We own 19 patent families that are directed to immunotherapy, including CAR T cell therapies. Some of these are applicable to immunotherapies and/or CAR T cells directed to killing a variety of different types of infected or cancerous cells. Others are directed to specific indications in which cells expressing particular antigens are targeted, or methods of manufacturing immunotherapies. Each of our immunotherapy product candidates is protected by one or more patents in these families.

The first family includes nine issued U.S. patents, one issued patent in each of Europe and Japan, and pending patent applications in each of the United States, Europe, Australia, Canada, China, Hong Kong, Israel, Japan, Mexico and South Korea. Patents in this family include claims directed to (1) populations of genetically modified human T cells in which 20%-65% of the cells have reduced expression of an endogenous TCR and express an anti-cancer antigen CAR from DNA inserted into the cells' TCR alpha constant region (TRAC) gene, (2) methods for using such populations of genetically modified human T cells for cancer immunotherapy, (3) pharmaceutical compositions comprising such populations of genetically modified human T cells, (4) genetically modified human T cells which have reduced expression of an endogenous TCR and express an anti-cancer antigen CAR from DNA inserted into the cells' TRAC gene, (5) methods for using such genetically modified human T cells for cancer immunotherapy, and (6) pharmaceutical compositions comprising such genetically modified human T cells. Patents in this family have a standard expiration date of October 5, 2036, subject to potential extensions.

The second family includes one issued patent in each of the United States and Europe, pending patent applications in each of the United States, Europe, Hong Kong, Canada and Japan, and two pending patent applications in Australia. Patent applications in this family include claims directed to (1) first-generation recombinant meganucleases that cleave a target in the TRAC gene, (2) nucleic acids and vectors encoding such recombinant meganucleases, (3) methods for producing genetically modified eukaryotic cells, including CAR T cells, using such meganucleases, and (4) methods of using such genetically modified eukaryotic cells for cancer immunotherapy. Patents in this family will have a standard expiration date of October 5, 2036, subject to potential extensions.

The third family includes a pending PCT international patent application, and pending patent applications in each of the United States, Europe, Australia, Canada, China, Israel, Japan, Mexico, and South Korea. Patent applications in this family include claims directed to (1) second-generation engineered meganucleases that cleave a specific target in the TRAC gene, (2) nucleic acids and vectors encoding such recombinant meganucleases, (3) methods for producing genetically modified eukaryotic cells, including CAR T cells, using such meganucleases, (4) genetically modified eukaryotic cells or populations of cells prepared by such methods, (5) pharmaceutical compositions comprising such cells or populations of cells, and (6) methods of treating diseases using such cells, populations of cells or pharmaceutical compositions to treat diseases, including cancer immunotherapy. Patents in this family, if issued, will likely have a standard expiration date of April 11, 2039, subject to potential extensions.

The fourth family includes one issued patent in each of the United States and Europe, pending patent applications in Europe, Canada and Japan, and two pending patent applications in the United States and Australia. Patent applications in this family include claims directed to (1) nucleic acids encoding co-stimulatory domains having certain amino acid sequences, (2) recombinant DNA constructs and vectors comprising such nucleic acids, (3) nucleic acids and vectors encoding such recombinant meganucleases, (4) genetically modified cells comprising such nucleic acids, (5) methods for producing such genetically modified cells, (6) pharmaceutical compositions comprising such cells, and (7) methods of immunotherapy using such cells. Patents in this family have a standard expiration date of October 4, 2037, subject to potential extensions.

The fifth family includes pending patent applications in the United States and Europe. Patent applications in this family include claims directed to (1) methods of reducing cytotoxicity associated with DNA transfection in primary eukaryotic cells, (2) methods for increasing the number of gene-edited primary eukaryotic cells following DNA transfection, (3) methods for increasing gene editing frequency in primary eukaryotic cells following DNA transfection, (4) methods for increasing the number of primary eukaryotic cells comprising targeted insertion of an exogenous sequence of interest into the genome following DNA transfection, (5) methods for increasing insertion frequency of an exogenous sequence of interest into the genome in primary eukaryotic cells following DNA transfection, (6) methods for high throughput screening of primary human T cells expressing a CAR or exogenous TCR, (7) methods for high throughput screening of primary human T cells expressing a CAR or exogenous TCR, and (8) genetically modified primary eukaryotic cells produced by such methods. Patents in this family, if issued, will have a standard expiration date of April 30, 2038, subject to potential extensions.

The sixth family includes pending patent applications in Europe, Australia, Canada and Japan, and two pending patent applications in the United States. Patent applications in this family include claims directed to (1) recombinant meganucleases that recognize and cleave a recognition sequence within the human beta-2-microglobulin gene, (2) nucleic acids and vectors encoding such recombinant meganucleases, (3) methods for producing genetically modified eukaryotic cells, including CAR T cells, using such meganucleases, (4) populations of genetically modified eukaryotic cells in which 80% of the cells have reduced expression of an endogenous TCR and 80% of the cells have reduced expression of beta-2-microglobulin, (5) pharmaceutical compositions comprising such populations of

genetically modified eukaryotic cells, and (6) methods for using such genetically modified eukaryotic cells for cancer immunotherapy. Patents in this family, if issued, will have a standard expiration date of December 22, 2036, subject to potential extensions.

The seventh family includes an issued patent in the United States, and pending patent applications in the United States, Europe, Australia, Canada, Hong Kong, and Japan. Patent applications in this family include claims directed to (1) nucleic acids encoding an engineered antigen receptor (e.g., a CAR) and an inhibitory molecule (e.g., an RNA interfering with beta-2-microglobulin expression), (2) genetically modified eukaryotic cells comprising such nucleic acids, (3) methods for producing such genetically modified eukaryotic cells using such nucleic acids and an engineered nuclease that promotes insertion of such nucleic acids, (4) genetically modified eukaryotic cells expressing an engineered antigen receptor and having expression of beta-2-microglobulin or MHC Class I molecules reduced by 10%-95%, (5) pharmaceutical compositions comprising such genetically modified eukaryotic cells, and (6) methods for using such genetically modified eukaryotic cells for immunotherapy. Patents in this family have a standard expiration date of May 8, 2038, subject to potential extensions.

The eighth family includes pending patent applications in the United States, Europe, Australia, Canada, Hong Kong, and Japan. Patent applications in this family include claims directed to (1) engineered meganucleases that recognize and cleave a recognition sequence in an upstream intron of the human TRAC gene, (2) nucleic acids and vectors encoding such engineered meganucleases, (3) methods for producing genetically modified T cells using such nucleic acids or vectors, (4) genetically modified T cells in which an exogenous sequence is inserted into an upstream intron of the human TRAC gene and endogenous TCR expression is reduced, (5) populations of such genetically modified T cells, (6) pharmaceutical compositions comprising such genetically modified T cells, and (7) methods of treating disease using such genetically modified T cells and pharmaceutical compositions, including cancer immunotherapy. Patents in this family, if issued, will have a standard expiration date of June 27, 2038, subject to potential extensions.

The ninth family includes pending patent applications in the United States and Europe. Patent applications in this family include claims directed to (1) nucleic acids and vectors encoding certain modified human epidermal growth factor receptor, or EGFRs, (2) genetically modified cells and populations of cells, including T cells and CAR T cells, expressing such modified EGFRs, (3) methods for producing such genetically modified cells using such nucleic acids or vectors encoding such modified EGFRs, (4) pharmaceutical compositions comprising such genetically modified cells, (5) methods for isolating such genetically modified cells, (6) methods of treating disease using such genetically modified cells and pharmaceutical compositions, including cancer immunotherapy, and (7) methods of depleting such genetically modified cells in a subject using anti-modified EGFR antibodies. Patents in this family, if issued, will likely have a standard expiration date of October 3, 2038, subject to potential extensions.

The tenth family includes a pending provisional patent application in the United States and a pending PCT international patent application. Patent applications in this family include claims directed to (1) methods for preparing genetically-modified immune cells, (2) populations of genetically-modified immune cells, (3) pharmaceutical compositions comprising such populations of genetically-modified immune cells, (4) methods of treating a disease using such populations of genetically-modified immune cells, (5) lipid nanoparticle compositions, and (6) kits for transfecting a eukaryotic cell with mRNA. Patents in this family, if issued, will have a standard expiration date of April 3, 2040, subject to potential extensions.

The eleventh family includes a pending provisional patent application in the United States, a pending PCT international patent application, and a pending non-provisional patent application in the United States. Patent applications in this family include claims directed to (1) a genetically-modified immune cell comprising in its genome a nucleic acid sequence encoding a microRNA-adapted shRNA, (2) a method for reducing the expression of an endogenous protein in an immune cell, (3) immune cells made by such methods, (4) populations of such immune cells, (5) pharmaceutical compositions comprising such populations of immune cells, and (6) methods of immunotherapy for treating a disease in a subject. Patents in this family, if issued, will have a standard expiration date of April 3, 2040, subject to potential extensions.

We own eight additional patent families that include pending provisional patent applications in the United States or pending PCT international patent applications that are directed to immunotherapies, including CAR T cell therapies, or to technologies that are useful for the manufacture of immunotherapies. We jointly own one patent family that includes a pending PCT international patent application directed to immunotherapies. We will determine in the future whether to pursue each of these applications.

In October 2020, we announced the U.S. Patent and Trademark Office's PTAB issued judgements in our favor in two patent interference proceedings that challenged nine U.S. patents we owned. The patents, which issued in 2018, relate to allogeneic CAR T cells produced by inserting a gene encoding a CAR into the TRAC locus, as well as methods of using those cells for cancer immunotherapy. In the interference proceedings, a third party argued that it had invented the technology in 2012. The PTAB, however, found that the third-party patent application did not satisfy the written description requirement and rejected these claims while maintaining the claims in all nine of our patents.

Other Patent Families

We own three patent families directed to gene therapy for Hepatitis B virus. The first family includes two issued patents in the United States, one issued patent in Japan, and pending patent applications in the United States, Europe, Japan, Canada, Australia, China, South Korea, Mexico, Israel, Colombia, Costa Rica, the Dominican Republic, Egypt, Eurasia, Guatemala, Hong Kong, Morocco, Malaysia, New Zealand, Nigeria, Panama, Peru, the Philippines, Saudi Arabia, South Africa, Thailand and Vietnam. Patents in this family will have a standard expiration date of October 13, 2037, subject to potential extensions. The second family includes a pending PCT international patent application and patent applications in the United States, Europe, Taiwan and the Gulf Cooperation Council. Patents in this family, if issued, will have a standard expiration date of April 11, 2039, or April 12, 2039, subject to potential extensions. The third family includes a pending PCT international patent application. Patents in this family, if issued, will have a standard expiration date of December 4, 2040, subject to potential extensions.

We own one patent family directed to engineered meganucleases and methods of treatment targeting the PCSK9 gene, which is associated with familial hypercholesterolemia. This family includes pending patent applications in the United States, Europe, Australia, Canada, China, Hong Kong, Israel, Japan, Mexico, and South Korea. Patents in this family, if issued, will have a standard expiration date of April 20, 2038, subject to potential extensions.

We own two patent families directed to engineered meganucleases and methods of treatment targeting the rhodopsin gene, which is associated with retinitis pigmentosa. The first family includes two issued patents in the United States, one issued patent in Japan, pending patent applications in the United States, Europe, Canada and Japan, and two pending patent applications in Australia. Patents in this family will have a standard expiration date of September 8, 2036, subject to potential extensions. The second family includes two pending provisional patent application in the United States. Patents in this family, if issued, will likely have a standard expiration date of May 12, 2041, subject to potential extensions.

We own one patent family that is directed to engineered meganucleases and methods of treatment targeting the hydroxyacid oxidase 1 gene, which is associated with primary hyperoxaluria 1. This family includes a pending PCT international patent application. Patents in this family, if issued, will have a standard expiration date of December 20, 2039, subject to potential extensions.

We own two patent families that are directed to engineered meganucleases and methods of treatment targeting the Factor VIII gene, which is associated with Hemophilia A. The first family includes pending patent applications in the United States, Europe, Australia, Canada, and Japan. Patents in this family, if issued, will have a standard expiration date of May 3, 2037, subject to potential extensions. The second family includes pending patent applications in the United States and Europe. Patents in this family, if issued, will have a standard expiration date of November 1, 2038, subject to potential extensions.

We own one patent family directed to engineered meganucleases and methods of treatment targeting the ApoC3 gene, which is associated with diseases resulting from abnormal triglyceride synthesis. This family includes a pending provisional patent application in the United States. Patents in this family, if issued, will likely have a standard expiration date of August 11, 2041, subject to potential extensions.

We own one patent family directed to engineered meganucleases and methods of treatment targeting the transthyretin (TTR) gene, which is associated with TTR amyloidosis. This family includes a pending provisional patent applications in the United States. Patents in this family, if issued, will likely have a standard expiration date of August 21, 2041, subject to potential extensions.

We own two patent families directed to engineered meganucleases and methods of treatment targeting the dystrophin gene, which is associated with Duchenne Muscular Dystrophy. The first family includes an issued patent in Europe, pending patent applications in Europe, Australia, Canada and Japan, and two pending patent applications in the United States. Patents in this family will have a standard expiration date of March 12, 2035, subject to potential extensions. The second family includes a pending provisional patent application in the United States. Patent applications in this family, if issued, will likely have a standard expiration date of November 12, 2041.

We own one patent family directed to engineered meganucleases and methods of treatment targeting genomic trinucleotide repeats, which are associated with several trinucleotide repeat disorders. This family includes pending patent applications in the United States and Europe. Patents in this family, if issued, will have a standard expiration date of May 2, 2036, subject to potential extensions.

We license from Duke one patent family directed to engineered fusion proteins comprising engineered meganuclease domains and effector domains which may be useful in controlling gene expression. This patent family includes two pending patent applications in the United States. Patents in this family, if issued, will have a standard expiration date of October 18, 2026, subject to potential extensions.

We own one patent family directed to engineered meganucleases that target amplifiable genetic loci and may be useful in producing cells with amplified transgenes. This family includes two issued patents in Europe, one issued patent in the United States, and one pending patent application in each of the United States and Europe. Patents in this family will have a standard expiration date of June 1, 2032, subject to potential extensions.

We own two patent families directed to self-limiting viral vectors (e.g., AAV vectors) that encode engineered meganucleases which eliminate the vector after gene delivery. The first family includes an issued patent in the United States, and pending patent applications in the United States and Europe. Patents in this family will have a standard expiration date of June 20, 2036, subject to potential extensions. The second family includes one pending provisional patent application in the United States. Patents in this family, if issued, will likely have a standard expiration date of May 11, 2041, subject to potential extensions.

We own one patent family directed to compositions and methods for sequential stacking of nucleic acid sequences into a genomic locus. This family includes a pending PCT international patent application. Patents in this family, if issued, will have a standard expiration date of July 24, 2040, subject to potential extensions.

We own one patent family directed to eukaryotic cells comprising a modified transferrin gene that includes an exogenous nucleic acid sequence encoding a polypeptide of interest. This family includes a pending PCT international patent application. Patents in this family, if issued, will have a standard expiration date of January 10, 2040.

We own one patent family directed to methods for separation of empty and full AAV capsids during manufacturing. This family includes a pending provisional application in the United States. Patents in this family, if issued, will likely have a standard expiration date of February 6, 2041.

We own an issued patent in the United States directed to engineered meganucleases which target a genetic locus in maize and methods for genetically modifying that locus in maize. That patent has a standard expiration date of March 2, 2029, subject to potential extensions.

We own, through our Elo Life Systems subsidiary, one patent family directed to the modulation of endogenous mogroside pathway genes in watermelon and other cucurbits. This family includes a pending provisional patent application in the United States. Patents in this family, if issued, will likely have a standard expiration date of March 31, 2041, subject to potential extensions.

We own, through our Elo Life Systems subsidiary, one patent family directed to methods for producing vanilla plants with improved flavor and agronomic product. This family includes a pending provisional patent application in the United States. Patents in this family, if issued, will likely have a standard expiration date of October 23, 2041, subject to potential extensions.

For any individual patent, the term depends on the applicable law in the country in which the patent is granted. In most countries where we have filed patent applications or in-licensed patents and patent applications, patents have a term of 20 years from the application filing date or earliest claimed non-provisional priority date. In the United States, the patent term is 20 years but may be shortened if a patent is terminally disclaimed over another patent that expires earlier. The term of a U.S. patent may also be lengthened by a patent term adjustment to address administrative delays by the USPTO in granting a patent.

In the United States, the term of a patent that covers an FDA-approved drug or biologic may be eligible for patent term extension in order to restore the period of a patent term lost during the premarket FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the natural expiration of the patent. The patent term restoration period is generally equal to the portion of the FDA regulatory review period for the approved product that occurs after the date the patent issued, subject to certain exceptions. Only one patent may be extended for a regulatory review period for any product, and the application for the extension must be submitted prior to the expiration of the patent. In the future, we may decide to apply for restoration of patent term for one of our currently owned or licensed patents to extend its current expiration date, depending on the expected length of the clinical studies and other factors involved in the filing of the relevant BLA.

We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in our owned or in-licensed patents or other intellectual property as an inventor or co-inventor. If we are required to and unable to obtain an exclusive license to any such third-party co-owners' interest in such patent applications, such co-owners may be able to license their rights to other third parties, including our competitors. In addition, we may need the cooperation of any such co-owners to enforce any patents that issue from such patent applications against third parties, and such cooperation may not be provided to us. We or our

licensors are subject to and may also become a party to similar proceedings or priority disputes in Europe or other foreign jurisdictions.

Our registered trademark portfolio currently contains four registered trademarks in the United States, including ARCUS, ARC nuclease, Elo Life Systems and Zeromelon. We also own registered trademarks for both ARCUS and ARC nuclease in Europe, China and Australia, and a registered trademark for ARCUS in Canada. We own a registered trademark for Elo Life Systems in Australia, and pending trademark application for Zeromelon in each of Australia, Brazil, Canada, China, Europe, Germany, India, Japan, Mexico, South Korea, and the United Kingdom. Additionally, we own pending trademark applications for Zerocanola, Precision Biotechnology and Climate-Smart in the United States, Australia, Brazil, Canada, China, Europe, Japan, and Mexico.

Licensed Intellectual Property

Duke University

In April 2006, we exclusively licensed from Duke families of patents and patent applications related to certain meganucleases and methods of making such nucleases owned by Duke. The patent family covered by the Duke License comprises the core patents covering ARCUS described above. See "—License and Collaboration Agreements—Duke University" above for additional information regarding the Duke License.

Cellectis S.A.

In January 2014, we entered into the Cellectis License, which relates to certain modified I-CreI homing endonuclease patents and patents that had been subject to litigation between us and Cellectis. The patents to which we have rights under the cross-license include at least eight issued patents in each of the United States and Australia, seven issued patents in Europe, two issued patents in Canada and one issued patent in Japan. These patents have standard expiration dates prior to January 29, 2034, subject to potential extensions. See "—License and Collaboration Agreements—Cellectis S.A." above for additional information regarding the Cellectis License.

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biological product candidates such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Biologics Regulation

The process required by the FDA before biologic product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's Good Laboratory Practice requirements, or GLPs;
- demonstration of successful, reproducible manufacture of clinical trial material produced in compliance with current Good Manufacturing Practices (cGMPs) and consistent with all release specifications for the product at initial manufacture and over time when stored under defined conditions;
- submission to the FDA of an IND, which must become effective before clinical trials may begin, and which must be properly maintained throughout the course of clinical development;
- approval by an Investigational Review Board ("IRB") or ethics committee, and additional scientific and biosafety review committees at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials following protocols agreed to by FDA to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a BLA after completion of all pivotal clinical trials;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;

- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed commercial product is produced to assess compliance with cGMP and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with GCPs; and

- satisfactory completion of an FDA Advisory Committee review, if applicable;

- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. A central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product according to the proposed clinical protocol including the proposed dose level(s). An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In addition to the submission of an IND to the FDA before initiation of a clinical trial in the United States, certain human clinical trials involving recombinant or synthetic nucleic acid molecules are subject to oversight of institutional biosafety committees, or IBCs, as set forth in the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules, or NIH Guidelines. Specifically, under the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, for each site proposing to conduct the clinical trial an independent IRB must review and approve the plan for any clinical trial and the informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB, or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.

- Phase 2—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.

- Phase 3—The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

- Phase 4—In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be made a condition to approval of the BLA.

Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including studies initiated by investigators. The submission of a BLA requires payment of a substantial user fee to FDA, and the sponsor of an approved BLA is also subject to an annual program fee. These fees are typically increased annually. A waiver of user fees may be obtained under certain limited circumstances. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the application also includes a non-orphan indication.

Once a BLA has been submitted, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. Priority review designation will direct overall attention and resources to the evaluation of applications for products that, if approved, would be significant improvements in the safety or effectiveness of the treatment, diagnosis, or prevention of serious conditions. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites involved in the pivotal studies submitted in the BLA to assure compliance with GCP.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter ("CRL") if the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable. In the CRL, the FDA will outline the deficiencies in the BLA submission and often will request additional information or testing that the applicant might perform to place the BLA in condition for approval, including requests for additional information or clarification. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. Note that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the CRL without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with the requirement that a Risk Evaluation and Mitigation Strategy ("REMS") be established to ensure the benefits of the product outweigh its risks when used according to the approved label. A REMS is a safety strategy to manage a known or potential serious risk associated with a medicine and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries, required prescriber training, and other risk minimization tools. The FDA also may condition approval on, among other things, changes to

proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase IV post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could impact the timeline for regulatory approval or otherwise impact ongoing development programs.

Expedited Development and Review Programs

A sponsor may seek approval of its product candidate under programs designed to accelerate FDA's review and approval of new drugs and biological products that meet certain criteria. Specifically, new drugs and biological products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. For a fast track product, the FDA may consider sections of the BLA for review on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the application, the FDA agrees to accept sections of the application and determines that the schedule is acceptable and the sponsor pays any required user fees upon submission of the first section of the application. A fast track designated product candidate may also qualify for priority review, under which the FDA sets the target date for FDA action on the BLA at six months after the FDA accepts the application for filing. Priority review is granted pending availability of FDA review resources for the expedited review and when there is evidence that the proposed product would be a significant improvement in the safety or effectiveness of the treatment, diagnosis, or prevention of a serious disease or condition. If criteria are not met for priority review, the application is subject to the standard FDA review period of 10 months after FDA accepts the application for filing. Priority review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

Under the accelerated approval program, the FDA may approve a BLA on the basis of either a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Post-marketing studies or completion of ongoing studies after marketing approval are generally required to verify the biologic's clinical benefit in relationship to the surrogate endpoint or ultimate outcome in relationship to the clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product. FDA may withdraw approval of a drug or indication approved under accelerated approval if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product.

In addition, the Food and Drug Administration Safety and Innovation Act, or the FDASIA, which was enacted and signed into law in 2012, established the breakthrough therapy designation. A sponsor may seek FDA designation of its product candidate as a breakthrough therapy if the product candidate is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the therapy may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. If the FDA designates a breakthrough therapy, it may take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program will gather the nonclinical and clinical data necessary for approval as efficiently as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and considering alternative clinical trial designs when scientifically appropriate, which may result in smaller trials or more efficient trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough therapy designation comes with all of the benefits of fast track designation, which means that the sponsor may file sections of the BLA for review on a rolling basis if certain conditions are satisfied, including an agreement with the FDA on the proposed schedule for submission of portions of the application and the payment of applicable user fees before the FDA may initiate a review.

The Regenerative Medicine Advanced Therapy, or RMAT, designation facilitates an efficient development program for, and expedites review of, any drug that meets the following criteria: (1) it qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (2) it is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (3) preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such a disease or condition. Like breakthrough therapy designation, RMAT designation provides potential benefits that include more frequent meetings with FDA to discuss the development plan for the product candidate, and eligibility for rolling review and priority review. Products granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites, including through expansion to additional sites. RMAT-designated products that receive accelerated approval may, as appropriate, fulfill their post-approval requirements through the submission of clinical evidence, clinical studies, patient registries, or other sources of real world evidence (such as electronic health records); through the collection of larger confirmatory data sets; or via post-approval monitoring of all patients treated with such therapy prior to approval of the therapy.

Fast track designation, priority review, breakthrough therapy designation and RMAT designation do not change the standards for approval but may expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Orphan Drug Designation and Exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 individuals in the United States, or a patient population greater than 200,000 individuals in the United States and when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA.

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient within the product for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same active ingredient for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug many not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or, as noted above, if the second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. We plan to seek orphan drug designation for some or all of our product candidates in specific orphan indications in which there is a medically plausible basis for the use of these products.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Exclusivity

The Affordable Care Act, signed into law in 2010, includes a subtitle called the BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A biological product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study.

The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Genetically Engineered Food Products

In the United States, the FDA and the USDA are primarily responsible for overseeing food regulation and safety, although many other federal agencies also play a role in food regulation.

USDA has jurisdiction over certain genetically engineered crops through the Animal and Plant Health Inspection Services, or APHIS. Under the Plant Protection Act and APHIS' Part 340 regulations, USDA requires anyone who wishes to import, transport interstate, or release into the environment a "regulated article" to apply for a permit or, in some cases, notify APHIS that the introduction will be made. Regulated articles are defined as "any organism which has been altered or produced through genetic engineering which USDA determines is a plant pest or has reason to believe is a plant pest." Regulated articles may be subject to extensive regulation, including both permitting requirements and inspections. However, to the extent products are subject to APHIS regulation, APHIS may make a determination of nonregulated status for a product following the submission of a petition requesting such a determination. The petition process can be a multi-year process that varies based on a number of factors, including APHIS's familiarity with similar products, the type and scope of the environmental review conducted, and the number and types of public comments received. APHIS conducts a comprehensive science-based review of the petition to assess, among other things, plant pest risk, environmental considerations pursuant to the National Environmental Policy Act of 1969, or NEPA, and any potential impact on endangered species. If, upon the completion of the review, APHIS grants the petition, the product is no longer deemed a "regulated article" and the petitioner may commercialize the product, subject to any conditions set forth in the decision. In January 2017, APHIS proposed significant amendments to its Part 340 regulatory framework that would, among other things, clarify the types of genetically engineered plants subject to regulation thereunder. In November 2017, however, APHIS withdrew its proposed rule and stated that it would "begin a fresh stakeholder engagement aimed at exploring alternative policy approaches." That process appears to remain ongoing.

On May 4, 2018, the USDA issued a proposed rule implementing the National Bioengineered Food Disclosure Standard, with a proposed compliance date of January 1, 2020. Under this proposed rule, the label of a bioengineered, or BE, food must include a disclosure that the food is a BE food or contains a BE ingredient, with certain exceptions. This proposed rule defines BE food as "a food that contains genetic material that was has been modified through *in vitro* recombinant deoxyribonucleic acid, or DNA, techniques and for which the modification could not otherwise be obtained through conventional breeding or found in nature," except in the case of an incidental additive present in food at an insignificant level and that does not have any technical or functional effect in the food. The USDA's proposed rule may change significantly prior to being finalized.

The FDA's oversight of food safety and security is primarily carried out by the Center for Food Safety and Applied Nutrition. To execute its responsibilities, the FDA conducts inspections and collects and analyzes product samples. Foods are typically not subject to premarket review and approval requirements, with limited exceptions, such as the requirement for premarket review and approval of food additives. Under Section 201(s) and 409 of the FDCA, any substance that is reasonably expected to become a component of food is considered a "food additive" that is subject to premarket approval by the FDA, unless it is already subject to a food additive regulation. Ingredients that are GRAS are exempt from the definition of food additive and from the premarket approval requirements. Under section 201(s), and FDA's implementing regulations, the use of a food substance may be GRAS either through a determination by qualified experts or, for a substance used in food before 1958, through experience based on common use in food.

Manufacturers of GRAS substances may voluntarily provide the FDA with a notification of GRAS determination, which includes, among other things, a description of the substance, the applicable conditions of use, the dietary exposure and an explanation of how the substance was determined to be safe for the intended use. Upon review of such a notification, the FDA may respond with a "no questions" letter stating that while it has not made its own GRAS determination, it has no questions at the time regarding the applicant's own GRAS determination. Alternatively, manufacturers may self-affirm that a given substance is GRAS without the voluntary FDA notification. A company may market a new food ingredient based on its independent determination that the substance is GRAS; however, the FDA can disagree with this determination and take enforcement action.

The FDA regulates foods made with genetically modified organisms under the approach summarized in its 1992 "Statement of Policy: Foods Derived from New Plant Varieties." Under this policy, updated in 2017, the FDA regulates foods derived from genetically modified plant varieties consistent with the framework for non-genetically modified foods. Under this framework, the FDA offers a voluntary consultation process to determine whether a food derived from a genetically modified plant variety raises any safety or other regulatory issues, such as whether any substance in the food from the plant may require premarket approval as a food additive.

Foreign Regulation

Medicinal products

Clinical trials. Clinical trials of medicinal products in the European Economic Area ("EEA") (which is comprised of the 27 Member States of the EU plus Norway, Iceland and Liechtenstein) must be conducted in accordance with European Union and national regulations and the International Conference on Harmonization ("ICH") guidelines on GCPs. Additional GCP guidelines from the European Commission, focusing in particular on traceability, apply to clinical trials of advanced therapy medicinal products. If the sponsor of the clinical trial is not established within the EEA, it must appoint an entity within the EEA to act as its legal representative. The sponsor must take out a clinical trial insurance policy, and in most countries, the sponsor is liable to provide 'no fault' compensation to any study subject injured in the clinical trial.

Prior to commencing a clinical trial, the sponsor must obtain a clinical trial authorization ("CTA"), from the competent authority, and a positive opinion from an independent ethics committee. The application for a CTA must include, among other things, a copy of the trial protocol and an investigational medicinal product dossier containing information about the manufacture and quality of the medicinal product under investigation. Currently, clinical trial authorization applications must be submitted to the competent authority in each member state in which the trial will be conducted. Under the new Regulation on Clinical Trials, which is currently expected to take effect in 2022, there will be a centralized application procedure where one national authority takes the lead in reviewing the application and the other national authorities have only a limited involvement. Any substantial changes to the trial protocol or other information submitted with the CTA applications must be notified to or approved by the relevant competent authorities and ethics committees. Investigational medicinal products used in clinical trials must be manufactured in accordance with the cGMPs specified in EudraLex, Volume 4, Annex 13 and certified by a Qualified Person before use. Other national and EEA-wide regulatory requirements may also apply.

Marketing authorizations. To market a medicinal product in the EEA, we must obtain a Marketing Authorization ("MA"). There are two types of MAs:

- The Union MA, which is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use ("CHMP") of the European Medicines Agency ("EMA") and which is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as medicinal products derived from biotechnology processes, orphan designated medicinal products, advanced therapy medicinal products (such as gene therapy, somatic cell therapy and tissue engineered products), and medicinal products containing a new active substance indicated for the treatment certain diseases, such as AIDS, cancer, neurodegenerative disorders, diabetes, auto immune and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU. Under the Centralized Procedure, the maximum timeframe for the evaluation of an MA application is 210 days, excluding clock stops. Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is of major interest from the point of view of public health and in particular from the viewpoint of therapeutic innovation. If the CHMP accepts such request, the time limit of 210 days will be reduced to 150 days but it is possible that the CHMP can revert to the standard time limit for the centralized procedure if it considers that it is no longer appropriate to conduct an accelerated assessment.
- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this national MA can be recognized in another Member State through the Mutual Recognition Procedure. If the product has not received a national MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authority of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State.

Under the above described procedures, in order to grant the MA, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy. MAs have an initial duration of five years. After these five years, the authorization may be renewed on the basis of a reevaluation of the risk-benefit balance.

Priority medicines scheme. Innovative products that target an unmet medical need and are expected to be of major public health interest may be eligible for a number of expedited development and review programs, such as the so-called Priority Medicines ("PRIME") scheme, which provides incentives similar to the breakthrough therapy designation in the U.S. PRIME was launched in 2016 by the EMA to support the development and accelerate the review of new therapies to treat patients with unmet medical need. This voluntary scheme is based on enhanced interaction and early dialogue with developers of promising medicines, to optimize development plans and speed up evaluation so these medicines can reach patients earlier. To qualify for PRIME, product candidates require early clinical evidence that the therapy has the potential to offer a therapeutic advantage over existing treatments or benefits patients without treatment options. Among the benefits of PRIME are the appointment of a rapporteur to provide continuous support and help build knowledge ahead of an MA application, early dialogue and scientific advice at key development milestones, and the potential to qualify products for accelerated review earlier in the application process. Innovative medicines fulfilling a medical need may also benefit from different types of fast track approvals, such as a conditional marketing authorization or a marketing authorization under exceptional circumstances granted on the basis of less comprehensive clinical data than normally required (respectively in the likelihood that the sponsor will provide such data within an agreed timeframe or when comprehensive data cannot be obtained even after authorization).

Advanced therapy classification. Based on legislation adopted in 2007, the EMA established an additional regulatory designation for products classified as an advanced therapy medicinal product ("ATMP"). The ATMP designation offers sponsors a variety of benefits similar to those associated with the PRIME scheme, including scientific and regulatory guidance, additional opportunities for dialogue with regulators, and presubmission review and certification of the CMC and nonclinical data proposed for submission in a forthcoming MA applications for micro-,small-, or medium-sized enterprises. To qualify for this designation, product candidates intended for human use must be based on gene therapy, somatic cell therapy, or tissue engineered therapy.

Data and marketing exclusivity. In the EEA, new products authorized for marketing, or reference products, qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization. The data exclusivity period prevents generic or biosimilar applicants from relying on the pre-clinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization in the EU during a period of eight years from the date on which the reference product was first authorized in the EU. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until 10 years have elapsed from the initial authorization of the reference product in the EU. The 10-year market exclusivity period can be extended to a maximum of eleven years if, during the first eight years of those 10 years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

Pediatric development. In the EEA, MA applications for new medicinal products have to include the results of studies conducted in the pediatric population, in compliance with a pediatric investigation plan ("PIP"), agreed with the EMA's Pediatric Committee (" PDCO"). The PIP sets out the timing and measures proposed to generate data to support a pediatric indication of the drug for which marketing authorization is being sought. The PDCO can grant a deferral of the obligation to implement some or all of the measures of the PIP until there are sufficient data to demonstrate the efficacy and safety of the product in adults. Further, the obligation to provide pediatric clinical trial data can be waived by the PDCO when these data is not needed or appropriate because the product is likely to be ineffective or unsafe in children, the disease or condition for which the product is intended occurs only in adult populations, or when the product does not represent a significant therapeutic benefit over existing treatments for pediatric patients. Once the MA is obtained in all member states of the EU and study results are included in the product information, even when negative, the product is eligible for six months' supplementary protection certificate extension (if any is in effect at the time of authorization) or, in the case of orphan products, a two year extension of the orphan market exclusivity.

Orphan drug designation. In the EEA, a medicinal product can be designated as an orphan drug if its sponsor can establish that (1) the product is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; and (2) either (a) such condition affects not more than five in ten thousand persons in the EU when the application is made, or (b) without incentives, it is unlikely that the marketing of the product in the EU would generate sufficient return to justify the necessary investment; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of the condition in question that has been authorized in the EU or, if such method exists, the product will be of significant benefit to those affected by that condition.

In the EEA, an application for designation as an orphan product can be made any time prior to the filing of a MA application.

MA for an orphan drug leads to a ten-year period of market exclusivity. During this market exclusivity period, the EMA or the member state competent authorities, cannot accept another application for a MA, or grant a MA, for a similar medicinal product for the same indication. The period of market exclusivity is extended by two years for medicines that have also complied with an agreed PIP.

This period may, however, be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan drug designation, for example because the product is sufficiently profitable not to justify market exclusivity. Market exclusivity can be revoked only in very selected cases, such as consent from the marketing authorization holder, inability to supply sufficient quantities of the product, demonstration of "clinical superiority" by a similar medicinal product, or, after a review by the Committee for Orphan Medicinal Products, requested by a member state in the fifth year of the marketing exclusivity period (if the designation criteria are believed to no longer apply).

Medicinal products designated as orphan drugs are eligible for incentives made available by the EU and its Member States to support research into, and the development and availability of, orphan drugs. Orphan designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

Genetically Modified Food Products

In the EEA food products are generally governed by Regulation (EC) No 178/2002 laying down the general principles and requirements of food law as well as the procedures in matters of food safety and establishing the European Food Safety Authority ("EFSA"). Food business operators are regulated by, among other authorities, the European Commission and EFSA, and national food safety authorities in EEA countries. In addition, food additives (such as substances preserving, coloring or sweetening food) are specifically regulated by Regulation (EC) No 1333/2008, which sets the conditions of use and labeling requirements for additives, and Commission Regulation (EU) No 234/2011, which establishes a common authorization procedure for food improvement agents (including food additives). To be used on the EEA market, additives must be safe and authorized by the European Commission for that purpose. EFSA and/or the Scientific Committee on Food assess the safety of food additives. Authorized additives and their conditions of use are listed in a European list. For some categories of food additives, additional requirements may apply.

A genetically modified organism ("GMO") is an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination. In July 2018, the Court of Justice of the European Union ("CJEU") clarified in its ruling C-528/16 that organisms from new mutagenesis techniques also fall within the scope of the European GMO legislation. Food which contains or consists of such GMOs, or is produced from GMOs, is called genetically modified food, and is regulated by a number of specific EU and national regulations. In particular, Regulation (EC) No. 1829/2003 on genetically modified food and feed (complemented by Commission Implementing Regulation (EU) No 503/2013) and Directive 2001/18/EC on the deliberate release of GMOs into the environment (as amended by Commission Directive (EU) 2018/350) provide that both the cultivation of GMOs and the use of GMOs in food, feed and derived products in the EEA are subject to prior authorizations. Authorizations for these respective activities are granted by the national competent authorities of EEA countries following a thorough risk assessment (of the risks the GMO may present to the environment, human health and animal safety) by EFSA. Authorizations are valid throughout the EEA, for a maximum of 10 years, and are renewable. In accordance with Directive (EU) 2015/412 individual countries may further restrict or prohibit GMO cultivation on their territory. The European Commission holds and maintains a register of genetically modified food and feed which is available to the general public.

GMO operators must also comply with traceability and labeling requirements as notably provided for in Regulation (EC) No 1830/2003. All operators, such as farmers or food and feed producers, which introduce such products in the supply chain or purchase such products, must be able to identify their supplier and the companies to which the products have been delivered. Operators must provide their customers with an indication that the product – or certain ingredients – contains, consists of, or is obtained from GMOs, and information on the unique identifier(s) for these GMOs. Operators must keep a record for a five year period after every transaction. In addition, subject to an exception of a proportion no higher than 0.9 percent of the food/feed ingredients considered individually, the list of ingredients on the labeling of pre-packed genetically modified food/feed products must indicate "genetically modified" or "produced from genetically modified [name of the organism]." For products without packaging, this information must be clearly displayed in close proximity to the product.

Specific post-authorization requirements apply. For instance, GMO operators must implement and regularly report on a post-market environmental monitoring plan, including general surveillance for unanticipated adverse effects and case-specific monitoring to detect direct and indirect effects which have been identified in the environmental risk assessment. In addition, post-market monitoring plans may be requested in specific cases to ensure that the conditions of use are duly applied and to monitor the consumption of the product. Further to Regulation (EU) 2017/625, GMOs are subject to official controls by EEA countries for the deliberate release of GMOs in the EEA and the presence of GMOs and/or genetically modified material in food, feed and seeds at import stage and on the EEA market. Official controls, which may consist of audits and inspections, verify the absence of unauthorized GMOs and genetically modified material on the EEA market and check proper traceability and labeling.

Transboundary movements of GMOs are regulated by Regulation (EC) 1946/2003 which transposes the Cartagena Protocol on Biosafety into EU law. The Regulation obliges countries to take legal, administrative and other measures to implement their commitments under the Protocol, and in particular addresses GMOs exports, requiring a notification to importing parties, information to the Biosafety Clearing House as well as other identification and accompanying documentation.

Even though EU regulations are directly applicable in all EU Member States and – when specified – in Iceland, Liechtenstein and Norway, additional national laws, regulations, implementing rules and guidelines on specific aspects may impose further requirements on GMOs operators.

GMOs and modern biotechnologies are under scrutiny in the EEA. As a variety of new techniques, based on advances in biotechnology, has been developed in the last decade, the European Commission follows these developments to strike a balance between innovation in the food and agricultural sector while maintaining high safety standards. In November 2019, the Council of the European Union requested the European Commission to provide a study on new genomic techniques, the results of which are expected by April 30, 2021.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation under various federal and state healthcare laws including, among others, the federal Anti-Kickback Statute, the federal False Claims Act and HIPAA. Similar laws exist in foreign jurisdictions including the EEA, as well.

The U.S. federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. A person does not need to have knowledge of the statute or specific intent to violate it to have committed a violation.

The U.S. federal civil and criminal false claims laws, including the civil False Claims Act, which can be enforced through civil whistleblower or qui tam actions, and civil monetary penalties laws, prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. government. In addition, the government may assert that a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act.

The U.S. Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Additionally, the federal Physician Payments Sunshine Act, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS information related to certain payments or other transfers of value made or distributed to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain other health care professionals beginning in 2022, and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals and to report annually to CMS certain ownership and investment interests held by physicians and their immediate family members.

Moreover, analogous state and non-U.S. laws and regulations may apply to our activities, such as state anti-kickback and false claims laws, which may apply to our business practices, including, but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, or by the patients themselves, state laws that require pharmaceutical and device companies to comply with the industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources, state and local laws and regulations that require manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures and pricing information, and state and local laws which require the registration of pharmaceutical sales representatives.

Efforts to ensure that current and future business arrangements with third parties comply with applicable healthcare laws and regulations involves substantial costs. If a business is found to be in violation of any of these or any other health regulatory laws that may apply to it, it may be subject to significant penalties, including the imposition of significant civil, criminal and administrative

penalties, damages, monetary fines, disgorgement, individual imprisonment, possible exclusion from participation in Medicare, Medicaid and other U.S. healthcare programs, additional reporting requirements and oversight if subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm, diminished profits and future earnings, and curtailment or restructuring of operations.

Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status for newly approved therapeutics. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage, and establish adequate reimbursement levels for such products. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Moreover, the coverage provided may be more limited than the purposes for which the product is approved by the FDA. It is also possible that a third-party payor may consider a product as substitutable and only offer to reimburse patients for the less expensive product. Adequate third-party payor reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. Coverage policies and third-party payor reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

In the EEA, governments influence the price of products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Member States are free to restrict the range of pharmaceutical products for which their national health insurance systems provide reimbursement, and to control the prices and reimbursement levels of pharmaceutical products for human use. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed to by the government. Member states may approve a specific price or level of reimbursement for the pharmaceutical product, or alternatively adopt a system of direct or indirect controls on the profitability of the company responsible for placing the pharmaceutical product on the market, including volume-based arrangements, caps and reference pricing mechanisms. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs in general, particularly prescription products, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross border imports from low-priced markets exert a commercial pressure on pricing within a country.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product candidates, restrict or regulate post-approval activities, and affect the ability to profitably sell product candidates for which marketing approval is obtained. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively the Affordable Care Act, enacted in March 2010, has substantially changed healthcare financing and delivery by both governmental and private insurers. Among other things the Affordable Care Act included the following provisions:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to point-of-sale discounts of 70% off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the 340B Drug Discount Program;

- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;

- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected; and

- a licensure framework for follow on biologic products.

On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, or Texas District Court Judge, ruled that the entire Affordable Care Act is invalid based primarily on the fact that the legislation enacted on December 22, 2017, the Tax Cuts and Jobs Act of 2017, or the TCJA, repealed the tax-based shared responsibility payment imposed by the Affordable Care Act, on certain individuals who fail to maintain qualifying health coverage for all or part of a year, which is commonly referred to as the "individual mandate." On December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the district court's decision that the individual mandate was unconstitutional but remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. The U.S. Supreme Court is currently reviewing the case, although it remains unclear when or how the Supreme Court will rule. It is also unclear how other efforts, if any, to challenge, repeal or replace the Affordable Care Act will impact the Affordable Care Act.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, included reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2021, unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Additionally, on May 30, 2018, the Right to Try Act was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

Finally, there has been heightened governmental scrutiny recently over pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies, rebates and price negotiation for pharmaceutical products. How the incoming Biden Administration chooses to prioritize such reforms and other policy initiatives, and how such events may impact our ability to realize returns on our product development investments remains to be seen. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product and medical device pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and medical devices to purchase and which suppliers will be included in their prescription drug and other healthcare programs.

Data Privacy and Security

Numerous state, federal and foreign laws, including consumer protection laws and regulations, govern the collection, dissemination, use, access to, confidentiality and security of personal information, including health-related information. In the United States, numerous federal and state laws and regulations, including data breach notification laws, health information privacy and security laws, including HIPAA, and federal and state consumer protection laws and regulations (e.g., Section 5 of the FTC Act), that govern the collection, use, disclosure, and protection of health-related and other personal information could apply to our operations or the operations of our partners. In addition, certain state and non-U.S. laws, such as the California Consumer Privacy Act, or the CCPA, the California Privacy Rights Act, or the CPRA, and the EU General Data Protection Regulation, or the GDPR, govern the privacy and security of personal information, including health-related information in certain circumstances, some of which are more stringent than HIPAA and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. Failure to comply with these laws, where applicable, can result in the imposition of significant civil and/or criminal penalties and private litigation. Privacy and security laws, regulations, and other obligations are constantly evolving, may conflict with each other to complicate compliance efforts, and can result in investigations, proceedings, or actions that lead to significant civil and/or criminal penalties and restrictions on data processing.

Human Capital

We are a purpose-driven organization, and we have carefully promoted a culture that values innovation, accountability, respect, adaptability and perseverance. We strive to ensure that our open, collaborative culture empowers Precisioneers to be their best selves and do their best work. We strongly believe that our shared values will help our team navigate and overcome challenges we may experience as we pursue our mission of improving life through genome editing. Our culture has helped build a world-class team with industry-leading experience in genome editing and we believe this will continue to attract new talent to further build our capabilities. Our team is a group of motivated individuals that value the opportunity to contribute their time and talents toward the pursuit of improving life. We believe all Precisioneers appreciate high-quality research and are moved by the opportunity to translate their work into treatments and solutions that could impact human health.

We are a company and a community dedicated to improving life. This isn't just a statement supporting the products that we are developing – it is a statement that speaks to our collective desire to do our part in improving the lives of those around us. Through our newly launched Diversity and Inclusion initiative, we are actively fostering an environment that attracts the best talent, values diversity of life experiences and perspectives, and encourages innovation in pursuit of our mission. With guest lectures, new trainings, employee resource groups, and other activities, we are supporting a workplace that reflects and embraces the gender, race, ethnicity, sexual orientation, age, physical ability, as well as all cultural backgrounds in our community.

Notable benefits we offer to our full-time Precisioneers include:

- employer sponsored health insurance;
- employer 401(k) matching contributions;
- generous paid time off policies;
- wellness programs including employee assistance programs, wellness reimbursement, and an on-site gym; and
- professional development programs including a tuition reimbursement program

The health and safety of our Precisioneers is also a top priority. The global effects associated with the COVID-19 pandemic have been unprecedented in their scope and depth. We have implemented measures to mitigate exposure risks and support operations. We initiated a health and safety program addressing mandatory use of face masks, social distancing, sanitary handwashing practices, use of personal protective equipment stations, stringent cleaning and sanitization of all facilities and measures to reduce total occupancy in facilities. We have implemented temperature and symptom screening procedures at each location, and we have continuously communicated to all our Precisioneers that if they are not comfortable coming to work, regardless of role, then they do not have to do so. Throughout this crisis, our focus has been on keeping our workplace as safe as possible, while ensuring business continuity and positioning ourselves well for the future.

As of December 31, 2020, we had 231 full-time Precisioneers, comprised of 208 from our Therapeutics Segment and 23 from our Food Segment. Of these full-time employees, 184 are engaged in research and development activities and 57 have Ph.D. degrees. None of our employees are represented by a labor union or covered by a collective bargaining agreement.

Corporate Information

We were incorporated in Delaware in January 2006. Our principal executive offices are located at 302 East Pettigrew St., Suite A-100, Durham, North Carolina 27701, and our telephone number is (919) 314-5512. Our website address is www.precisionbiosciences.com. The information contained in, or accessible through, our website does not constitute a part of this Annual Report on Form 10-K.

Available Information

We file annual, quarterly and current reports, proxy statements and other information with the U.S. Securities and Exchange Commission ("SEC"). Our SEC filings are available to the public over the Internet at the SEC's website at *www.sec.gov*. Our SEC filings are also available free of charge under the Investors and Media section of our website at *www.precisionbiosciences.com* as soon as reasonably practicable after they are filed with or furnished to the SEC. Our website and the information contained on or connected to that site are not incorporated into this Annual Report on Form 10-K.

We may use our website as a distribution channel of material information about the Company. Financial and other important information regarding the Company is routinely posted on and accessible through the Investors and Media section of our website at *www.precisionbiosciences.com*. In addition, you may automatically receive email alerts and other information about the Company when you enroll your email address by visiting the "Email Alerts" option under Investor Tools of the Investors and Media section of our website at *www.precisionbiosciences.com*.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. Before investing in our common stock, you should consider carefully the risks described below, together with the other information included or incorporated by reference in this Annual Report on Form 10-K. The occurrence of any of the following risks could materially adversely affect our business, financial condition, results of operations and future growth prospects. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Financial Condition, Limited Operating History and Need for Additional Capital

We have incurred significant operating losses since our inception and expect to continue to incur losses for the foreseeable future. We have never been profitable, and may never achieve or maintain profitability.

We have never been profitable and do not expect to be profitable in the foreseeable future. Since inception, we have incurred significant operating losses. If our product candidates are not successfully developed and approved, we may never generate any revenue from product sales. Our net losses were $109.0 million for the year ended December 31, 2020 and $92.9 million for the year ended December 31, 2019. As of December 31, 2020, we had an accumulated deficit of $286.1 million. In addition, we have not commercialized any products and have never generated any revenue from product sales. Substantially all of our losses have resulted from expenses incurred in connection with our research and development activities, including our preclinical development activities, and from general and administrative costs associated with our operations. We have financed our operations primarily through our IPO, private placements of our convertible preferred stock and convertible debt and payments under development, collaboration and license agreements. The amount of our future net losses will depend, in part, on the amount and growth rate of our expenses and our ability to generate revenues.

All of our current or future product candidates will require substantial additional development time and resources before we may realize revenue from product sales, if at all. We expect to continue to incur significant expenses and operating losses for the foreseeable future. Our expenses have increased and we anticipate will continue to increase substantially if and as we:

- continue our current research and development programs, including conducting laboratory, preclinical and greenhouse studies for product candidates;
- continue to conduct or initiate clinical or field trials for product candidates;
- seek to identify, assess, acquire or develop additional research programs or product candidates;
- maintain, expand and protect our intellectual property portfolio;
- seek marketing approvals for any product candidates that may successfully complete development;
- establish a sales, marketing and distribution infrastructure to commercialize any products that may obtain marketing approval;
- further develop and refine the manufacturing process for our product candidates;
- change or add additional manufacturers or suppliers of biological materials or product candidates;
- further develop our genome editing technology;
- acquire or in-license other technologies;
- seek to attract and retain new and existing personnel;
- expand our facilities; and
- incur increased costs as a result of operating as a public company.

It will be several years, if ever, before we obtain regulatory approval for, and are ready for commercialization of, a therapeutic product candidate. Similarly, no product candidate from our food platform has advanced to field testing, and it will be several years, if ever, before we or our collaborators commercialize any such product candidate. New food and agriculture products using the precise editing approach generally take approximately three to five years to develop. Even if a therapeutic product candidate receives regulatory approval or a food or agriculture product advances through commercialization, future revenues for such product candidate will depend upon many factors, such as, as applicable, the size of any markets in which such product candidate is approved for sale, the market share captured by such product candidate, including as a result of the market acceptance of such product candidate and the effectiveness of manufacturing, sales, marketing and distribution operations related to such product candidate, the terms of any collaboration or other strategic arrangement we may have with respect to such product candidate and levels of reimbursement from

third-party payors. If we are unable to develop and commercialize one or more product candidates either alone or with collaborators, or if revenues from any product candidate that receives marketing approval or is commercialized are insufficient, we may not achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability. If we are unable to achieve and maintain profitability, the value of our common stock will be materially adversely affected.

We will need substantial additional funding, and if we are unable to raise a sufficient amount of capital when needed on acceptable terms, or at all, we may be forced to delay, reduce or eliminate some or all of our research programs, product development activities and commercialization efforts.

The process of identifying product candidates and conducting preclinical or greenhouse studies and clinical or field trials is time consuming, expensive, uncertain and takes years to complete. We expect our expenses to increase in connection with our ongoing activities, particularly as we identify, continue the research and development of, initiate and continue clinical or field trials of, and seek marketing approval for, product candidates. In addition, if any therapeutic product candidate that we develop alone or with collaborators obtains marketing approval, we may incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution efforts. Furthermore, we have incurred, and expect to continue to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise sufficient capital when needed, we may be forced to delay, reduce or eliminate current or future research programs, product development activities and/or commercialization efforts.

We believe that our cash and cash equivalents as of December 31, 2020, cash payments received from Lilly in January 2021 in connection with the closing of the Development and License Agreement, expected operational receipts and available credit will allow the Company to continue its operations into 2023. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our operating plans and other demands on our cash resources may change as a result of many factors, including factors unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. We do not currently expect future grant revenues to be a material source of revenue.

Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop product candidates. Our future capital requirements will depend on many factors, including:

- the timing, scope, progress, costs, results and analysis of results of research activities, preclinical or greenhouse studies and clinical or field trials for any of our product candidates;
- the costs of future activities, including product manufacturing, sales, marketing and distribution activities for any product candidates that receive regulatory approval;
- the success of our existing collaborative relationships;
- the extent to which we exercise any development or commercialization rights under collaborative relationships;
- our ability to establish and maintain additional collaborative relationships on favorable terms, or at all;
- the extent to which we expand our operations and the timing of such expansion, including with respect to facilities, employees and product development platforms;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property and proprietary rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other technologies or product candidates;
- the extent to which we acquire or invest in other businesses;
- the costs of continuing to operate as a public company; and
- the amount of revenues, if any, received from commercial sales of any products that we develop alone or with collaborators that receive regulatory approval.

Even if we believe we have sufficient funds for our current or future operating plans, we may continue to seek additional capital if market conditions are favorable or in light of specific strategic considerations. Adequate additional financing may not be available to us on acceptable terms, or at all. If we are unable to obtain sufficient funding on a timely basis or on favorable terms, we may be required to significantly delay, reduce or eliminate one or more of our research or product development programs and/or commercialization efforts. We may also be unable to expand our operations or otherwise capitalize on business opportunities as desired. Any of these events could materially adversely affect our financial condition and business prospects.

Provisions of our debt instruments may restrict our ability to pursue our business strategies.

Pursuant to the Pacific Western Loan Agreement (as defined below) with Pacific Western Bank ("PWB"), we may request advances on a revolving line of credit ("the Revolving Line") of up to an aggregate principal of $30.0 million, the maturity date of the Revolving Line is June 23, 2023. As of December 31, 2020, we had no borrowings under our Revolving Line. Under the loan and security agreement, we granted PWB a security interest in substantially all of our assets, excluding any of the intellectual property now or hereafter owned, acquired or received by us (but including any rights to payment from the sale or licensing of any such intellectual property).

The Pacific Western Loan Agreement requires us, and any debt instruments we may enter into in the future may require us, to comply with various covenants that limit our ability to, among other things:

- dispose of assets;
- change our name, location, executive office or executive management, business, fiscal year, or control;
- complete mergers or acquisitions;
- incur indebtedness;
- encumber assets;
- pay dividends or make other distributions to holders of our capital stock;
- make specified investments;
- make capitalized expenditures in excess of $40 million in the aggregate during each fiscal year;
- maintain less than $10.0 million of unrestricted cash at PWB; and
- engage in certain transactions with our affiliates.

These restrictions could inhibit our ability to pursue our business strategies. In addition, we are subject to financial covenants based on minimum cash balances.

Raising additional capital may cause dilution to our stockholders restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity and/or debt financings and collaborations, licensing agreements or other strategic arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of such securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. To the extent that we raise additional capital through debt financing, it would result in increased fixed payment obligations and a portion of our operating cash flows, if any, being dedicated to the payment of principal and interest on such indebtedness. In addition, debt financing may involve agreements that include restrictive covenants that impose operating restrictions, such as restrictions on the incurrence of additional debt, the making of certain capital expenditures or the declaration of dividends. To the extent we raise additional capital through arrangements with collaborators or otherwise, we may be required to relinquish some of our technologies, research programs, product development activities, product candidates and/or future revenue streams, license our technologies and/or product candidates on unfavorable terms or otherwise agree to terms unfavorable to us. Furthermore, any capital raising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to advance research programs, product development activities or product candidates.

We have a limited operating history, which makes it difficult to evaluate our current business and future prospects and may increase the risk of your investment.

We are a genome editing company with a limited operating history. We formed our company in 2006 and spent the first nine years of our company's history developing and refining our core technology, and only during the past several years have we focused our efforts on advancing the development of product candidates.

Investment in biopharmaceutical and agricultural biotechnology product development is a highly speculative endeavor. It entails substantial upfront capital expenditures, and there is significant risk that any product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, obtain any required regulatory approvals or become commercially viable. Our genome editing platform and the technologies we are using are new and unproven. We have initiated a Phase 1/2a clinical trial in patients with R/R NHL and R/R B-ALL, a Phase 1/2a clinical trial in patients with NHL, chronic lymphocytic leukemia, or CLL, and small lymphocytic

lymphoma, or SLL, as well as a Phase 1/2a clinical trial in patients with R/R multiple myeloma, but we have not commenced field trials for any of our product candidates from our food platform. We have not yet demonstrated an ability to successfully complete any clinical or field trials, obtain any required marketing approvals, manufacture products, conduct sales, marketing and distribution activities, or arrange for a third party to do any of the foregoing on our behalf. Consequently, any predictions made about our future success or viability may not be as accurate as they could be if we had a history of successfully developing and commercializing products.

Additionally, we encounter risks and difficulties frequently experienced by new and growing companies in rapidly developing and changing industries, including challenges in forecasting accuracy, determining appropriate investments of our limited resources, gaining market acceptance of our technology, managing a complex regulatory landscape and developing new product candidates, which may make it more difficult to evaluate our likelihood of success. Our current operating model may require changes in order for us to adjust to these challenges or scale our operations efficiently. Our limited operating history, particularly in light of the rapidly evolving nature of the biopharmaceutical and agricultural biotechnology industries and the genome editing field, may make it difficult to evaluate our technology and business prospects or to predict our future performance. Additionally, due to the stage of our operations, we expect that our financial condition and operating results may fluctuate significantly from quarter to quarter as a result of many factors as we build our business, and you should not rely upon the results of any particular quarterly or annual period as indications of future operating performance.

We may expend our limited resources on pursuing particular research programs or product candidates that may be less successful or profitable than other programs or product candidates.

Research programs to identify new product candidates and product development platforms require substantial technical, financial and human resources. We may focus our efforts and resources on potential programs, product candidates or product development platforms that ultimately prove to be unsuccessful. Any time, effort and financial resources we expend on identifying and researching new product candidates and product development platforms may divert our attention from, and adversely affect our ability to continue, development and commercialization of existing research programs, product candidates and product development platforms. Clinical trials or field trials, as applicable, of any of our product candidates may never commence despite the expenditure of significant resources in pursuit of their development, and our spending on current and future research and development programs, product candidates and product development platforms may not yield any commercially viable products. As a result of having limited financial and managerial resources, we may forego or delay pursuit of opportunities that later prove to have greater commercial potential. For example, we continue to strategically assess our options in connection with a potential separation of our food segment, Elo, from Precision, which could be as early as during 2021. Our resource allocation decisions may cause us to fail to timely capitalize on viable commercial products or profitable market opportunities. Additionally, if we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other strategic arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

We expect to take advantage of a Research and Development Tax Incentive program in Australia, which could be amended or changed.

We may be eligible to receive a financial incentive from the Australian government as part of its Research and Development Tax Incentive program, or R&D Tax Incentive program. The R&D Tax Incentive program is one of the key elements of the Australian government's support for Australia's innovation system and, if eligible, provides the recipient with a 43.5% refundable tax offset for research and development activities in Australia. There have been recent proposals to change the structure of the innovation and research and development funding landscape in Australia, which may impact the research and development tax incentive receivable for the 2020 financial year and beyond. There can be no assurance that we will qualify and be eligible for such incentives or that the Australian government will continue to provide incentives, offset, grants and rebates on similar terms or at all.

Risks Related to the Identification, Development and Commercialization of Our Product Candidates

ARCUS is a novel technology, making it difficult to predict the time, cost and potential success of product candidate development. We have not yet been able to assess the safety and efficacy of most of our product candidates in humans, and have only limited safety and efficacy information in humans to date regarding one of our product candidates.

Our success depends on our ability to develop and commercialize product candidates using our novel genome editing technology. The novel nature of our technology makes it difficult to accurately predict the developmental challenges we may face for product candidates as they proceed through research, preclinical or greenhouse studies and clinical or field trials. There have been a limited number of clinical trials of products created with genome editing technologies, three of which have utilized our technology. Because our therapeutic research programs are all in preclinical or early clinical stages, we have only been able to assess limited safety and efficacy data for one of our product candidates in a human trial. Current or future product candidates may not meet safety and efficacy

requirements for continued development or ultimate approval in humans and may cause significant adverse events or toxicities. All of our product candidates are designed to act at the level of DNA, and because animal DNA differs from human DNA, it will be difficult for us to test our therapeutic product candidates in animal models for either safety or efficacy, and any testing that we conduct may not translate to their effects in humans. Moreover, animal models may not exist for some of the targets, diseases or indications that we intend to pursue. Similarly, we and our collaborators have not yet completed field trials for any agricultural product candidates created with our technology. Our product candidates may not be able to properly implement desired genetic edits with sufficient accuracy to be viable therapeutic or agricultural products, and there may be long-term effects associated with them that we cannot predict at this time. Any problems we experience related to the development of our genome editing technology or any of our or our collaborators' research programs or product candidates may cause significant delays or unanticipated costs, and we may not be able to satisfactorily solve such problems. These factors may prevent us or our collaborators from completing our preclinical or greenhouse studies or any clinical or field trials that we or our collaborators have ongoing or may initiate, or profitably commercializing any product candidates on a timely basis, or at all. We may also experience delays in developing a sustainable, reproducible and scalable manufacturing process as we develop and prepare to commercialize product candidates. These factors make it more difficult for us to predict the time, cost and potential success of product candidate development. If our product development activities take longer or cost more than anticipated, or if they ultimately are not successful, it would materially adversely affect our business and results of operations.

The genome editing field is relatively new and evolving rapidly, and other existing or future technologies may provide significant advantages over our ARCUS platform, which could materially harm our business.

To date, we have focused our efforts on optimizing our proprietary genome editing technology and exploring its potential applications. ARCUS is a novel genome editing technology using sequence-specific DNA-cutting enzymes, or nucleases, that is designed to perform modifications in the DNA of living cells and organisms. Other companies have previously undertaken research and development of genome editing technologies using zinc finger nucleases, transcription activator-like effector nucleases, or TALENs, and clustered regularly interspaced short palindromic repeats associated protein-9 nuclease, or CRISPR/Cas9, although none has obtained marketing approval for a product candidate developed using such technologies. Other genome editing technologies in development or commercially available, or other existing or future technologies, may lead to treatments or products that may be considered better suited for use in human therapeutics or agriculture, which could reduce or eliminate our commercial opportunity.

We are heavily dependent on the successful development and translation of ARCUS, and due to the early stages of our product development operations, we cannot give any assurance that any product candidates will be successfully developed and commercialized.

We are at an early stage of development of the product candidates currently in our programs and are continuing to develop our ARCUS technology. To date, we have invested substantially all of our efforts and financial resources to develop ARCUS and advance our current product development programs, including conducting preclinical studies, early stage clinical trials and other early research and development activities, and providing general and administrative support for these operations. We are also currently using our ARCUS technology to develop our lead in vivo gene correction programs targeting DMD and PH1. Our future success is dependent on our ability to successfully develop and, where applicable, obtain regulatory approval for, including marketing approval for, and then successfully commercialize, product candidates, either alone or with collaborators. We have not yet developed and commercialized any product candidates, and we may not be able to do so, alone or with collaborators.

Our research and development programs may not lead to the successful identification, development or commercialization of any products.

The success of our business depends primarily upon our ability to identify, develop and commercialize products using our genome editing technology. With the exception of our CD19, CD20 and BCMA product candidates, all current product candidates and product development programs are still in the discovery, preclinical or greenhouse stages. We may be unsuccessful in advancing those product candidates into clinical development or field trials or in identifying any developing additional product candidates. Our ability to identify and develop product candidates is subject to the numerous risks associated with preclinical and early stage biotechnology development activities, including that:

- the use of ARCUS may be ineffective in identifying additional product candidates;
- we may not be able to assemble sufficient resources to acquire or discover additional product candidates;
- we may not be able to enter into collaborative arrangements to facilitate development of product candidates;
- competitors may develop alternatives that render our product candidates obsolete or less attractive;
- our product candidates may be covered by third parties' patents or other exclusive rights;

- the regulatory pathway for a product candidate may be too complex, expensive or otherwise difficult to navigate successfully; or

- our product candidates may be shown to not be effective, have harmful side effects or otherwise pose risks not outweighed by such product candidate's benefits or have other characteristics that may make the products impractical to manufacture, unlikely to receive any required marketing approval, unlikely to generate sufficient market demand or otherwise not achieve profitable commercialization.

Our product candidates currently being investigated in clinical trials, or that are expected to be investigated in clinical trials, and other product candidates we may identify may never be approved. Failure to successfully identify and develop new product candidates and obtain regulatory approvals for our products would have a material adverse effect on our business and financial condition and could cause us to cease operations.

If our product candidates do not achieve projected development milestones or commercialization in the announced or expected timeframes, the further development or commercialization of such product candidates may be delayed, and our business will be harmed.

We sometimes estimate, or may in the future estimate, the timing of the accomplishment of various scientific, clinical, manufacturing, regulatory and other product development objectives. These milestones may include our expectations regarding the commencement or completion of scientific studies or clinical or field trials, the submission of regulatory filings, the receipt of marketing approval or the realization of other commercialization objectives. The achievement of many of these milestones may be outside of our control. All of these milestones are based on a variety of assumptions, including assumptions regarding capital resources, constraints and priorities, progress of and results from development activities, the receipt of key regulatory approvals or actions, and other factors, including without limitation, impacts resulting from the COVID-19 pandemic, any of which may cause the timing of achievement of the milestones to vary considerably from our estimates. If we or our collaborators fail to achieve announced milestones in the expected timeframes, the commercialization of the product candidates may be delayed, our credibility may be undermined, our business and results of operations may be harmed, and the trading price of our common stock may decline.

Adverse public perception of genome editing may negatively impact the developmental progress or commercial success of products that we develop alone or with collaborators.

The developmental and commercial success of our current product candidates, or any that we develop alone or with collaborators in the future, will depend in part on public acceptance of the use of genome editing technology for the prevention or treatment of human diseases or for application in food or agricultural products. Adverse public perception of applying genome editing technology for these purposes may negatively impact our ability to raise capital or enter into strategic agreements for the development of product candidates.

The commercial success of any food or agricultural products that we develop alone or with collaborators may be adversely affected by claims that biotechnology plant products are unsafe for consumption or use, pose risks of damage to the environment or create legal, social or ethical dilemmas. Additionally, the public may perceive any potential food or agricultural products created with ARCUS to constitute genetically modified organisms, or GMO, even if they do not constitute genetically modified organisms under relevant regulatory requirements, and may be unwilling to consume them because of negative opinions regarding consumption of genetically modified organisms. This may result in expenses, delays or other impediments to development programs in our food platform or the market acceptance and commercialization of any potential food or agricultural products.

Any therapeutic product candidates may involve editing the human genome. The commercial success of any such potential therapeutic products, if successfully developed and approved, may be adversely affected by claims that genome editing is unsafe, unethical or immoral. This may lead to unfavorable public perception and the inability of any therapeutic product candidates to gain the acceptance of the public or the medical community. Unfavorable public perceptions may also adversely impact our or our collaborators' ability to enroll clinical trials for therapeutic product candidates. Moreover, success in commercializing any therapeutic product candidates that receive regulatory approval will depend upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of such product candidates in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available. Publicity of any adverse events in, or unfavorable results of, preclinical studies or clinical trials for any current or future product candidates, including, without limitation, patient deaths, or with respect to the studies or trials of our competitors or of academic researchers utilizing genome editing technologies, even if not ultimately attributable to our technology or product candidates, could negatively influence public opinion. Negative public perception about the use of genome editing technology in human therapeutics and food or agricultural products, whether related to our technology or a competitor's technology, could result in increased governmental regulation, delays in the development and commercialization of product candidates or decreased demand for the resulting products, any of which may have a negative impact on our business and financial condition.

We face significant competition in industries experiencing rapid technological change, and there is a possibility that our competitors may achieve regulatory approval before us or develop product candidates or treatments that are safer or more effective than ours, which may harm our financial condition and our ability to successfully market or commercialize any of our product candidates.

The development and commercialization of new drug products is highly competitive, and the genome editing field is characterized by rapidly changing technologies, significant competition and a strong emphasis on intellectual property. We will face competition with respect to our current and future therapeutic product candidates from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization of products. Competition for improving plant genetics comes from conventional and advanced plant breeding techniques, as well as from the development of advanced biotechnology traits. Other potentially competitive sources of improvement in crop yields include improvements in crop protection chemicals, fertilizer formulations, farm mechanization, other biotechnology and information management. Programs to improve genetics and crop protection chemicals are generally concentrated within a relatively small number of large companies, while non-genetic approaches are underway with a broader set of companies.

There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of the disease indications for which we have research programs. Some of these competitive products and therapies are based on scientific approaches that are similar to our approach, and others are based on entirely different approaches. We principally compete with others developing and utilizing genome editing technology in the human health and plant sciences sectors, including companies such as Allogene Therapeutics, Inc., Alnylam Pharmaceuticals, Inc., Caribou Biosciences, Inc., Cellectis S.A., CRISPR Therapeutics, AG, Dicerna Pharmaceuticals, Inc., Editas Medicine, Inc., Intellia Therapeutics, Inc., Sangamo Therapeutics, Inc., and Beam Therapeutics, Inc. Several companies, including Novartis Pharmaceuticals Corp. and Gilead Sciences, Inc., or Gilead, have obtained FDA approval for autologous immunotherapies, and a number of companies, including Cellectis S.A., Celgene Corp., Allogene Therapeutics and CRISPR Therapeutics AG, are pursuing allogeneic immunotherapies. We expect that our operations focused on developing products for *in vivo* gene correction will face substantial competition from others focusing on gene therapy treatments, especially those that may focus on conditions that our product candidates target. Moreover, any human therapeutics products that we develop alone or with collaborators will compete with existing standards of care for the diseases and conditions that our product candidates target and other types of treatments, such as small molecule, antibody or protein therapies. Our competitors in the agricultural biotechnology space include Pairwise Plants, LLC, Corteva Agriscience, Tropic Biosciences UK LTD, Calyxt, Inc., Benson Hill Biosystems and Cibus.

Many of our current or potential competitors, either alone or with their collaborators, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical or greenhouse testing, conducting clinical or field trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and agricultural biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products we develop alone or with collaborators or that would render any such products obsolete or non-competitive. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we or our collaborators may obtain approval for any that we develop, which could result in our competitors establishing a strong market position before we are able to enter the market. Additionally, technologies developed by our competitors may render our product candidates uneconomical or obsolete, and we or our collaborators may not be successful in marketing any product candidates we may develop against competitors. The availability of our competitors' products could limit the demand, and the price we are able to charge, for any products that we develop alone or with collaborators.

Our future profitability, if any, depends in part on our and our collaborators' ability to penetrate global markets, where we would be subject to additional regulatory burdens and other risks and uncertainties associated with international operations that could materially adversely affect our business.

Our future profitability, if any, will depend in part on our ability and the ability of our collaborators to commercialize any products that we or our collaborators may develop in markets throughout the world. Commercialization of products in various markets could subject us to risks and uncertainties, including:

- obtaining, on a country-by-country basis, the applicable marketing authorization from the competent regulatory authority;

- the burden of complying with complex and changing regulatory, tax, accounting, labor and other legal requirements in each jurisdiction that we or our collaborators pursue;
- reduced protection for intellectual property rights;
- differing medical and agricultural practices and customs affecting acceptance in the marketplace;
- import or export licensing requirements;
- governmental controls, trade restrictions or changes in tariffs;
- economic weakness, including inflation, or political instability in particular non-U.S. economies and markets;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- longer accounts receivable collection times;
- longer lead times for shipping;
- language barriers;
- foreign currency exchange rate fluctuations;
- foreign reimbursement, pricing and insurance regimes; and
- the interpretation of contractual provisions governed by foreign laws in the event of a contract dispute.

We have limited or no prior experience in these areas, and our collaborators may have limited experience in these areas. Failure to successfully navigate these risks and uncertainties may limit or prevent market penetration for any products that we or our collaborators may develop, which would limit their commercial potential and our revenues.

Product liability lawsuits against us could cause us to incur substantial liabilities and could limit commercialization of any products that we develop alone or with collaborators.

We face an inherent risk of product liability and professional indemnity exposure related to the testing in clinical or field trials of our product candidates. We will face an even greater liability risk if we commercially sell any products that we or our collaborators may develop for human use or consumption. Manufacturing defects, errors in product distribution or storage processes, improper administration or application and known or unknown side effects of product usage may result in liability claims against us or third parties with which we have relationships. These actions could include claims resulting from acts by our collaborators, licensees and subcontractors over which we have little or no control.

For example, our liability could be sought by patients participating in clinical trials for potential therapeutic product candidates as a result of unexpected side effects, improper product administration or the deterioration of a patient's condition, patient injury or even death. Criminal or civil proceedings might be filed against us by patients, regulatory authorities, biopharmaceutical companies and any other third party using or marketing any product candidates or products that we develop alone or with collaborators. On occasion, large judgments have been awarded in class action lawsuits based on products that had unanticipated adverse effects. If we cannot successfully defend ourselves against claims that product candidates or products we develop alone or with collaborators caused harm, we could incur substantial liabilities.

Regardless of merit or eventual outcome, liability claims may result in:

- significant time and costs to defend the related litigation;
- injury to our reputation and significant negative media attention;
- diversion of management's attention from pursuing our strategy;
- withdrawal of clinical trial participants;
- delay or termination of clinical trials;
- decreased demand for any products that we develop alone or with collaborators;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;

- loss of revenue; and
- the inability to further develop or commercialize any products.

Although the clinical trial process is designed to identify and assess potential side effects, clinical development does not always fully characterize the safety and efficacy profile of a new medicine, and it is always possible that a drug or biologic, even after regulatory approval, may exhibit unforeseen side effects. If our product candidates were to cause adverse side effects during clinical trials or after approval, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates. If any of our product candidates are approved for commercial sale, we will be highly dependent upon consumer perceptions of us and the safety and quality of such products. We could be adversely affected if we are subject to negative publicity associated with illness or other adverse effects resulting from patients' use or misuse of such products or any similar products distributed by other companies.

Although we maintain product liability insurance coverage, it may not be adequate to cover all liabilities that we may incur. We anticipate that we will need to increase our insurance coverage if we or our collaborators successfully commercialize any products. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liabilities to which we may become subject.

Additional Risks Related to the Identification, Development and Commercialization of Our Therapeutic Product Candidates

The regulatory landscape that will apply to development of therapeutic product candidates by us or our collaborators is rigorous, complex, uncertain and subject to change, which could result in delays or termination of development of such product candidates or unexpected costs in obtaining regulatory approvals.

Regulatory requirements governing products created with genome editing technology or involving gene therapy treatment have changed frequently and will likely continue to change in the future. Approvals by one regulatory agency may not be indicative of what any other regulatory agency may require for approval, and there has historically been substantial, and sometimes uncoordinated, overlap in those responsible for regulation of gene therapy products, cell therapy products and other products created with genome editing technology. For example, in the United States, the FDA has established the Office of Tissues and Advanced Therapies within its Center for Biologics Evaluation and Research, or CBER, to consolidate the review of gene therapy and related products, and the Cellular, Tissues, and Gene Therapies Advisory Committee to advise CBER on its review. Our product candidates will need to meet safety and efficacy standards applicable to any new biologic under the regulatory framework administered by the FDA.

In addition to the submission of an IND to the FDA, before initiation of a clinical trial in the United States, certain human clinical trials subject to the NIH Guidelines are subject to review and oversight by an institutional biosafety committee, or IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them. We are subject to significant regulatory oversight by the FDA, and in addition to the government regulators, the applicable IBC and institutional review board, or IRB, of each institution at which we or our collaborators conduct clinical trials of our product candidates, or a central IRB if appropriate, would need to review and approve the proposed clinical trial.

The same applies in the European Union, or the EU. The European Medicines Agency, or the EMA, has a Committee for Advanced Therapies, or CAT, that is responsible for assessing the quality, safety and efficacy of advanced-therapy medicinal products. Advanced-therapy medical products include gene therapy medicine, somatic-cell therapy medicines and tissue-engineered medicines. The role of the CAT is to prepare a draft opinion on an application for marketing authorization for a gene therapy medicinal product candidate that is submitted to the EMA. In the EU, the development and evaluation of a gene therapy medicinal product must be considered in the context of the relevant EU guidelines. The EMA may issue new guidelines concerning the development and marketing authorization for gene therapy medicinal products and require that we comply with these new guidelines. Similarly complex regulatory environments exist in other jurisdictions in which we might consider seeking regulatory approvals for our product candidates, further complicating the regulatory landscape. As a result, the procedures and standards applied to gene therapy products and cell therapy products may be applied to any of our gene therapy or genome editing product candidates, but that remains uncertain at this point.

The clinical trial requirements of the FDA, the EMA and other regulatory authorities and the criteria these regulators use to evaluate the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of the potential products. The regulatory approval process for product candidates created with novel genome editing technology such as ours can be more lengthy, rigorous and expensive than the process for other better known or more extensively studied product candidates and technologies. Since we are developing novel treatments for diseases in which there is little clinical experience with new endpoints and methodologies, there is heightened risk that the FDA, the EMA or comparable regulatory bodies may not consider the clinical trial endpoints to provide clinically meaningful results, and the resulting clinical data and results may be more difficult to analyze. This may be a particularly significant risk for many of the genetically defined diseases for which we may develop product candidates alone or with collaborators due to small patient populations for those diseases, and designing and executing a rigorous clinical trial with appropriate statistical power is more difficult than with diseases that have larger patient populations. Regulatory agencies administering existing or future regulations or legislation may not allow production and marketing of products utilizing genome editing technology in a timely manner or under technically or commercially feasible conditions. Even if our product candidates obtain required regulatory approvals, such approvals may later be withdrawn as a result of changes in regulations or the interpretation of regulations by applicable regulatory agencies.

Changes in applicable regulatory guidelines may lengthen the regulatory review process for our product candidates, require additional studies or trials, increase development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of such product candidates, or lead to significant post-approval limitations or restrictions. Additionally, adverse developments in clinical trials conducted by others of gene therapy products or products created using genome editing technology, such as products developed through the application of a CRISPR/Cas9 technology, or adverse public perception of the field of genome editing, may cause the FDA, the EMA and other regulatory bodies to revise the requirements for approval of any product candidates we may develop or limit the use of products utilizing genome editing technologies, either of which could materially harm our business. Furthermore, regulatory action or private litigation could result in expenses, delays or other impediments to our research programs or the development or commercialization of current or future product candidates.

As we advance product candidates alone or with collaborators, we will be required to consult with these regulatory and advisory groups and comply with all applicable guidelines, rules and regulations. If we fail to do so, we or our collaborators may be required to delay or terminate development of such product candidates. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a product candidate to market could decrease our ability to generate sufficient product revenue to maintain our business.

We may not be able to file IND applications to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

We plan to submit IND applications to enable us to conduct clinical trials for additional product candidates in the future, and we expect to file IND amendments to enable us to conduct additional clinical trials under existing INDs. We cannot be sure that submission of an IND application or IND amendment will result in us being allowed to proceed with clinical trials, or that, once begun, issues will not arise that could result in the suspension or termination such clinical trials. The manufacturing of allogeneic CAR T cell therapy remains an emerging and evolving field. Accordingly, we expect chemistry, manufacturing and controls-related topics, including product specifications, will be a focus of IND reviews, which may delay receipt of authorization to proceed under INDs. Additionally, even if such regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND or clinical trial application, we cannot guarantee that such regulatory authorities will not change their requirements in the future.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

We and any collaborators are not permitted to commercialize, market, promote or sell any product candidate in the United States without obtaining marketing approval from the FDA. Foreign regulatory authorities, such as the EMA, impose similar requirements. The time required to obtain approval by the FDA, the EMA and comparable foreign authorities is unpredictable, but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including substantial discretion of the regulatory authorities and sufficient resources at the FDA. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. To date, we have not submitted a biologics license application, or BLA, or other marketing authorization application to the FDA or similar drug approval submissions to comparable foreign regulatory authorities for any product candidate. We and any collaborators must complete additional preclinical or nonclinical studies and clinical trials to demonstrate the safety and efficacy of our product candidates in humans to the satisfaction of the regulatory authorities before we will be able to obtain these approvals.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our or our collaborators' clinical trials;
- we or our collaborators may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we or our collaborators may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our or our collaborators' interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of product candidates may not be sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we or our collaborators contract for clinical and commercial supplies;
- the FDA or comparable foreign regulatory authorities may fail to approve the companion diagnostics we may contemplate developing with collaborators; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our or our collaborators' clinical data insufficient for approval.

This lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our product candidates, which would significantly harm our business, results of operations and prospects.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may impose significant limitations in the form of narrow indications, warnings, or a Risk Evaluation and Mitigation Strategy, or REMS. Regulatory authorities may not approve the price we or our collaborators intend to charge for products we may develop, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Clinical trials are difficult to design and implement, expensive, time-consuming and involve an uncertain outcome, and the inability to successfully and timely conduct clinical trials and obtain regulatory approval for our product candidates would substantially harm our business.

Clinical testing is expensive and usually takes many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process, and product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. We have initiated a Phase 1/2a clinical trial in patients with R/R NHL or R/R B-ALL, a Phase 1/2a clinical trial in subjects with NHL, chronic lymphocytic leukemia and small lymphocytic lymphoma, and a Phase 1/2a clinical trial in subjects with R/R multiple myeloma. We do not know whether any current or planned clinical trials will need to be redesigned, recruit and enroll patients on time or be completed on schedule, or at all. Clinical trials have been and may in the future be delayed, suspended or terminated for a variety of reasons, including in connection with:

- the inability to generate sufficient preclinical, toxicology or other *in vivo* or *in vitro* data to support the initiation of clinical trials;
- applicable regulatory authorities disagreeing as to the design or implementation of the clinical trials;
- obtaining regulatory authorization to commence a trial;
- reaching an agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining IRB approval at each site;
- developing and validating the companion diagnostic to be used in a clinical trial, if applicable;

- insufficient or inadequate supply or quality of product candidates or other materials, including identification of lymphocyte donors meeting regulatory standards necessary for use in clinical trials, or delays in sufficiently developing, characterizing or controlling a manufacturing process suitable for clinical trials;
- recruiting and retaining enough suitable patients to participate in a trial;
- having enough patients complete a trial or return for post-treatment follow-up;
- adding a sufficient number of clinical trial sites;
- inspections of clinical trial sites or operations by applicable regulatory authorities, or the imposition of a clinical hold;
- clinical sites deviating from trial protocol or dropping out of a trial;
- the inability to demonstrate the efficacy and benefits of a product candidate;
- discovering that product candidates have unforeseen safety issues, undesirable side effects or other unexpected characteristics;
- addressing patient safety concerns that arise during the course of a trial;
- receiving untimely or unfavorable feedback from applicable regulatory authorities regarding the trial or requests from regulatory authorities to modify the design of a trial;
- non-compliance with applicable regulatory requirements by us or third parties or changes in such regulations or administrative actions;
- suspensions or terminations by IRBs of the institutions at which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities due to a number of factors, including those described above;
- third parties being unable or unwilling to satisfy their contractual obligations to us;
- changes in our financial priorities, greater than anticipated costs of completing a trial or our inability to continue funding the trial; or
- unforeseen events, such as natural or manmade disasters, public health emergencies, such as the COVID-19 pandemic, which has and may continue to impact our operations, or other natural catastrophic events.

Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates. Additionally, we or our collaborators may experience unforeseen events during or resulting from clinical trials that could delay or prevent receipt of marketing approval for or commercialization of product candidates. For example, clinical trials of product candidates may produce negative, inconsistent or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon development programs. Regulators may also revise the requirements for approving the product candidates, or such requirements may not be as we anticipate. If we or our collaborators are required to conduct additional clinical trials or other testing of product candidates beyond those that we or our collaborators currently contemplate, if we or our collaborators are unable to successfully complete clinical trials or other testing of such product candidates, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- incur unplanned costs;
- be delayed in obtaining or fail to obtain marketing approval for product candidates;
- obtain marketing approval in some countries and not in others;
- obtain marketing approval for indications or patient populations that are not as broad as intended or desired;
- obtain marketing approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;
- be subject to additional post-marketing testing requirements;
- be subject to changes in the way the product is administered;
- have regulatory authorities withdraw or suspend their approval of the product or impose restrictions on its distribution;
- be sued; or
- experience damage to our reputation.

If we or our collaborators experience delays in the commencement or completion of our clinical trials, or if we or our collaborators terminate a clinical trial prior to completion, we may experience increased costs, have difficulty raising capital and/or be required to slow down the development and approval process timelines. Furthermore, the product candidates that are the subject of such trials may never receive regulatory approval, and their commercial prospects and our ability to generate product revenues from them could be impaired or not realized at all.

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA or comparable foreign regulatory authorities. The FDA or comparable foreign regulatory authorities may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the study. The FDA or comparable foreign regulatory authorities may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA or comparable foreign regulatory authorities, as the case may be, and may ultimately lead to the denial of marketing approval of one or more of our product candidates.

Any product candidates that we or our collaborators may develop will be novel and may be complex and difficult to manufacture, and if we experience manufacturing problems, it could result in delays in development and commercialization of such product candidates or otherwise harm our business.

Our product candidates involve or will involve novel genome editing technology and will require processing steps that are more complex than those required for most small molecule drugs, resulting in a relatively higher manufacturing cost. Moreover, unlike small molecules, the physical and chemical properties of biologics generally cannot be fully characterized. As a result, assays of the finished product may not be sufficient to ensure that such product will perform in the intended manner. Although we intend to employ multiple steps to control the manufacturing process, we may experience manufacturing issues with any of our product candidates that could cause production interruptions, including contamination, equipment or reagent failure, improper installation or operation of equipment, facility contamination, raw material shortages or contamination, natural disasters, disruption in utility services, human error, disruptions in the operations of our suppliers, inconsistency in cell growth and variability in product characteristics. We may encounter problems achieving adequate quantities and quality of clinical-grade materials that meet FDA, EMA or other comparable applicable standards or specifications with consistent and acceptable production yields and costs. For example, the FDA has required us to conduct testing of our allogeneic CAR T cell product candidates for the presence of certain human viruses prior to release of such products for clinical use. If the FDA concludes that further such viral testing of our product candidates is required and that any lots testing positive may not be used in clinical trials, we may need to produce new clinical trial materials, which could delay our clinical trials and result in higher manufacturing costs. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities in which such product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Our manufacturing process for any allogeneic CAR T cell product candidate that we develop alone or with collaborators will be susceptible to product loss or failure due to the quality of the raw materials, failure of the products to meet specifications, logistical issues associated with the collection of white blood cells, or starting material, from healthy third-party donors, shipping such material to the manufacturing site, ensuring standardized production batch-to-batch in the context of mass production, freezing the manufactured product, shipping the final product globally and infusing patients with such product. Problems with the manufacturing process, even minor deviations from the normal process, could result in product defects or manufacturing failures that result in lot failures, delays in initiating or completing clinical trials, product recalls, product liability claims or insufficient inventory.

As product candidates are developed through preclinical to late-stage clinical trials towards approval and commercialization, we expect that various aspects of the development program, such as manufacturing methods, may be altered along the way in an effort to help optimize processes and results. Such changes carry the risk that they will not achieve the intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of future clinical trials or our reliance on results of trials that have previously been conducted using the product candidate in its previous form. If the manufacturing process is changed during the course of product development, we or our collaborators may be required to repeat some or all of the previously conducted trials or conduct additional bridging trials, which could increase our costs and delay or impede our ability to obtain marketing approval.

We expect our manufacturing strategy for one or more of our product candidates may involve the use of contract manufacturing organizations, or CMOs, as well as our newly opened manufacturing facility, MCAT. The facilities used by us and our contract manufacturers to manufacture therapeutic product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our BLA to the FDA. We do not control the manufacturing process of our contract manufacturers and are dependent on their compliance with cGMP for their manufacture of our product candidates. We may establish multiple manufacturing facilities as we expand our commercial footprint to multiple geographies, which will be costly and time consuming and may lead to regulatory delays. Even if we are successful, our manufacturing capabilities could be affected by cost-overruns, potential problems

with scale-out, process reproducibility, stability issues, lot inconsistency, timely availability of reagents or raw materials, unexpected delays, equipment failures, labor shortages, natural disasters, utility failures, regulatory issues and other factors that could prevent us from realizing the intended benefits of our manufacturing strategy and have a material adverse effect on our business.

The FDA, the EMA and other foreign regulatory authorities may require us to submit samples of any lot of any product that may receive approval together with the protocols showing the results of applicable tests at any time. Under some circumstances, the FDA, the EMA or other foreign regulatory authorities may require that we not distribute a lot until the relevant agency authorizes its release. Slight deviations in the manufacturing process, including those affecting quality attributes and stability, may result in unacceptable changes in the product that could result in lot failures or product recalls. Lot failures or product recalls could cause us or our collaborators to delay product launches or clinical trials, which could be costly to us and otherwise harm our business. Problems in our manufacturing process also could restrict our or our collaborators' ability to meet market demand for products.

Any problems in our manufacturing process or facilities could make us a less attractive collaborator for potential partners, including larger pharmaceutical companies and academic research institutions, which could limit our access to additional attractive development opportunities.

We will rely on donors of T cells to manufacture product candidates from our allogeneic CAR T immunotherapy platform, and if we do not obtain an adequate supply of T cells from qualified donors, development of those product candidates may be adversely impacted.

We are developing a pipeline of allogeneic T cell product candidates that are engineered from healthy donor T cells, which vary in type and quality. This variability in type and quality of a donor's T cells makes producing standardized product candidates more difficult and makes the development and commercialization pathway of those product candidates more uncertain. We have developed a screening process designed to enhance the quality and consistency of T cells used in the manufacture of our CAR T cell product candidates. If we are unable to identify and obtain T cells from donors that satisfy our criteria in sufficient quantity, to obtain such cells in a timely manner or to address variability in donor T cells, development of our CAR T cell product candidates may be delayed or there may be inconsistencies in the product candidates we produce, which could negatively impact development of such product candidates, harm our reputation and adversely impact our business and prospects.

Failure to achieve operating efficiencies from MCAT may require us to devote additional resources and management time to manufacturing operations and may delay our product development timelines.

We have leased approximately 33,800 square feet of space for MCAT at a location approximately seven miles from our headquarters in Durham, North Carolina. We use this manufacturing center to create clinical trial material for certain of our current and planned clinical trials. We may not experience the anticipated operating efficiencies in our own manufacturing. Any delays in manufacturing may disrupt or delay the supply of our product candidates if we have not maintained a sufficient back-up supply of such product candidates through third-party manufacturers. Moreover, changing manufacturing facilities may also require that we or our collaborators conduct additional studies, make notifications to regulatory authorities, make additional filings to regulatory authorities, and obtain regulatory authority approval for the new facilities, which may be delayed or which we may never receive. We are also required to comply with the FDA's and applicable foreign regulatory authorities' cGMP requirements for the production of product candidates for clinical trials and, if approved, commercial supply, and will be subject to FDA and comparable foreign regulatory authority inspection. These requirements include the qualification and validation of our manufacturing equipment and processes. We may not be able to develop, acquire or maintain the internal expertise and resources necessary for compliance with these requirements. If we fail to achieve the operating efficiencies that we anticipate, our manufacturing and operating costs may be greater than expected, which could have a material adverse impact on our operating results.

We also may encounter problems hiring and retaining the experienced scientific, quality-control and manufacturing personnel needed to operate our manufacturing processes. If we experience unanticipated employee shortage or turnover in any of these areas, we may not be able to effectively manage our ongoing manufacturing operations and we may not achieve the operating efficiencies that we anticipate from the new facility, which may negatively affect our product development timeline or result in difficulties in maintaining compliance with applicable regulatory requirements.

Any such problems could result in the delay, prevention or impairment of clinical development and commercialization of our product candidates.

Any delays or difficulties in our or our collaborators ability to enroll patients in clinical trials, could delay or prevent receipt of regulatory approvals.

We or our collaborators may not be able to initiate or continue clinical trials on a timely basis or at all for any product candidates we or our collaborators identify or develop if we or our collaborators are unable to locate and enroll a sufficient number of eligible

patients to participate in the trials as required by applicable regulations or as needed to provide appropriate statistical power for a given trial. Additionally, some of our competitors may have ongoing clinical trials for product candidates that would treat the same indications as one or more of our product candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in our competitors' clinical trials.

Patient enrollment may also be affected by many factors, including:

- severity and difficulty of diagnosing of the disease under investigation;
- the difficulty in recruiting and/or identifying eligible patients suffering from rare diseases being evaluated under our trials;
- size of the patient population and process for identifying subjects;
- eligibility and exclusion criteria for the trial in question, including unforeseen requirements by the FDA or other regulatory authorities that we restrict one or more entry criteria for the study for safety reasons;
- our or our collaborators' ability to recruit clinical trial investigators with the appropriate competencies and experience;
- design of the trial protocol;
- availability and efficacy of approved medications or therapies, or other clinical trials, for the disease or condition under investigation;
- perceived risks and benefits of the product candidate under trial or testing, or of the application of genome editing to human indications;
- availability of genetic testing for potential patients;
- efforts to facilitate timely enrollment in clinical trials;
- patient referral practices of physicians;
- ability to obtain and maintain subject consent;
- risk that enrolled subjects will drop out before completion of the trial;
- ability to monitor patients adequately during and after treatment;
- proximity and availability of clinical trial sites for prospective patients; and
- unforeseen events, such as natural or manmade disasters, public health emergencies, such as the COVID-19 pandemic which has and may continue to impact our operations, or other natural catastrophic events.

We expect that some of our product candidates will focus on rare genetically defined diseases with limited patient pools from which to draw for enrollment in clinical trials. The eligibility criteria of our clinical trials will further limit the pool of available trial participants. In addition to the factors identified above, patient enrollment in any clinical trials we or our collaborators may conduct may be adversely impacted by any negative outcomes our competitors may experience, including adverse side effects, clinical data showing inadequate efficacy or failures to obtain regulatory approval.

Furthermore, our or our collaborators' ability to successfully initiate, enroll and conduct a clinical trial outside the United States is subject to numerous additional risks, including:

- difficulty in establishing or managing relationships with CROs and physicians;
- differing standards for the conduct of clinical trials;
- differing standards of care for patients with a particular disease;
- an inability to locate qualified local consultants, physicians and partners; and
- the potential burden of complying with a variety of foreign laws, medical standards and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatments.

Enrollment delays in clinical trials, including those due to the COVID-19 pandemic, may result in increased development costs for any of our product candidates, which may cause the value of our company to decline and limit our ability to obtain additional financing. If we or our collaborators have difficulty enrolling a sufficient number of patients to conduct clinical trials as planned, we may need to delay, limit or terminate ongoing or planned clinical trials, any of which may have an adverse effect on our results of operations and prospects.

Results of preclinical studies and early clinical trials of product candidates may not be predictive of results of later studies or trials. Our product candidates may not have favorable results in later clinical trials, if any, or receive regulatory approval.

Preclinical and clinical drug development is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the preclinical study or clinical trial process. Despite promising preclinical or clinical results, any product candidate can unexpectedly fail at any stage of preclinical or clinical development. The historical failure rate for product candidates in our industry is high.

The results from preclinical studies or early clinical trials of a product candidate may not be predictive of the results from later preclinical studies or clinical trials, and interim results of a clinical trial are not necessarily indicative of final results. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy characteristics despite having progressed through preclinical studies and initial clinical trials. Many companies in the biopharmaceutical and biotechnology industries have suffered significant setbacks at later stages of development after achieving positive results in early stages of development, and we may face similar setbacks. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway or safety or efficacy observations made in clinical trials, including previously unreported adverse events. Moreover, non-clinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain regulatory approval. With the exception of our allogeneic anti-CD19, anti-CD20 and anti-BCMA CAR T product candidates, which have undergone limited testing in humans to date, our gene editing technology and our product candidates have never undergone testing in humans and have only been tested in a limited manner in animals, and results from animal studies may not be predictive of clinical trial results. Even if product candidates progress to clinical trials, these product candidates may fail to show the safety and efficacy in clinical development required to obtain regulatory approval, despite the observation of positive results in animal studies. Our or our collaborators' failure to replicate positive results from early research programs and preclinical or greenhouse studies may prevent us from further developing and commercializing those or other product candidates, which would limit our potential to generate revenues from them and harm our business and prospects.

For the foregoing reasons, we cannot be certain that any ongoing or future preclinical studies or clinical trials will be successful. Any safety or efficacy concerns observed in any one of our preclinical studies or clinical trials in a targeted area could limit the prospects for regulatory approval of product candidates in that and other areas, which could have a material adverse effect on our business and prospects.

Interim "top-line" and initial data from studies or trials that we announce or publish from time to time may change as more data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish initial data or interim "top-line" data from preclinical or greenhouse studies or clinical or field trials. For example, we recently reported initial results from our ongoing Phase 1/2a clinical trial of PBCAR0191. Interim data are subject to the risk that one or more of the outcomes may materially change as more data become available. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the top-line results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Initial or "top-line" data also remain subject to audit and verification procedures that may result in the final data being materially different from these initial data we previously published. As a result, interim and initial data should be viewed with caution until the final data are available. Additionally, interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between initial or interim data and final data could significantly harm our business prospects.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure. Any information we determine not to disclose may ultimately be deemed significant by you or others with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the top-line data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, product candidates may be harmed, which could significantly harm our business prospects.

Our product candidates may not work as intended or cause undesirable side effects that, could hinder or prevent receipt of regulatory approval or realization of commercial potential for them or our other product candidates and substantially harm our business.

Our product candidates may be associated with off-target editing or other serious adverse events, undesirable side effects or unexpected characteristics. Results of clinical trials could reveal severe or recurring side effects, toxicities or unexpected events, including death. Off-target cuts could lead to disruption of a gene or a genetic regulatory sequence at an unintended site in the DNA. In those instances where we also provide a segment of DNA, it is possible that following off-target cut events, such DNA could be integrated into the genome at an unintended site, potentially disrupting another important gene or genomic element. There may also be delayed adverse events following exposure to therapeutics made with genome editing technologies due to persistent biologic activity of the genetic material or other components of products used to carry the genetic material. In addition to serious adverse events or side effects caused by product candidates we develop alone or with collaborators, the administration process or related procedures may also cause undesirable side effects. For example, one NHL patient in our Phase 1/2a clinical trial who was treated with PBCAR0191 and eLD suffered episodes of sepsis, which resulted in a fatal outcome. Further, any side effects may not be appropriately recognized or managed by the treating medical staff. We or our collaborators expect to have to educate medical personnel using any product candidates we may develop to understand the side effect profiles for our clinical trials and upon any commercialization of such product candidates. Inadequate recognition or management of the potential side effects of such product candidates could result in patient injury or death.

If any such events occur, clinical trials or commercial distribution of any product candidates or products we develop alone or with collaborators could be suspended or terminated, and our business and reputation could suffer substantial harm. Treatment-related side effects could affect patient recruitment and the ability of enrolled patients to complete the trial or result in potential liability claims. Regulatory authorities could order us or our collaborators to cease further development of, deny approval of or require us to cease selling any product candidates or products for any or all targeted indications. If we or our collaborators elect, or are required, to delay, suspend or terminate any clinical trial or commercialization efforts, the commercial prospects of such product candidates or products may be harmed, and our ability to generate product revenues from them or other product candidates that we develop may be delayed or eliminated.

Additionally, if we successfully develop a product candidate alone or with collaborators and it receives marketing approval, the FDA could require us to adopt a REMS to ensure that the benefits of treatment with such product candidate outweigh the risks for each potential patient, which may include, among other things, a communication plan to health care practitioners, patient education, extensive patient monitoring or distribution systems and processes that are highly controlled, restrictive and more costly than what is typical for the industry. We or our collaborators may also be required to adopt a REMS or engage in similar actions, such as patient education, certification of health care professionals or specific monitoring, if we or others later identify undesirable side effects caused by any product that we develop alone or with collaborators. Such identification could also have several additional significant negative consequences, such as:

- regulatory authorities may suspend, withdraw or limit approvals of such product, or seek an injunction against its manufacture or distribution;
- regulatory authorities may require additional warnings on the label, including “boxed” warnings, or issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we may be required to change the way a product is administered or conduct additional trials;
- the product may become less competitive;
- we or our collaborators may decide to remove the product from the marketplace;
- we may be subject to fines, injunctions or the imposition of civil or criminal penalties;
- we could be sued and be held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us or our collaborators from achieving or maintaining market acceptance of any potential product, or otherwise have a negative impact on our business.

We are subject to federal, state and non-U.S. healthcare laws and regulations relating to our business, and could face substantial penalties if we are determined not to have fully complied with such laws, which would have an adverse impact on our business.

Our business operations, as well as our current and anticipated future arrangements with investigators, healthcare professionals, consultants, third-party payors, customers and patients, expose or will expose us to broadly applicable foreign, federal, and state fraud and abuse and other healthcare laws and regulations. These laws constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute any potential products for which we may obtain marketing approval. Such laws include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a U.S. healthcare program such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the U.S. federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation;

- U.S. federal civil and criminal false claims laws, including the civil False Claims Act, which can be enforced through civil whistleblower or qui tam actions, and civil monetary penalties laws, prohibits, among other things, individuals and entities from knowingly presenting, or causing to be presented, to the U.S. government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. government. In addition, the government may assert that a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;

- the U.S. Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- the U.S. Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS information related to payments or other "transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain other health care professionals beginning in 2022, and teaching hospitals, and requires applicable manufacturers and group purchasing organizations to report annually to the Centers for Medicare and Medicaid Services, or CMS, ownership and investment interests held by the physicians described above and their immediate family members; and

- analogous state and non-U.S. laws and regulations, such as state anti-kickback and anti-corruption and false claims laws, which may apply to our business practices, including, but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, or by the patients themselves; state laws and non-U.S. laws and regulations that require pharmaceutical and device companies to comply with the industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. government or foreign governmental authorities, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state and local laws and regulations and non-U.S. laws and regulations that require manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures and pricing information; state and local laws and non-U.S. laws and regulations which require the registration of pharmaceutical sales representatives.

Efforts to ensure that our current and future business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities may conclude that our business practices, including our relationships with certain physicians, some of whom are compensated in the form of stock options for consulting services provided, do not comply with current or future statutes, regulations, agency guidance or case law involving applicable healthcare laws. If our operations are found to be in violation of any of these or any other health regulatory laws that may apply to us, we may be subject to significant penalties, including the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgement, individual imprisonment, possible exclusion from participation in Medicare, Medicaid and other U.S. or foreign healthcare programs, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm, diminished profits and future earnings, and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. Defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such

actions that may be brought against us, our business may be impaired. If any of the above occur, it could adversely affect our ability to operate our business and our results of operations.

Actual or perceived failures to comply with applicable data protection, privacy and security laws, regulations, standards and other requirements, and the increasing use of social media, could adversely affect our business, results of operations, and financial condition.

The global data protection landscape is rapidly evolving, and we are or may become subject to numerous state, federal and foreign laws, requirements and regulations governing the collection, use, disclosure, retention, and security of personal data, such as information that we may collect in connection with clinical trials in the U.S. and abroad. Implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future, and we cannot yet determine the impact future laws, regulations, standards, or perception of their requirements may have on our business. This evolution may create uncertainty in our business, affect our ability to operate in certain jurisdictions or to collect, store, transfer use and share personal information, necessitate the acceptance of more onerous obligations in our contracts, result in liability or impose additional costs on us. The cost of compliance with these laws, regulations and standards can be high and is likely to increase in the future. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulation, our internal policies and procedures or our contracts governing our processing of personal information could result in negative publicity, government investigations and enforcement actions, claims by third parties and damage to our reputation, any of which could have a material adverse effect on our operations, financial performance and business.

As our operations and business grow, we may become subject to or affected by new or additional data protection laws and regulations and face increased scrutiny or attention from regulatory authorities. In the U.S., HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their implementing regulations, imposes, among other things, certain standards relating to the privacy, security, transmission and breach reporting of individually identifiable health information on covered entities (defined as health plans, health care clearinghouses and certain health care providers) and their respective business associates, individuals or entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HIPAA mandates the reporting of certain breaches of health information to HHS, affected individuals and if the breach is large enough, the media. Entities that are found to be in violation of HIPAA as the result of a breach of unsecured protected health information, a complaint about privacy practices or an audit by HHS, may be subject to significant civil, criminal and administrative fines and penalties and/or additional reporting and oversight obligations if required to enter into a resolution agreement and corrective action plan with HHS to settle allegations of HIPAA non-compliance. Even when HIPAA does not apply, according to the Federal Trade Commission or the FTC, failing to take appropriate steps to keep consumers' personal information secure constitutes unfair acts or practices in or affecting commerce in violation of Section 5(a) of the Federal Trade Commission Act. The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Individually identifiable health information is considered sensitive data that merits stronger safeguards.

Certain states have also adopted comparable privacy and security laws and regulations, some of which may be more stringent than HIPAA. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. In addition, California recently enacted the CCPA, which went into effect on January 1, 2020. The CCPA creates individual privacy rights for California consumers and increases the privacy and security obligations of entities handling certain personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. Further, the CPRA, recently passed in California. The CPRA will impose additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the CPRA provisions are expected to go into effect on January 1, 2023. The CCPA, and the CPRA, may increase our compliance costs and potential liability, and many similar laws have been proposed at the federal level and in other states. In the event that we are subject to or affected by HIPAA, the CCPA, the CPRA or other domestic privacy and data protection laws, any liability from failure to comply with the requirements of these laws could adversely affect our financial condition.

In Europe, the GDPR, went into effect in May 2018 and introduces strict requirements for processing the personal data of individuals within the EEA. Companies that must comply with the GDPR face increased compliance obligations and risk, including more robust regulatory enforcement of data protection requirements. From January 1, 2021 we are subject to compliance with the GDPR and the UK GDPR, which, together with the amended UK Data Protection Act 2018, retains the GDPR in UK national law. The UK GDPR mirrors the fines under the GDPR, i.e., fines up to the greater of €20 million/ £17 million or 4% of global turnover. The relationship between the UK and the EU in relation to certain aspects of data protection law remains unclear, and it is unclear how UK data protection laws and regulations will develop in the medium to longer term, and how data transfers between EU member states will be regulated in the long run. Currently there is a four- to six-month grace period agreed in the EU and UK Trade and Cooperation Agreement, ending June 30, 2021 at the latest, whilst the parties discuss an adequacy decision. However, it is not clear whether (and when) an adequacy decision may be granted by the European Commission enabling data transfers from EU member states to the UK long term without additional measures. These changes will lead to additional costs and increase our overall risk exposure.

Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA and the UK to the U.S. Most recently, on July 16, 2020, the Court of Justice of the European Union, or the CJEU, invalidated the EU-US Privacy Shield Framework, the Privacy Shield, under which personal data could be transferred from the EEA to US entities who had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances. Use of the standard contractual clauses must now be assessed on a case-by-case basis taking into account the legal regime applicable in the destination country, in particular applicable surveillance laws and rights of individuals and additional measures and/or contractual provisions may need to be put in place, however, the nature of these additional measures is currently uncertain. The CJEU went on to state that if a competent supervisory authority believes that the standard contractual clauses cannot be complied with in the destination country and the required level of protection cannot be secured by other means, such supervisory authority is under an obligation to suspend or prohibit that transfer.

These recent developments may require us to review and amend the legal mechanisms by which we make and/ or receive personal data transfers to/ in the U.S. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Despite our efforts to monitor evolving social media communication guidelines and comply with applicable rules, there is risk that the use of social media by us or our employees to communicate about our product candidates or business may cause us to be found in violation of applicable requirements. In addition, our employees may knowingly or inadvertently make use of social media in ways that may not comply with our internal policies or other legal or contractual requirements, which may give rise to liability, lead to the loss of trade secrets or other intellectual property, or result in public exposure of personal information of our employees, clinical trial patients, customers and others. Our potential patient population may also be active on social media and use these platforms to comment on the effectiveness of, or adverse experiences with, our product candidates. Negative posts or comments about us or our product candidates on social media could seriously damage our reputation, brand image and goodwill.

Although we work to comply with applicable laws, regulations and standards, our contractual obligations and other legal obligations, these requirements are evolving and may be modified, interpreted and applied in an inconsistent manner from one jurisdiction to another, and may conflict with one another or other legal obligations with which we must comply. Any failure or perceived failure by us or our employees, representatives, contractors, consultants, CROs, collaborators, or other third parties to comply with such requirements or adequately address privacy and security concerns, even if unfounded, could result in additional cost and liability to us, damage our reputation, and adversely affect our business and results of operations.

We have received orphan drug designation for PBCAR0191 for the treatment of ALL and mantle cell lymphoma, or MCL, PBCAR20A for the treatment of MCL, and PBCAR269A for the treatment of multiple myeloma, and we may seek orphan drug designation for some or all of our other product candidates, but we may be unable to obtain such designations or to maintain the benefits associated with orphan drug designation, which may negatively impact our ability to develop or obtain regulatory approval for such product candidates and may reduce our revenue if we obtain such approval.

We may seek orphan drug designation for some or all of our product candidates in specific orphan indications in which there is a medically plausible basis for the use of these products. Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 in the United States, or a patient population greater than 200,000 in the United States when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a biologics license application, or BLA.

In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. Although we may seek orphan product designation for some or all of our other product candidates, we may never receive such designations.

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a BLA, to market the same biologic for the same indication for seven years, except in limited circumstances such as a showing of clinical superiority to the product with orphan product exclusivity or if FDA finds that the holder of the orphan drug exclusivity has not shown that it can ensure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Even if we or our collaborators obtain orphan drug designation for a product candidate, we may not be the first to obtain marketing approval for any particular orphan indication due to the uncertainties associated with developing pharmaceutical products. Exclusive marketing rights in the United States may be limited if we or our collaborators seek approval for an indication broader than the orphan designated indication and may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if a product obtains orphan drug exclusivity, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug with the same active moiety for the same condition if the FDA concludes that the later drug is safer, more effective, or makes a major contribution to patient care. Furthermore, the FDA can waive orphan exclusivity if we or our collaborators are unable to manufacture sufficient supply of the product.

Similarly, in the EU, a medicinal product may receive orphan designation under Article 3 of Regulation (EC) 141/2000. This applies to products that are intended for a life-threatening or chronically debilitating condition and either (1) such condition affects not more than five in 10,000 persons in the EU when the application is made, or (2) the product, without the benefits derived from orphan status, would be unlikely to generate sufficient returns in the EU to justify the necessary investment. Moreover, in order to obtain orphan designation in the EU it is necessary to demonstrate that there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU or, if such a method exists, the product will be of significant benefit to those affected by the condition. In the EU, orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and applicants can benefit from specific regulatory assistance and scientific advice. Products receiving orphan designation in the EU can receive 10 years of market exclusivity, during which time no similar medicinal product for the same indication may be placed on the market. An orphan product can also obtain an additional two years of market exclusivity in the EU for pediatric studies. However, the 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation—for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, marketing authorization may be granted to a similar product for the same indication at any time if:

- the second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior;
- the first applicant consents to a second orphan medicinal product application; or
- the first applicant cannot supply enough orphan medicinal product.

If we or our collaborators do not receive or maintain orphan drug designation for product candidates for which we seek such designation, it could limit our ability to realize revenues from such product candidates.

We have received and may continue to seek fast track designation, and may seek breakthrough therapy designation, Regenerative Medicine Advanced Therapy, or RMAT, designation, or priority review from the FDA or access to the PRIME scheme from the EMA for some or all of our product candidates, but we may not receive such designations, and even if we do, it may not lead to a faster development or regulatory review or approval process, and will not increase the likelihood that such product candidates will receive marketing approval.

We have received fast track designation for PBCAR0191 for the treatment of B-ALL as well as PBCAR269A for R/R multiple myeloma. We may continue to seek fast track designation and may also seek breakthrough therapy designation, Regenerative Medicine Advanced Therapy, or RMAT, designation or priority review from the FDA, or access to the PRIME scheme from the EMA for some or all of our product candidates. If a drug is intended for the treatment of a serious or life-threatening condition or disease, and nonclinical or clinical data demonstrate the potential to address an unmet medical need, the product may qualify for FDA fast track designation, for which sponsors must apply. The FDA has broad discretion whether or not to grant this designation. If granted, fast track designation makes a drug eligible for more frequent interactions with FDA to discuss the development plan and clinical trial design, as well as rolling review of the application, which means that the company can submit completed sections of its marketing

application for review prior to completion of the entire submission. Products with fast track designation may also be eligible for accelerated approval and priority review, if the relevant criteria are met.

Breakthrough therapy designation is intended to expedite the development and review of product candidates that treat serious or life-threatening diseases when "preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development." The designation of a product candidate as a breakthrough therapy provides the same potential benefits as a fast track designation, with more intensive FDA guidance on an efficient development program and an organizational commitment at FDA involving senior managers.

A company may also request RMAT designation of its product candidate, which designation may be granted if the drug meets the following criteria: (1) it qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (2) it is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (3) preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such a disease or condition. Like breakthrough therapy designation, RMAT designation provides potential benefits that include more frequent meetings with FDA to discuss the development plan for the product candidate, and potential eligibility for rolling review and priority review. Products granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites, including through expansion to additional sites. RMAT- designated products that receive accelerated approval may, as appropriate, fulfill their post-approval requirements through the submission of clinical evidence, clinical studies, patient registries, or other sources of real world evidence (such as electronic health records); through the collection of larger confirmatory data sets; or via post-approval monitoring of all patients treated with such therapy prior to approval of the therapy.

PRIME is a scheme provided by the EMA to enhance support for the development of medicines that target an unmet medical need. To qualify for PRIME, product candidates require early clinical evidence that the therapy has the potential to offer a therapeutic advantage over existing treatments or benefits patients without treatment options. Among the benefits of PRIME are the appointment of a rapporteur to provide continuous support and help build knowledge ahead of a marketing authorization application, early dialogue and scientific advice at key development milestones, and the potential to qualify products for accelerated review earlier in the application process.

Based on legislation adopted late in 2007, the EMA established an additional regulatory designation for products classified as an advanced therapy medicinal product (ATMP). The ATMP classification offers sponsors a variety of benefits similar to those associated with the PRIME scheme, including scientific and regulatory guidance, additional opportunities for dialogue with regulators, and presubmission review and certification of the CMC and nonclinical data proposed for submission in a forthcoming MA applications for micro-, small-, or medium-sized enterprises. To qualify for this designation, product candidates intended for human use must be based on gene therapy, somatic cell therapy, or tissue engineered therapy (i.e., engineered cells or tissues intended to regenerate, replace or repair human tissue).

There is no assurance that we will obtain additional fast track designation, or that we will obtain breakthrough therapy designation, RMAT designation or access to PRIME or ATMP for any of our product candidates. Fast track designation, breakthrough therapy designation, RMAT designation and PRIME and ATMP eligibility do not change the standards for product approval, and there is no assurance that any such designation or eligibility will result in expedited review or approval or that the approved indication will not be narrower than the indication covered by the fast track designation, breakthrough therapy designation, RMAT designation or PRIME or ATMP eligibility. Additionally, fast track designation, breakthrough therapy designation, RMAT designation and access to PRIME or ATMP can each be revoked if the criteria for eligibility cease to be met as clinical data emerges.

If the product candidates that we or our collaborators may develop receive regulatory approval in the United States or another jurisdiction, they may never receive approval in other jurisdictions, which would limit market opportunities for such product candidate and adversely affect our business.

Approval of a product candidate in the United States by the FDA or by the requisite regulatory agencies in any other jurisdiction does not ensure approval of such product candidate by regulatory authorities in other countries or jurisdictions. The approval process varies among countries and may limit our or our collaborators' ability to develop, manufacture, promote and sell product candidates internationally. Failure to obtain marketing approval in international jurisdictions would prevent the product candidates from being marketed outside of the jurisdictions in which regulatory approvals have been received. In order to market and sell product candidates in the EU and many other jurisdictions, we and our collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and may involve additional preclinical studies or clinical trials both before and after approval. In many countries, any product candidate for human use must be approved for reimbursement before it can be approved for sale in that country. In some cases, the intended price for such product is also subject to

approval. Further, while regulatory approval of a product candidate in one country does not ensure approval in any other country, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory approval process in others. If we or our collaborators fail to comply with the regulatory requirements in international markets or to obtain all required marketing approvals, the target market for a particular potential product will be reduced, which would limit our ability to realize the full market potential for the product and adversely affect our business.

Current and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize any product candidates we or our collaborators develop and may adversely affect the prices for such product candidates.

In the United States and certain non-U.S. jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could, among other things, prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our or our collaborators' ability to profitably sell any product candidates that obtain marketing approval.

For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively the Affordable Care Act, was enacted in the United States. Among the provisions of the Affordable Care Act of importance to our product candidates, the Affordable Care Act established an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents; increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, extended manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations, expanded eligibility criteria for Medicaid programs, expanded the entities eligible for discounts under the Public Health program, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, created a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D, and created a licensure framework for follow-on biologic products.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, as well as efforts by the Trump administration to repeal or replace certain aspects of the Affordable Care Act and we expect such challenges and amendments to continue. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, or Texas District Court Judge, ruled that the entire Affordable Care Act is invalid based primarily on the fact that the TCJA enacted on December 22, 2017, repealed the tax-based shared responsibility payment imposed by the Affordable Care Act, on certain individuals who fail to maintain qualifying health coverage for all or part of a year, which is commonly referred to as the "individual mandate." On December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court's decision that the individual mandate was unconstitutional but remanded the case back to the District Court to determine whether the remaining provisions of the Affordable Care Act are invalid as well. The case is currently being reviewed by the U.S. Supreme Court, although it is unclear when or how the Supreme Court will rule. It is also unclear how other efforts, if any, to challenge, repeal or replace the Affordable Care Act will impact the law or our business.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, included reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2021, unless additional Congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Further, there has been heightened governmental scrutiny recently over pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies, rebates and price negotiation for pharmaceutical products. The probability of success of any previously announced policies under the Trump administration and their impact on the United States prescription drug marketplace is unknown, particularly in light of the new Biden administration. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product and medical device pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and medical devices to purchase and which suppliers will be included in their prescription drug and other healthcare programs.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017, or the Right to Try Act, was signed into law. The law, among other things, provides a framework for certain patients with life-threatening diseases or conditions to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

We expect that the Affordable Care Act, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria, new payment methodologies and in additional downward pressure on the price that we or our collaborators may receive for any approved or cleared product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we or our collaborators are slow or unable to adapt to new requirements or policies, or if we or our collaborators are not able to maintain regulatory compliance, any of our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

Even if we obtain regulatory approval for any products that we develop alone or with collaborators, such products will remain subject to ongoing regulatory requirements, which may result in significant additional expense.

Even if products we develop alone or with collaborators receive regulatory approval, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, distribution, storage, advertising, promotion, sampling, record-keeping and submission of safety and other post-market information, among other things. Any regulatory approvals received for such products may also be subject to limitations on the approved indicated uses for which they may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing and surveillance studies. For example, the holder of an approved BLA in the United States is obligated to monitor and report adverse events and any failure of a product to meet the specifications in the BLA. FDA guidance advises that patients treated with some types of gene therapy undergo follow-up observations for potential adverse events for as long as 15 years. Similarly, in the EU, pharmacovigilance obligations are applicable to all medicinal products. In addition to those, holders of a marketing authorization for gene or cell therapy products must detail, in their application, the measures they envisage to ensure follow-up of the efficacy and safety of these products. In cases of particular concern, marketing authorization holders for gene or cell therapy products in the EU may be required to design a risk management system with a view to identifying, preventing or minimizing risks and may be obliged to carry out post-marketing studies. In the United States, the holder of an approved BLA must also submit new or supplemental applications and obtain FDA approval for certain changes to the approved product, product labeling or manufacturing process. Similar provisions apply in the EU. Advertising and promotional materials must comply with FDA rules and are subject to FDA review, in addition to other potentially applicable federal and state laws. Similarly, in the EU any promotion of medicinal products is highly regulated and, depending on the specific jurisdiction involved, may require prior vetting by the competent national regulatory authority.

In addition, product manufacturers and their facilities are subject to payment of user fees and continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP requirements and adherence to commitments made in the BLA or foreign marketing application. If we, our collaborators or a regulatory agency discovers previously unknown problems with a product such as adverse events of unanticipated severity or frequency or problems with the facility where the product is manufactured or disagrees with the promotion, marketing or labeling of that product, a regulatory agency may impose restrictions relative to that product, the manufacturing facility or us or our collaborators, including requiring recall or withdrawal of the product from the market or suspension of manufacturing.

Moreover, if any of our product candidates are approved, our product labeling, advertising, promotion and distribution will be subject to regulatory requirements and continuing regulatory review. The FDA strictly regulates the promotional claims that may be made about drug products. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling.

If we or our collaborators fail to comply with applicable regulatory requirements following approval of any potential products we may develop, authorities may:

- issue an untitled enforcement letter or a warning letter asserting a violation of the law;
- seek an injunction, impose civil and criminal penalties, and impose monetary fines, restitution or disgorgement of profits or revenues;
- suspend or withdraw regulatory approval;

- suspend or terminate any ongoing clinical trials or implement requirements to conduct post-marketing studies or clinical trials;
- refuse to approve a pending BLA or comparable foreign marketing application (or any supplements thereto) submitted by us or our collaborators;
- restrict the labeling, marketing, distribution, use or manufacturing of products;
- seize or detain products or otherwise require the withdrawal or recall of products from the market;
- refuse to approve pending applications or supplements to approved applications that we or our collaborators submit;
- refuse to permit the import or export of products; or
- refuse to allow us or our collaborators to enter into government contracts.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our or our collaborators' ability to commercialize products and our ability to generate revenues.

In addition, the FDA's policies, and policies of foreign regulatory agencies, may change, and additional regulations may be enacted that could prevent, limit or delay regulatory approval of product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, the results of the 2020 Presidential election and recent change in administration may impact our business and industry. The Trump administration, for example, took several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance and review and approval of marketing applications. It is difficult to predict whether or how these requirements will be implemented or whether they will be rescinded or replaced under the Biden Administration. The policies and priorities of the Biden administration are unknown and could materially impact the regulation governing our products. If we or our collaborators are slow or unable to adapt to changes in existing requirements or the adoption of new requirements, or if we or our collaborators are unable to maintain regulatory compliance, marketing approval that has been obtained may be lost and we may not achieve or sustain profitability.

Even if any product we develop alone or with collaborators receives marketing approval, such product may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

The commercial success of any potential therapeutic products we develop alone or with collaborators will depend upon their degree of market acceptance by physicians, patients, third-party payors and others in the medical community. Even if any potential therapeutic products we develop alone or with collaborators receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors and others in the medical community. The degree of market acceptance of any product we develop alone or with collaborators, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy and safety of such product as demonstrated in clinical trials;
- the prevalence and severity of any side effects;
- the clinical indications for which the product is approved by FDA, the EMA or other regulatory authorities;
- product labeling or product insert requirements of the FDA, the EMA or other regulatory authorities, including any limitations or warnings contained in a product's approved labeling;
- public attitudes regarding genome editing technologies;
- our and any collaborators' ability to educate the medical community about the safety and effectiveness of the product;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies, as well as their willingness to accept a therapeutic intervention that involves the editing of the patient's genome;
- the potential and perceived advantages compared to alternative treatments;
- convenience and ease of administration compared to alternative treatments;
- any restrictions on the use of such product together with other treatments or products;
- market introduction of competitive products;

- publicity concerning such product or competing products and treatments;
- the ability to offer such product for sale at a competitive price;
- the strength of marketing and distribution support; and
- sufficient third-party coverage and adequate reimbursement.

If any products we develop alone or with collaborators do not achieve an adequate level of acceptance, we may not generate significant product revenues, and we may not become profitable.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to sell and market any products we develop alone or with collaborators, the commercialization of such products may not be successful if and when they are approved.

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of biopharmaceutical or other commercial products. To achieve commercial success for any approved products for which we retain sales and marketing responsibilities, we must either develop a sales and marketing organization or outsource these functions to third parties. In the future, we may choose to build a focused sales, marketing and commercial support infrastructure to sell, or participate in sales activities with our collaborators for, certain product candidates if and when they are approved.

There are risks involved with both establishing our own commercial capabilities and entering into arrangements with third parties to perform these services. For example, restricted or closed distribution channels may make it difficult to distribute products to segments of the patient population, and the lack of complementary medicines to be offered by sales personnel may put us at a competitive disadvantage relative to companies with more extensive product lines.

Recruiting and training a sales force or reimbursement specialists are expensive and time consuming and could delay any product launch. If the commercial launch of a product for which we recruit a sales force and establish marketing and other commercialization capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses, and our investment would be lost if we cannot retain or reposition our commercialization personnel. Factors that may inhibit our efforts to commercialize products on our own include:

- unforeseen costs and expenses associated with creating an independent commercialization organization;
- our inability to recruit, train, retain and effectively manage adequate numbers of effective sales, marketing, customer service and other support personnel, including for reimbursement or medical affairs;
- the inability of sales personnel to educate adequate numbers of physicians on the benefits of our future medicines; and
- the inability of reimbursement professionals to negotiate arrangements for formulary access, reimbursement and other acceptance by payors.

If we choose to enter into arrangements with third parties to perform sales, marketing, commercial support or distribution services, we may not be successful in entering into such arrangements or may be unable to do so on terms that are favorable to us. Entering into such third-party arrangements may subject us to a variety of risks, including:

- product revenues or profitability to us being lower than if we were to market and sell any products we or our collaborators may develop ourselves;
- our inability to exercise direct control over sales and marketing activities and personnel;
- failure of the third parties to devote necessary resources and attention to, or other inability to, sell and market any products we or our collaborators may develop;
- potential disputes with third parties concerning sales and marketing expenses, calculation of royalties and sales and marketing strategies; and
- unforeseen costs and expenses associated with sales and marketing.

If we do not establish effective commercialization capabilities, either on our own or in collaboration with third parties, we will not be successful in commercializing any of our product candidates that may receive approval.

If the market opportunities for any products we develop alone or with collaborators are smaller than our estimates, or if we are unable to successfully identify enough patients, our revenues may be adversely affected.

We focus some of our research and product development on treatments for rare genetic diseases. Our and our collaborators' projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with product candidates we may develop, are based on estimates. These estimates may prove to be incorrect, and new studies may change the estimated incidence or prevalence of these diseases. The number of patients in the United States, Europe and elsewhere may turn out to be lower than expected, and patients may not be amenable to treatment with products that we may develop alone or with collaborators, or may become increasingly difficult to identify or gain access to, any of which would decrease our ability to realize revenue from any such products for such diseases.

The successful commercialization of potential products will depend in part on the extent to which governmental authorities and health insurers establish coverage, and the adequacy of reimbursement levels and pricing policies, and failure to obtain or maintain coverage and adequate reimbursement for any potential products that may receive approval, could limit marketability of those products and decrease our ability to generate revenue.

The availability of coverage and adequacy of reimbursement by government healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors is essential for most patients to be able to afford prescription medications such as the potential therapeutic products we develop alone or with collaborators. The ability to achieve acceptable levels of coverage and reimbursement for any potential products that may be approved by governmental authorities will have an effect on our and our collaborators' ability to successfully commercialize such products. Even if products we develop alone or with collaborators obtain coverage by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. If coverage and reimbursement in the United States, the EU or elsewhere is not available for any products we develop alone or with collaborators that may be approved, or any reimbursement that may become available is decreased or eliminated in the future, we and our collaborators may be unable to commercialize such products.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved drugs and biologics. In the United States, third-party payors, including private and governmental payors, such as the Medicare and Medicaid programs, play an important role in determining the extent to which new drugs and biologics will be covered. In August 2019, the CMS published its decision to cover autologous treatment for cancer with T-cells expressing at least one CAR when administered at healthcare facilities enrolled in the FDA risk evaluation and mitigation strategies and used for an FDA-approved indication or for other uses when the product has been FDA-approved and the use is supported in one or more CMS-approved compendia. The Medicare and Medicaid programs increasingly are used as models in the United States for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs and biologics. Some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. We cannot predict at this time what third-party payors will decide with respect to the coverage and reimbursement for any product that we develop alone or with collaborators.

No uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us or our collaborators to provide scientific and clinical support for the use of any potential products that may be approved to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently, in some cases on short notice. Obtaining coverage and adequate reimbursement for products we develop alone or with collaborators may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. In certain instances, payors may not separately reimburse for the product itself, but only for the treatments or procedures in which such product is used. A decision by a third-party payor not to cover or separately reimburse for products that we develop alone or with collaborators or procedures using such products, could reduce physician utilization of any such products that may receive approval.

Third-party payors are increasingly challenging prices charged for pharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when an equivalent generic drug, biosimilar or a less expensive therapy is available. If approved, it is possible that a third-party payor may consider any products that we develop alone or with collaborators as substitutable and only offer to reimburse patients for the less expensive product. Pricing of existing third-party therapeutics may limit the amount we will be able to charge for any products that may receive approval even if we or our collaborators show improved efficacy or improved convenience of administration such products. These payors may deny or revoke the reimbursement status of a given product or establish prices for new or existing marketed products at levels that are too low to enable us to realize an appropriate return on our investment in the product. If reimbursement is not available or is available only at limited levels, we or our collaborators may not be able to successfully commercialize any of the products that we develop, even if approved, and we may not be able to obtain a satisfactory financial return on them. Moreover, increasing efforts by governmental and third-

party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for any products we develop alone or with collaborators that may receive approval. We expect to experience pricing pressures in connection with the sale of any products that may receive approval due to the trend toward managed health care, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and biologics and surgical procedures and other treatments, has become intense. As a result, increasingly high barriers are being erected to the entry of new products.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe and elsewhere have and will continue to put pressure on the pricing and usage of any products we develop alone or with collaborators that may receive approval. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products, but monitor and control company profits. Additional international price controls or other changes in pricing regulation could restrict the amount that we or our collaborators are able to charge for products that we develop that may receive approval. Accordingly, in markets outside the United States, the reimbursement for such products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

If we are successful in achieving regulatory approval to commercialize any biologic product candidate we develop alone or with collaborators, it may face competition from biosimilar products. In the United States, our product candidates are regulated by the FDA as biologic products subject to approval under the BLA pathway. The Biologics Price Competition and Innovation Act of 2009, or the BPCIA, created an abbreviated pathway for the approval of biosimilar and interchangeable biologic products following the approval of an original BLA. The abbreviated regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product may not be submitted until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years after the reference product was first licensed by the FDA. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for biological product candidates.

We believe that any of our product candidates that are approved as biological products under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider such product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar product, once approved, will be substituted for any one of our or our collaborators' reference products in a way that is similar to traditional generic substitution for non-biologic products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing. If competitors are able to obtain marketing approval for biosimilars referencing any products that we develop alone or with collaborators that may be approved, such products may become subject to competition from such biosimilars, with the attendant competitive pressure and potential adverse consequences.

Additional Risks Related to the Identification, Development and Commercialization of Our Food and Agricultural Product Candidates

The regulatory landscape that may govern any potential food or agricultural products that we or our collaborators may develop is uncertain and may adversely impact the development and commercialization activities of our food platform.

In the United States, the United States Department of Agriculture, or the USDA, regulates, among other things, the introduction (including the importation, interstate movement or release into the environment) of organisms and products altered or produced through genetic engineering determined to be plant pests or for which there is reason to believe are plant pests. Such organisms and products are considered "regulated articles." However, a petitioner may submit a request for a determination by the USDA of "nonregulated status" for a particular article. A petition for determination of nonregulated status must include detailed information, including relevant experimental data and publications, field trial reports and a description of the genotypic differences between the regulated article and the non-modified recipient organism, among other things. Neither we nor, to our knowledge, our collaborators

have obtained a determination from the USDA that any product candidates are not "regulated articles" under these regulations. We cannot predict whether the USDA, advocacy groups or other third parties will contend that these products are regulated articles. The USDA's regulations also require that companies obtain a permit or file a notification before engaging in the introduction (including the importation, interstate movement or release into the environment such as in field trials) of "regulated articles." Additionally, a change in the way the USDA interprets its regulations, or a change in its regulations, could subject our or our collaborators' products to more burdensome regulations, thereby substantially increasing the time and costs associated with developing product candidates. Complying with the USDA's Part 340 regulations, including permitting requirements, is a costly, time-consuming process and could delay or prevent the commercialization of any potential food or agricultural products we or our collaborators may develop.

Any potential food or agricultural products that we or our collaborators develop may also be subject to extensive FDA food product regulations. Under sections 201(s) and 409 of the Federal Food, Drug, and Cosmetic Act, or the FDCA, any substance that becomes or is reasonably expected to become a component of food is a food additive and is therefore subject to FDA premarket review and approval, unless the substance is generally recognized, among qualified experts, as having been adequately shown to be safe under the conditions of its intended use (generally recognized as safe, or GRAS), or unless the use of the substance is otherwise excluded from the definition of a food additive, and any food that contains an unsafe food additive is considered adulterated under section 402(a)(2)(C) of the FDCA. The FDA may classify some or all of the potential food or agricultural products that we or our collaborators may develop as containing a food additive that is not GRAS or otherwise determine that such products contain significant compositional differences from existing plant products that require further review. Such classification would cause these potential products to require pre-market approval, which could delay the commercialization of these products. In addition, the FDA is currently evaluating its approach to the regulation of gene-edited plants. For example, on January 19, 2017, the FDA issued a notice in the Federal Register requesting public comment on the use of genome editing techniques to produce new plant varieties that are used for human or animal food or foods that are derived from such new plant varieties produced using genome editing. Among other things, the notice asked for data and information in response to questions about the safety of foods from gene-edited plants, such as whether categories of gene-edited plants present food safety risks different from other plants produced through traditional plant breeding. If the FDA enacts new regulations or policies with respect to gene-edited plants, such policies could result in additional compliance costs and delay or even prevent the commercialization of any of our product candidates, which could negatively affect our profitability. Any delay in the regulatory consultation process, or a determination that any potential products we or our collaborators may develop do not meet regulatory requirements by the FDA or other regulators, could cause a delay in, or prevent, the commercialization of our products, which may lead to reduced acceptance by the public and an increase in competitor products that may directly compete with ours, or could otherwise negatively impact our business, prospects and results of operations.

On December 21, 2018, the USDA finalized a rule implementing the National Bioengineered Food Disclosure Standard, with an implementation date of January 1, 2020. Under this rule, the label of a bioengineered, or BE, food must include a disclosure that the food is a BE food or contains a BE ingredient, with certain exceptions. This rule defines BE food as "a food that contains genetic material that was has been modified through in vitro recombinant deoxyribonucleic acid, or DNA, techniques and for which the modification could not otherwise be obtained through conventional breeding or found in nature," except in the case of an incidental additive present in food at an insignificant level and that does not have any technical or functional effect in the food. Under this rule, products developed by our collaborators based on our ARCUS technology may be required to be labeled "BE," in which case consumer perception of these products may be adversely affected.

In the European Economic Area, or EEA (which is comprised of the 27 Member States of the European Union, or EU, plus Norway, Liechtenstein, and Iceland), genetically modified foods, or GM foods, can only be authorized for sale on the market once they have been subject to rigorous safety assessments. The procedures for evaluation and authorization of GM foods are notably governed by Regulation (EC) 1829/2003 on GM food and feed and Directive 2001/18/EC (as amended and transposed into EEA member states' law and regulations) on the release of genetically modified organisms, or GMOs, into the environment. If the GMO is not to be used in food or feed, then an application must be made under Directive 2001/18/EC. If the GMO is to be used in food or feed (but it is not cultivated in the EEA) then a single application for both food and feed purposes under Regulation 1829/2003 should be made. If the GMO is used in feed or food and it is cultivated in the EEA, an application for both cultivation and food/feed purposes needs to be carried out under Regulation (EC) 1829/2003. A different EU regulation, Regulation (EC) 1830/2003, regulates the labeling of products that contain GMOs that are placed on the EEA market. Directive 2001/18/EC was amended by Directive (EU) 2015/412 which gives EEA member states more flexibility to allow, restrict or prohibit cultivating GMOs in their territory, on a range of environmental grounds, even if such crops were previously authorized at EEA level. Under Directive 2015/412, EEA member state restrictions or prohibitions can only cover cultivation, and not the free circulation and import of genetically modified seeds and plant propagation material, and should be in conformity with the internal market rules of the EU Treaties.

Further EU legislation may be applicable to GM foods such as Directive 2009/41/EC on contained use of genetically modified micro-organisms and Regulation (EC) 1946/2003 on transboundary movements of GMOs.

We cannot predict whether or when any governmental authority will change its regulations with respect to any potential food or agricultural products that we develop alone or with collaborators. Advocacy groups have engaged in publicity campaigns and filed lawsuits in various countries against companies and regulatory authorities seeking to halt biotechnology approval activities or influence public opinion against genetically engineered products. In addition, governmental reaction to negative publicity concerning genetically edited agricultural products could result in greater regulation of genetic research and derivative products or regulatory costs that render our or our collaborators' development of potential food or agricultural products cost prohibitive. Our collaborators may use or integrate our products or technology into other products in ways that could subject those collaborators or products to additional regulation.

The overall agricultural industry is susceptible to agricultural price changes, and we may be exposed to risks from changes in commodity prices.

Changes in the prices of agricultural products could result in changes in demand for and prices of food and agricultural products that we or our collaborators may develop. We may be susceptible to these changes as a result of factors beyond our control, such as general economic conditions, seasonal fluctuations, weather conditions, demand, food safety concerns, product recalls and government regulations, subsidies or market export tariffs. If demand for agricultural products that we or our collaborators may develop is negatively impacted, our potential revenues under collaboration agreements for such products may decline, which could adversely affect our results of operations.

The successful commercialization of any food or agricultural products we develop will depend in part on our collaborators' ability to produce high-quality plant, vegetative propagation material and seeds cost-effectively on a large scale and to accurately forecast demand for such potential products, and they may be unable to do so.

The production of commercial-scale quantities of food or agricultural products or seeds for them requires the multiplication of the plants, vegetative propagation material or seeds through a succession of plantings and seed harvests. The cost-effective production of high-quality, high-volume quantities of such products or seeds may depend in part on our collaborators' abilities to scale production processes to produce plants and seeds in sufficient quantity to meet demand. Our collaborators' existing or future plant and seed production techniques may not enable timely meeting of large-scale production goals cost-effectively for any potential food or agricultural products that we and our collaborators may develop. Although we have worked with some of the largest plant biotechnology companies to edit gene targets and develop potential product candidates in a variety of crop plants, no commercial food or agricultural products have ever been developed using our technology.

In addition, because of the length of time it takes to produce commercial quantities of marketable plants and seeds, our collaborators will need to make seed production decisions well in advance of food product sales. The ability to accurately forecast demand can be adversely affected by a number of factors outside of their control, including changes in market conditions, environmental factors, such as pests and diseases, and adverse weather conditions.

The commercial success of any consumer-centric food or agricultural products that we or our collaborators may develop is reliant on the needs of food manufacturers and the recognition of shifting consumer preferences.

The commercial success of any consumer-centric products depends in part on the ability of the food manufacturer to accurately determine the shifting needs and desires of the ultimate consumer. We will not control the marketing, distribution labeling or any other aspects of the sale and commercialization of the manufacturers' food products. Consumer preferences may be a significant driver in the success of food manufacturers in their efforts to sell food and agricultural products, including products that we or our collaborators may develop. While current trends indicate that consumer preferences may be moving towards "healthier" options, we cannot predict whether such trends will continue or which types of food products will be demanded by consumers in the future. Additionally, as health and nutritional science continues to progress, consumer perception of what foods, nutrients and ingredients are considered "healthy" may shift. We and our collaborators may not be dynamic enough in responding to consumer trends and creating products that will be demanded by consumers in the future. In addition, if consumer demand is lower than our estimates or those of our collaborators, our ability to realize revenues from potential food or agricultural products may be limited. Failure by our collaborators to successfully recognize consumer trends could lower demand for potential food or agricultural products that we or our collaborators may develop, which could harm our business, results of operations and financial condition.

Some of the potential food products we develop alone or with collaborators may be distributed into markets or countries in which they have not received regulatory approval, which may result regulatory challenges or lawsuits.

The scale of the agricultural industry may make it difficult to monitor and control the distribution of any potential food products that we develop alone or with collaborators. As a result, such products may be sold inadvertently within jurisdictions where they are not approved for distribution. Such sales may lead to regulatory challenges or lawsuits against us, which could result in significant expenses and divert our management's attention, which could harm our business, results of operations and financial condition.

Risks Related to Our Organization, Structure and Operations

The ongoing novel coronavirus disease, COVID-19 has impacted our business, and any other pandemic, epidemic or outbreak of an infectious disease may materially and adversely impact our business, including our preclinical studies and clinical trials.

In March 2020, the World Health Organization designated the outbreak of the novel strain of coronavirus known as COVID-19 as a global pandemic, and COVID-19 has spread to multiple global regions, including the United States and Europe. The ongoing pandemic and government measures taken in response have also had a significant impact, both direct and indirect, on businesses and commerce, as worker shortages have occurred; supply chains have been disrupted; facilities and production have been suspended; and demand for certain goods and services, such as medical services and supplies, has spiked, while demand for other goods and services, such as travel, has fallen. In response to the spread of COVID-19 and in accordance with local guidelines, we have implemented measures to mitigate exposure risks and support operations. The health and safety program we have initiated requiring mandatory use of face masks, social distancing, sanitary handwashing practices, use of personal protective equipment stations, stringent cleaning and sanitization of all facilities and measures to reduce total occupancy in facilities, as well as temperature and symptom screening procedures at each location may not sufficiently protect our employees. We have communicated to our employees that based on their comfort level, regardless of role, they may elect not to come to work. Any resurgence of outbreaks or new regulatory orders or guidance or self-imposed protective measures we impose could require reversal of our previously eased restrictions to our on-site activities and, as a result, adversely impact our business, including our preclinical studies and clinical trials.

As a result of the COVID-19 pandemic or other pandemic, epidemic or outbreak of an infectious disease, we have and may continue to experience disruptions that could severely impact our business, preclinical studies and clinical trials, including:

- delays or difficulties in enrolling patients in our clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption of key clinical trial activities, such as clinical trial site data monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others or interruption of clinical trial subject visits and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- interruption of, or delays in receiving, supplies of our product candidates from our contract manufacturing organizations due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems;
- interruptions in preclinical studies due to restricted or limited operations at our laboratory facility;
- limitations on employee resources that would otherwise be focused on the conduct of our preclinical studies and clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people; and
- interruption or delays to our sourced discovery and clinical activities.

The COVID-19 pandemic continues to rapidly evolve. Disruptions, competing resource demands and safety concerns caused by the COVID-19 pandemic have caused, and may continue to cause, delays in our clinical trial site activation and our ability to enroll patients. We may also experience other difficulties, disruptions or delays in conducting preclinical studies or initiating, enrolling, conducting or completing our planned and ongoing clinical trials, and we may incur other unforeseen costs as a result. The extent to which the outbreak impacts our business, preclinical studies and clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the pandemic, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and treat the disease. If we or any of the third parties with whom we engage were to experience shutdowns or any further business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted. Additionally, the magnitude of the economic impact brought by and the duration of the COVID-19 pandemic is difficult to assess or predict and may continue to result in significant disruption of global financial markets, which may reduce our ability to access capital and negatively affect our liquidity.

We will need to expand our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of December 31, 2020, we had 231 full-time employees. We will need to significantly expand our organization, and our future financial performance, ability to develop and commercialize product candidates alone or with collaborators and ability to compete effectively will depend in part on our ability to effectively manage any future growth. We may have difficulty identifying, hiring and integrating new personnel. Many of the biotechnology companies that we compete against for qualified personnel and consultants have greater financial and other resources, different risk profiles and a longer history than we do. If we are unable to continue to attract and retain high-quality personnel and consultants, the rate and success at which we can identify and develop product candidates, enter into collaborative arrangements and otherwise operate our business will be limited.

Future growth would impose significant additional responsibilities on our management, including the need to identify, recruit, maintain, motivate and integrate additional employees, consultants and contractors.

Management may need to divert a disproportionate amount of its attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expected expansion of our operations or recruit and train additional qualified personnel. Moreover, the expected physical expansion of our operations may lead to significant costs and may divert our management and business development resources from other projects, such as the development of product candidates. If we are not able to effectively manage the expansion of our operations, it may result in weaknesses in our infrastructure, increase our expenses more than expected, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity. Our future financial performance, ability to successfully commercialize any of our product candidates and our ability to compete effectively will depend, in part, on our ability to effectively manage any future growth.

We may engage in transactions that could disrupt our business, cause dilution to our stockholders or reduce our financial resources.

In the future, we may enter into transactions to acquire or in-license rights to product candidates, products or technologies or to acquire other businesses. If we do identify suitable candidates, we may not be able to enter into such transactions on favorable terms, or at all. Any such acquisitions or in-licenses may not strengthen our competitive position, and these transactions may be viewed negatively by customers or investors. We may decide to incur debt in connection with an acquisition or in-license, which may negatively impact our financial condition and restrict our operations, or issue our common stock or other equity securities to the stockholders of the acquired company, which would reduce the percentage ownership of our existing stockholders. We could incur losses resulting from undiscovered liabilities of the acquired business that are not covered by the indemnification we may obtain from the sellers of the acquired business. In addition, we may not be able to successfully integrate the acquired personnel, technologies and operations into our existing business in an effective, timely and non-disruptive manner. Such transactions may also divert management attention from day-to-day responsibilities, increase our expenses and reduce our cash available for operations and other uses. We cannot predict the number, timing or size of future acquisitions or in-licenses or the effect that they might have on our operating results.

Our future success depends on our ability to retain our key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the research and development experience, technical skills, leadership and continued service of certain members of our management and scientific teams. Although we have formal employment agreements with our executive officers, these agreements do not prevent them from terminating their employment with us at any time upon thirty days' written notice. The loss of the services of any of these persons could impede the achievement of our research, development and commercialization objectives.

Recruiting and retaining qualified scientific, clinical, manufacturing and, if we retain commercialization responsibility for any product candidate we develop alone or with collaborators, sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms or at all given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategies. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. The inability to recruit, integrate, motivate and retain additional skilled and qualified personnel, or the loss of services of certain executives, key employees, consultants or advisors, may impede the progress of our research, development and commercialization objectives and have a material adverse effect on our business.

We are subject to increased costs as a result of operating as a public company, and our management will be required to devote substantial time to maintaining compliance initiatives and corporate governance practices, including establishing and maintaining proper and effective internal control over financial reporting.

As a public company, we have incurred and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. We are subject to the Securities Exchange Act of 1934, as amended, or the Exchange Act, including the reporting requirements thereunder, the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The Nasdaq Stock Market LLC, or Nasdaq, and other applicable securities rules and regulations, including requirements related to the establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to continue to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased our legal and financial compliance costs, making some activities more difficult, time consuming or costly, and increasing demand on our systems and resources.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, we are required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 of the Sarbanes-Oxley Act within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. We may need to hire more employees in the future or engage outside consultants to comply with these requirements, which will further increase our costs and expenses. If we fail to implement the requirements of Section 404 of the Sarbanes-Oxley Act in the required timeframe, we may be subject to sanctions or investigations by regulatory authorities, including the SEC and Nasdaq. Furthermore, if we are unable to conclude that our internal control over financial reporting is effective, our investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by regulatory authorities. Failure to implement or maintain an effective internal control system could also restrict our future access to the capital markets.

Our business and operations would suffer in the event of system failures or security breaches.

Despite the implementation of security measures, our computer systems, as well as those of third parties with which we have relationships, are vulnerable to damage from computer viruses, unauthorized access, natural and manmade disasters, terrorism, war and telecommunication and electrical failures. Attacks upon information technology systems are increasing in their frequency, levels of persistence, sophistication and intensity, and are being conducted by sophisticated and organized groups and individuals with a wide range of motives and expertise. As a result of the COVID-19 pandemic, we may also face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. Furthermore, because the technologies used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. While we do not believe that we have experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our or their operations, it could result in delays and/or material disruptions of our research and development programs. For example, the loss of trial data from completed, ongoing or planned trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to data or applications, or inappropriate disclosure of personal, confidential or proprietary information, we could incur liability and the development of our product candidates could be delayed.

The U.S. federal and various state and foreign governments have enacted or proposed requirements regarding the collection, distribution, use, security and storage of personally identifiable information and other data relating to individuals, and U.S. federal and state consumer protection laws are being applied to enforce regulations related to the online collection, use and dissemination of data. In the ordinary course of our business, we and third parties with which we have relationships will continue to collect and store sensitive data, including intellectual property, clinical trial data, proprietary business information, personal data and personally identifiable information of our clinical trial subjects and employees, in data centers and on networks. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our and our collaborators' security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or internal bad actors, breaches due to employee error, technical vulnerabilities, malfeasance or other disruptions. A number of proposed and enacted federal, state and international laws and regulations obligate companies to notify individuals of security breaches involving particular personally identifiable information, which could result from breaches experienced by us or by third parties, including collaborators, vendors, contractors or other organizations with which we have formed strategic relationships. Although, to our knowledge, neither we nor any such third parties have experienced any material security breach, and even though we may have contractual protections with such third parties, any such breach could compromise our or their networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure, notifications, follow-up actions related to such a security breach or other loss of

information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information and significant costs, including regulatory penalties, fines and legal expenses, and such an event could disrupt our operations, cause us to incur remediation costs, damage our reputation and cause a loss of confidence in us and our or such third parties' ability to conduct clinical trials, which could adversely affect our reputation and delay our research and development programs.

Our insurance policies are expensive and protect us only from some business risks, which leaves us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. If we obtain marketing approval for any product candidates that we or our collaborators may develop, we intend to acquire insurance coverage to include the sale of commercial products, but we may be unable to obtain such insurance on commercially reasonable terms or in adequate amounts. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination.

Accordingly, in the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and clinical trials or regulatory approvals for any of our product candidates could be suspended. We also expect that operating as a public company will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors, our board committees or as our executive officers.

Insurance coverage is becoming increasingly expensive, and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. We do not know if we will be able to maintain existing insurance with adequate levels of coverage, and any liability insurance coverage we acquire in the future may not be sufficient to reimburse us for any expenses or losses we may suffer. A successful liability claim or series of claims brought against us could require us to pay substantial amounts and cause our share price to decline and, if judgments exceed our insurance coverage, could adversely affect our results of operations and business, including preventing or limiting the development and commercialization of any product candidates that we or our collaborators may develop.

If we or any of our contract manufacturers or other suppliers fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur significant costs.

We and any of our contract manufacturers and suppliers are subject to numerous federal, state and local environmental, health and safety laws, regulations and permitting requirements, including those governing laboratory procedures; the generation, handling, use, storage, treatment and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air and water; and employee health and safety. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. Under certain environmental laws, we could be held responsible for costs relating to any contamination at our current or past facilities and at third-party facilities. We also could incur significant costs associated with civil or criminal fines and penalties.

Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our research and product development efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty and general liability insurance policies (under which we currently have an aggregate of approximately $10 million in coverage) specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals for any product candidate we develop alone or with collaborators could be suspended, which could have a material adverse effect on our business and financial condition.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws, regulations and permitting requirements, and any third-party contract manufacturers and suppliers we engage will also be subject to such current and future regulations and requirements. These current or future laws, regulations and permitting requirements may impair our research, development or production efforts. Failure to comply with these laws, regulations and permitting requirements, either by us

or by any third-party contract manufacturers and suppliers we engage, also may result in substantial fines, penalties or other sanctions or business disruption.

Our business operations, including our current and future relationships with third parties, will expose us to penalties for potential misconduct or improper activity, including non-compliance with regulatory standards and requirements.

Complex laws constrain our business and the financial arrangements and relationships through which we conduct our operations, including how we may research, market, sell and distribute product candidates alone or with collaborators. We are exposed to the risk of fraud or other misconduct by our employees, consultants and collaborators and, if we or our collaborators commence clinical trials and proceed to commercialization, our principal investigators and commercial partners, as well as healthcare professionals, third-party payors, patient organizations and customers. For example, misconduct by these parties could include intentional failures to comply with FDA regulations or the regulations applicable in the EU and other jurisdictions, provide accurate information to the FDA, the European Commission and other regulatory authorities, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, false and/or misleading statements, corruption of government officials, self-dealing and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing, promotion, sales commission and customer incentive programs and other business arrangements. Such misconduct also could involve the improper use or misrepresentation of information obtained in the course of clinical trials, creating fraudulent data in preclinical studies or clinical trials, illegal misappropriation of study materials or other property, or improper interactions with the FDA or other regulatory authorities, which could result in regulatory sanctions and cause serious harm to our or our collaborators' reputations.

Ensuring that our internal operations and current and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, additional reporting requirements and oversight if subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to similar penalties, such as criminal, civil or administrative sanctions, including exclusions from government-funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly and time-consuming and may require significant personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

We have adopted policies applicable to all of our employees, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent such activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from government investigations or other actions or lawsuits stemming from a failure to comply with applicable laws or regulations. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of any of the penalties discussed above and have a significant impact on our business and financial condition.

We are subject to complex tax rules relating to our business, and any audits, investigations or tax proceedings could have a material adverse effect on our business, results of operations and financial condition.

We are subject to income and non-income taxes in the United States. Income tax accounting often involves complex issues, and judgment is required in determining our provision for income taxes and other tax liabilities. In May 2018 we formed a subsidiary in Australia, in June 2019 we formed a subsidiary in the United Kingdom, and we may operate in other non-US jurisdictions in the future. We could become subject to income and non-income taxes in non-US jurisdictions as well. In addition, many jurisdictions have detailed transfer pricing rules, which require that all transactions with non-resident related parties be priced using arm's length pricing principles within the meaning of such rules. The application of withholding tax, goods and services tax, sales taxes and other non-income taxes is not always clear and we may be subject to tax audits relating to such withholding or non-income taxes. We believe that our tax positions are reasonable and our tax reserves are adequate to cover any potential liability. We are currently not subject to any tax audits. However, the Internal Revenue Service or other taxing authorities may disagree with our positions. If the Internal Revenue Service or any other tax authorities were successful in challenging our positions, we may be liable for additional tax and

penalties and interest related thereto or other taxes, as applicable, in excess of any reserves established therefor, which may have a significant impact on our results and operations and future cash flow.

We may not be able to utilize all, or any, of our net operating loss carryforwards.

We have incurred substantial losses during our history, do not expect to become profitable in the near future, and we may never achieve profitability. As of December 31, 2020, we had U.S. federal, state, and foreign net operating loss carryforwards of $172.7 million, $116.5 million, and $0.6 million, respectively. Our federal net operating loss carryforwards of $19.7 million will begin to expire in 2030 while the remaining federal net operating loss carryforwards of $153.0 million carry forward indefinitely. The state net operating loss carryforwards begin to expire in 2025. In addition, as of December 31, 2020, we have U.S. federal and state research and development tax credits of $9.9 million and an amount less than $0.1 million available to offset future U.S. federal and state income taxes, which begin to expire in 2027 and 2030, respectively. At December 31, 2020 and December 31, 2019, we had federal Orphan Drug credits of $6.0 million and $1.8 million, respectively, which begin to expire in 2038.

Changes in tax laws or regulations may adversely impact our ability to utilize all, or any, of our net operating loss carryforwards. For example, legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, significantly revised the Internal Revenue Code of 1986, as amended. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Cuts and Jobs Act may affect us, and certain aspects of the Tax Cuts and Jobs Act could be repealed or modified in future legislation. For example, the CARES Act modified certain provisions of the Tax Cuts and Jobs Act. Under the CARES Act, net operating losses arising in a tax year beginning after December 31, 2017, and before January 1, 2021, generally may now be carried back five years. Under the Tax Cuts and Jobs Act, as modified by the CARES Act, unused losses generated in taxable years ending after December 31, 2017 will not expire and may be carried forward indefinitely, but the deductibility of such net operating losses in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the to the Tax Cuts and Jobs Act or the CARES Act.

As of December 31, 2020, we have a valuation allowance for the full amount of our net deferred tax assets as the realization of the net deferred tax assets is not determined to be more likely than not. In addition, Sections 382 and 383 of the Code limit a corporation's ability to utilize its net operating loss carryforwards and certain other tax attributes (including research credits) to offset any future taxable income or tax if the corporation experiences a cumulative ownership change of more than 50% over any rolling three-year period. State net operating loss carryforwards (and certain other tax attributes) may be similarly limited. A Section 382 ownership change can therefore result in significantly greater tax liabilities than a corporation would incur in the absence of such a change, and any increased liabilities could adversely affect the corporation's business, results of operations, financial condition and cash flow. We have not yet determined if any prior change in the ownership of our equity or any change in such ownership in connection with our IPO, would trigger a Section 382 ownership change. It is possible that such a Section 382 ownership change has already occurred in prior periods. Furthermore, additional ownership changes may occur in the future as a result of events over which we will have little or no control, including purchases and sales of our equity by our 5% stockholders, the emergence of new 5% stockholders, additional equity offerings or redemptions of our stock or certain changes in the ownership of any of our 5% stockholders. As a result, our pre-2018 net operating loss carryforwards (and research tax credits) may expire prior to being used, and our net operating loss carryforwards and tax credits generated in 2018 and thereafter will be subject to a percentage limitation, upon an ownership change. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. As a result, even if we attain profitability, we may be unable to use all or a material portion of our NOLs and other tax attributes, which could adversely affect our future cash flows.

Risks Related to Our Reliance on Third Parties

We have entered into significant arrangements with collaborators and expect to depend on collaborations with third parties for certain research, development and commercialization activities, and if any such collaborations are not successful, it may harm our business and prospects.

We have sought in the past, and anticipate that we will continue to seek in the future, third-party collaborators for the research, development and commercialization of certain product candidates and the research and development of certain technologies. For example, we are party to the Servier Agreement and the Development and License Agreement with Lilly. Under these agreements, we are focused on research and development of allogeneic CAR T cell therapies that utilize or incorporate our genome editing technologies and in vivo gene editing products that utilize or incorporate our ARCUS nucleases. In addition, our food platform is based on a consumer-centric model, whereby our research and development activities and potential revenues are based on the needs and commercial success of our collaborators. Our likely collaborators for other product research and development arrangements include large and mid-size pharmaceutical and biotechnology companies biotechnology and food, beverage, nutrition and agricultural biotechnology companies, and our likely collaborators for other technology research and development arrangements include universities and other research institutions.

Working with collaborators poses several significant risks. We have limited control over the amount and timing of resources that our collaborators dedicate to the product candidates or technologies we may seek to develop with them. A variety of factors may impact resource allocation decisions of collaborators, such as study or trial results, changes in the collaborator's strategic focus, turnover in personnel responsible for the development activities, financial capacity or external factors such as a business combination or change in control that diverts resources or creates competing priorities. Collaboration agreements may not lead to development or commercialization of product candidates or the development of technologies in the most efficient manner or at all. Resource allocation and other developmental decisions made by our collaborators may result in the delay or termination of research programs, studies or trials, repetition of or initiation of new studies or trials or provision of insufficient funding or resources for the completion of studies or trials or the successful marketing and distribution of any product candidates that may receive approval. Collaborators could independently develop, or develop with third parties, product candidates or technologies that compete directly or indirectly with our product candidates or technologies if the collaborators believe that competitive products or technologies are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours. Collaborators may not properly obtain, maintain, enforce or defend our intellectual property or proprietary rights or may use our proprietary information in such a way that could jeopardize or invalidate our proprietary information or expose us to potential litigation. Disputes may arise between us and our collaborators that result in the delay or termination of the research, development or commercialization activities or that result in costly litigation or arbitration that diverts management attention and resources.

Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. If our collaborations do not result in the successful development and commercialization of product candidates or technologies, or if one of our collaborators terminates its agreement with us, we may not receive any future funding or milestone or royalty payments under the collaboration. If we do not receive the funding we expect under these agreements, our development of product candidates or technologies could be delayed, and we may need additional resources to develop such product candidates or technologies. For example, as a result of the termination of the Gilead Agreement, we are no longer entitled to receive certain milestone payments, our submission of an IND for our in vivo chronic HBV program has been delayed and we are currently exploring alternative opportunities to enable to continued development of ARCUS-based HBV therapies. In connection with this termination, and if any of our other collaborators terminates its agreement with us, we may be unable to find a suitable replacement collaborator or any replacement collaborator or attract new collaborators and may need to raise additional capital to pursue further development or commercialization of the applicable product candidates or technologies. These events could delay development programs, negatively impact the perception of our company in business and financial communities or cause us to have to cease development of the product candidate covered by the collaboration arrangement. Failure to develop or maintain relationships with any current collaborators could result in the loss of opportunity to work with that collaborator or reputational damage that could impact our relationships with other collaborators in the relatively small industry communities in which we operate. Moreover, all of the risks relating to product development, regulatory approval and commercialization described in this Annual Report on Form 10-K apply to the activities of our collaborators. If our existing collaboration agreements or any collaborative or strategic relationships we may establish in the future are not effective and successful, it may damage our reputation and business prospects, delay or prevent the development and commercialization of product candidates and inhibit or preclude our ability to realize any revenues.

If we are not able to establish collaborations on commercially reasonable terms, we may have to alter our research, development and commercialization plans.

Our research and product development programs and the potential commercialization of any product candidates we develop alone or with collaborators will require substantial additional cash to fund expenses, and we expect that we will continue to seek collaborative arrangements with others in connection with the development and potential commercialization of current and future product candidates or the development of ancillary technologies. We face significant competition in establishing relationships with appropriate collaborators. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include, among other things and as applicable for the type of potential product or technology, an assessment of the opportunities and risks of our technology, the design or results of studies or trials, the likelihood of approval, if necessary, by the USDA, the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products and technologies and industry and market conditions generally.

Current or future collaborators may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us. Additionally, we may be restricted under existing collaboration agreements from entering into future agreements on certain terms or for certain development activities with potential collaborators. For example, we have granted exclusive rights or options to Servier for certain targets, and during the terms of our respective collaboration agreements with them we will be restricted from granting rights to other parties to use our ARCUS technology to pursue potential products that address those targets. Similarly, our collaboration agreements have in the

past and may in the future contain non-competition provisions that could limit our ability to enter into strategic collaborations with future collaborators.

Collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we do enter into additional collaboration agreements, the negotiated terms may force us to relinquish rights that diminish our potential profitability from development and commercialization of the subject product candidates or others. If we are unable to enter into additional collaboration agreements, we may have to curtail the research and development of the product candidate or technology for which we are seeking to collaborate, reduce or delay research and development programs, delay potential commercialization timelines, reduce the scope of any sales or marketing activities or undertake research, development or commercialization activities at our own expense. If we elect to increase our expenditures to fund research, development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all.

We expect to rely on third parties to conduct, supervise and monitor our clinical trials and some aspects of our research and preclinical testing, and if those third parties do not successfully carry out their contractual duties, comply with regulatory requirements, or otherwise perform in a satisfactory manner, we may not be able to obtain regulatory approval or commercialize product candidates, or such approval or commercialization may be delayed, and our business may be substantially harmed.

We may rely on medical institutions, universities, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct preclinical studies and future clinical trials for our product candidates. Nevertheless, we will be responsible for ensuring that each of our studies and trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on such third parties will not relieve us of our regulatory responsibilities.

Although we intend to design the trials for our product candidates either alone or with collaborators, third parties may conduct all of the trials. As a result, many important aspects of our research and development programs, including their conduct and timing, will be outside of our direct control. Our reliance on third parties to conduct future studies and trials will also result in less direct control over the management of data developed through studies and trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes and difficulties in coordinating activities. Outside parties may have staffing difficulties, fail to comply with contractual obligations, experience regulatory compliance issues, undergo changes in priorities, become financially distressed or form relationships with other entities, some of which may be our competitors. We also face the risk of potential unauthorized disclosure or misappropriation of our intellectual property by CROs or other third parties, which may reduce our trade secret protection and allow our potential competitors to access and exploit our proprietary technology. For any violations of laws and regulations during the conduct of our preclinical studies and future clinical trials, we could be subject to warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulations, commonly referred to as Good Clinical Practices, or GCPs, for conducting, monitoring, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. If we, our collaborators, our CROs or other third parties fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We also are required to register certain ongoing clinical trials and post the results of such completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

If our CROs or other third parties do not successfully carry out their contractual duties or obligations, fail to meet expected deadlines, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for any other reasons, trials for product candidates may be extended, delayed or terminated, and we or our collaborators may not be able to obtain regulatory approval for, or successfully commercialize, any product candidate that we develop. If we are required to repeat, extend the duration of or increase the size of any trials we conduct, it could significantly delay commercialization and require significantly greater expenditures. As a result of any of these factors, our financial results and the commercial prospects for any product candidate that we or our collaborators may develop would be harmed, our costs could increase and our ability to generate revenues could be delayed.

We expect to rely on third parties to supply raw materials or manufacture product supplies that are necessary for the conduct of preclinical studies, clinical trials and manufacturing of our product candidates, and failure by third parties to provide us with sufficient quantities of products, or to do so at acceptable quality levels or prices and on a timely basis, could harm our business.

We are dependent on third parties for the supply of various biological materials, such as cells, cytokines and antibodies, and the manufacture of product supplies, such as media, plasmids, mRNA and AAV viral vectors, that are necessary to produce our product candidates. The supply of these materials could be reduced or interrupted at any time. In such case, identifying and engaging an alternative supplier or manufacturer could result in delay, and we may not be able to find other acceptable suppliers or manufacturers on acceptable terms, or at all. Switching suppliers or manufacturers may involve substantial costs and is likely to result in a delay in our desired clinical and commercial timelines. If we change suppliers or manufacturers for commercial production, applicable regulatory agencies may require us to conduct additional studies or trials. If key suppliers or manufacturers are lost, or if the supply of the materials is diminished or discontinued, we or our collaborators may not be able to develop, manufacture and market product candidates in a timely and competitive manner, or at all. If any of our product candidates receives approval, we will likely need to seek alternative sources of supply of raw materials or manufactured product supplies and there can be no assurance that we will be able to establish such relationships to provide such supplies on commercially reasonable terms or at acceptable quality levels, if at all. If we are unable to identify and procure additional sources of supply that fit our required needs, we could face substantial delays or incur additional costs in procuring such materials. In addition, manufactured product supplies are subject to stringent manufacturing processes and rigorous testing. Delays in the completion and validation of facilities and manufacturing processes of these materials could adversely affect the ability to complete studies or trials and commercialize any product candidates that may receive approval. Furthermore, if our suppliers or manufacturers encounter challenges relating to employee turnover, the supply and manufacturing of our materials could be delayed or adversely affected as such parties seek to hire and train new employees. These factors could cause the delay of studies or trials, regulatory submissions, required approvals or commercialization of product candidates that we or our collaborators may develop, cause us to incur higher costs and prevent us from commercializing products successfully. Furthermore, if our suppliers or manufacturers fail to meet contractual requirements, and we are unable to secure one or more replacements capable of production at a substantially equivalent cost, our or our collaborators' studies or trials may be delayed and we could lose potential revenue.

We may rely on third parties for at least a portion of the manufacturing process of product candidates, and failure by those parties to adequately perform their obligations could harm our business.

While we expect to use our MCAT facility for certain of our clinical-scale manufacturing and processing needs, we may continue to rely on outside vendors for at least a portion of the manufacturing process of product candidates that we or our collaborators may develop. The facilities used by our contract manufacturers to manufacture product candidates must be approved by the FDA or other foreign regulatory agencies pursuant to inspections that will be conducted after we submit an application to the FDA or other foreign regulatory agencies. To the extent that we or our collaborators engage third parties for manufacturing services, we will not control the manufacturing process of, and will be completely dependent on, our contract manufacturing providers for compliance with cGMP requirements for manufacture of the product candidates. We have not yet caused any product candidates to be manufactured or processed on a commercial scale and may not be able to do so. We will make changes as we work to optimize the manufacturing process, and we cannot be sure that even minor changes in the process will result in products that are safe and effective. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or other regulatory authorities, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market any of our or our collaborators' potential products.

Risks Related to Intellectual Property

Our ability to compete may decline if we do not adequately protect our proprietary rights, and if our proprietary rights do not provide a competitive advantage.

Our commercial success depends upon obtaining and maintaining proprietary rights to our intellectual property estate, including rights relating to ARCUS and to our product candidates, as well as successfully defending these rights against third-party challenges and successfully enforcing these rights to prevent third-party infringement. We will only be able to protect ARCUS and product candidates from unauthorized use by third parties to the extent that valid and enforceable patents cover them. Our ability to obtain and maintain patent protection for ARCUS and our product candidates is uncertain due to a number of factors, including that:

- we may not have been the first to invent the technology covered by our pending patent applications or issued patents;

- we may not be the first to file patent applications covering product candidates, including their compositions or methods of use, as patent applications in the United States and most other countries are confidential for a period of time after filing;
- our compositions and methods may not be patentable;
- our disclosures in patent applications may not be sufficient to meet the statutory requirements for patentability;
- any or all of our pending patent applications may not result in issued patents;
- others may independently develop identical, similar or alternative technologies, products or compositions or methods of use thereof;
- others may design around our patent claims to produce competitive technologies or products that fall outside of the scope of our patents;
- we may fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection;
- we may not seek or obtain patent protection in countries that may eventually provide us a significant business opportunity;
- any patents issued to us may not provide a basis for commercially viable products, may not provide any competitive advantages or may be successfully challenged by third parties;
- others may identify prior art or other bases upon which to challenge and ultimately invalidate our patents or otherwise render them unenforceable; and
- the growing scientific and patent literature relating to engineered endonucleases, including our own patents and publications, may make it increasingly difficult or impossible to patent new engineered nucleases in the future.

Even if we have or obtain patents covering ARCUS or any product candidates or compositions, we and our collaborators may still be barred from making, using and selling such product candidates or technologies because of the patent rights of others. Others may have filed, and in the future may file, patent applications covering compositions, products or methods that are similar or identical to ours, which could materially affect our ability to successfully develop any product candidates or to successfully commercialize any approved products alone or with collaborators. In addition, because patent applications can take many years to issue, there may be currently pending applications unknown to us that may later result in issued patents that we or our collaborators may infringe. These patent applications may have priority over patent applications filed by us.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. For example, in August 2019, the PTAB, of the United States Patent and Trademark Office, or the USPTO, initiated two patent interferences, administrative proceedings within the USPTO, involving a family of patents that have been issued to us and a pending patent application filed by a third party. An interference is conducted by the PTAB when opposing parties have applied for patent claims to the same invention or substantially the same invention. The interference is conducted to determine which party, if either, is entitled to claims to the subject matter of the interference. In October 2020, we announced the PTAB has issued judgements in our favor in two patent interference proceedings that challenged nine U.S. patents we owned. The patents, which issued in 2018, relate to allogeneic CAR T cells produced by inserting a gene encoding a CAR into the TRAC locus, as well as methods of using those cells for cancer immunotherapy. In the interference proceedings, a third party argued that it had invented the technology in 2012. The PTAB, however, found that the third-party patent application did not satisfy the written description requirement and rejected these claims while maintaining the claims in all nine of our patents. Any adverse outcome in future interference proceedings could affect our competitive position, including, without limitation, loss of some or all of our involved patent claims, limiting our ability to stop others from using or commercializing similar or identical technology and products, which could harm our business, financial condition and results of operations. Protecting our patent rights in connection with such proceeding may also be expensive and may involve the diversion of significant management time.

Furthermore, we cannot guarantee that any patents will be issued from any pending or future owned or licensed patent applications. Thus, even if our patent applications issue as patents, they may not issue in a form that will provide us with meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. In addition, third parties may be able to develop products that are similar to, or better than, ours in a way that is not covered by the claims of our patents, or may have blocking patents that could prevent us from marketing our products or practicing our own patented technology. Moreover, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after it is filed. Various extensions may be available; however the life of a patent, and the protection it affords, is limited. Without patent protection for current or future product candidates, we may be open to competition from generic versions of such potential products. Given the amount of time

required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to those we or our collaborators may develop.

Obtaining and maintaining a patent portfolio entails significant expense, including periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and patent applications. These expenditures can be at numerous stages of prosecuting patent applications and over the lifetime of maintaining and enforcing issued patents. We may or may not choose to pursue or maintain protection for particular intellectual property in our portfolio. If we choose to forgo patent protection or to allow a patent application or patent to lapse purposefully or inadvertently, our competitive position could suffer. There are situations, however, in which failure to make certain payments or noncompliance with certain requirements in the patent process can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

Legal action that may be required to enforce our patent rights can be expensive and may involve the diversion of significant management time. There can be no assurance that we will have sufficient financial or other resources to file and pursue infringement claims, which typically last for years before they are concluded. In addition, these legal actions could be unsuccessful and result in the invalidation of our patents, a finding that they are unenforceable or a requirement that we enter into a licensing agreement with or pay monies to a third party for use of technology covered by our patents. We may or may not choose to pursue litigation or other actions against those that have infringed on our patents, or have used them without authorization, due to the associated expense and time commitment of monitoring these activities. If we fail to successfully protect or enforce our intellectual property rights, our competitive position could suffer, which could harm our results of operations.

Many biotechnology companies and academic institutions are currently pursuing a variety of different nuclease systems for genome editing technologies using zinc finger nucleases, TALENs, and clustered regularly interspaced short palindromic repeats associated protein-9 nuclease, or CRISPR/Cas9, and the use of those nucleases in cancer immunotherapy, gene therapy and genome editing. Although those nucleases are physically and chemically different from our ARCUS nucleases, those companies and institutions may seek patents that broadly cover aspects of cancer immunotherapy, gene therapy and genome editing using nucleases generally. Such patents, if issued, valid and enforceable, could prevent us from marketing our product candidates, if approved, practicing our own patented technology, or might require us to take a license which might not be available on commercially reasonable terms or at all. While we expect that we will continue to be able to patent our ARCUS nucleases for the foreseeable future, as the scientific and patent literature relating to engineered endonucleases increases, including our own patents and publications, it may become more difficult or impossible to patent new engineered endonucleases in the future.

If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

We are a party to a number of intellectual property license agreements that are important to our business and expect to enter into additional license agreements in the future. Our existing license agreements impose, and we expect that future license agreements will impose, various diligence, milestone payment, royalty and other obligations on us. We may need to outsource and rely on third parties for many aspects of the development, sales and marketing of any products covered under our current and future license agreements. Delay or failure by these third parties could adversely affect the continuation of our license agreements with our licensors. If we fail to comply with any of our obligations under these agreements, or we are subject to a bankruptcy, our licensors may have the right to terminate the license, in which event we would not be able to market any products covered by the license.

In addition, disputes may arise regarding the payment of the royalties due to licensors in connection with our exploitation of the rights we license from them. Licensors may contest the basis of royalties we retained and claim that we are obligated to make payments under a broader basis. In addition to the costs of any litigation we may face as a result, any legal action against us could increase our payment obligations under the respective agreement and require us to pay interest and potentially damages to such licensors.

In some cases, patent prosecution of our licensed technology is controlled solely by the licensor. If such licensor fails to obtain and maintain patent or other protection for the proprietary intellectual property we license from such licensor, we could lose our rights to such intellectual property or the exclusivity of such rights, and our competitors could market competing products using such intellectual property. In that event, we may be required to expend significant time and resources to develop or license replacement technology. If we are unable to do so, we or our collaborators may be unable to develop or commercialize the affected product candidates, which could harm our business significantly. In other cases, we control the prosecution of patents resulting from licensed technology. In the event we breach any of our obligations related to such prosecution, we may incur significant liability to our licensing partners.

For example, our license agreement with Duke University, or Duke, which we refer to as the Duke License, imposes various payment, royalty and other obligations on us in order to maintain the license. If we fail to make royalty payments or milestone payments required under the Duke License, Duke may terminate the agreement. If we or our affiliates obtain a license from a third party to practice the Duke technology, we must use commercially reasonable efforts to secure a covenant not to sue Duke, or any of its faculty, students, employees or agents, for any research and development efforts conducted at Duke that resulted in the creation of any of its inventions or intellectual property rights arising therefrom. Additionally, because development of the Duke technology was funded in part by the U.S. government, it is subject to certain government rights and obligations, including the requirement that any products sold in the United States based upon such technology be substantially manufactured in the United States.

In addition, our cross-license agreement with Cellectis, or the Cellectis License, imposes various obligations on us in order to maintain the license. In particular, if we participate in or provide assistance to a third party challenging the validity, enforceability and/or patentability of any claim of any patent licensed to us by Cellectis under this agreement, Cellectis may terminate the agreement. The Cellectis License does not provide exclusive rights to use the licensed intellectual property and technology or rights in all relevant fields in which we may wish to develop or commercialize our technology and products in the future. As a result, we are not able to prevent competitors from developing and commercializing competitive products and technology that may use this technology. Additionally, we do not have the right to control the preparation, filing, prosecution, maintenance, enforcement and defense of patents and patent applications covering the technology that we license from Cellectis. Therefore, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained and defended in a manner consistent with the best interests of our business. If Cellectis or other licensors fail to prosecute, maintain, enforce and defend the patents subject to such licenses, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated, and our right to develop and commercialize any of our products that are the subject of such licensed rights could be adversely affected.

If we fail to comply with our obligations under the Duke License or the Cellectis License, or arrangements with any other licensors, our counterparties may have the right to terminate these agreements, in which event we might not be able to develop, manufacture or market any product candidate that is covered by these agreements, which could materially adversely affect the value of any such product candidate. Termination of these agreements or reduction or elimination of our rights under these agreements may result in our having to negotiate new or reinstated agreements with less favorable terms, or cause us to lose our rights under these agreements, including our rights to important intellectual property or technology.

Disputes may arise regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the amounts of royalties, milestones or other payments due to our licensors;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our collaborators; and
- the priority of invention of patented technology.

Such disputes may be costly to resolve and may divert management's attention away from day-to-day activities. If disputes over intellectual property that we have licensed from third parties prevent or impair our ability to maintain our licensing arrangements on acceptable terms, we or our collaborators may be unable to successfully develop and commercialize the affected product candidates.

Some of our in-licensed intellectual property has been discovered through government funded research and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies, and compliance with such regulations may limit our exclusive rights and our ability to contract with non-U.S. manufacturers.

Certain intellectual property rights that have been in-licensed pursuant to the Duke License have been generated through the use of U.S. government funding and are therefore subject to certain federal regulations. As a result, the U.S. government may have certain rights to intellectual property embodied in our current or future product candidates pursuant to the Bayh-Dole Act of 1980, or the Patent and Trademark Law Amendment. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require the licensor to grant exclusive, partially exclusive or non-exclusive licenses to any of these inventions to a third party if it determines that (1) adequate steps have not been taken to commercialize the invention, (2) government action is necessary to meet public health or safety needs or (3) government action is necessary to meet requirements for public use

under federal regulations (also referred to as "march-in rights"). The U.S. government also has the right to take title to these inventions if the licensor fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States, and the Duke License requires that we comply with this requirement. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture the products substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. To the extent any of our owned or licensed future intellectual property is also generated through the use of U.S. government funding, the provisions of the Bayh-Dole Act may similarly apply.

If we do not obtain patent term extension in the United States under the Hatch-Waxman Act and in foreign countries under similar legislation with respect to our product candidates, thereby potentially extending the term of marketing exclusivity for such product candidates, our business may be harmed.

In the United States, a patent that covers an FDA-approved drug or biologic may be eligible for a term extension designed to restore the period of the patent term that is lost during the premarket regulatory review process conducted by the FDA. Depending upon the timing, duration and conditions of FDA marketing approval of our product candidates, one or more of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, which permits a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. In the European Union, our product candidates may be eligible for term extensions based on similar legislation. In either jurisdiction, however, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Even if we are granted such extension, the duration of such extension may be less than our request. If we are unable to obtain a patent term extension, or if the term of any such extension is less than our request, the period during which we can enforce our patent rights for that product will be in effect shortened and our competitors may obtain approval to market competing products sooner. The resulting reduction of years of revenue from applicable products could be substantial.

Patents and patent applications involve highly complex legal and factual questions, which, if determined adversely to us, could negatively impact our patent position.

The patent positions of biopharmaceutical and biotechnology companies and other actors in our fields of business can be highly uncertain and typically involve complex scientific, legal and factual analyses. In particular, the interpretation and breadth of claims allowed in some patents covering biopharmaceutical compositions may be uncertain and difficult to determine, and are often affected materially by the facts and circumstances that pertain to the patented compositions and the related patent claims. The standards of the USPTO and its foreign counterparts are sometimes uncertain and could change in the future. Consequently, the issuance and scope of patents cannot be predicted with certainty. Patents, if issued, may be challenged, invalidated or circumvented. U.S. patents and patent applications may also be subject to interference or derivation proceedings, and U.S. patents may be subject to reexamination proceedings, post-grant review and/or *inter partes* review in the USPTO. International patents may also be subject to opposition or comparable proceedings in the corresponding international patent office, which could result in either loss of the patent or denial of the patent application or loss or reduction in the scope of one or more of the claims of the patent or patent application. In addition, such interference, derivation, reexamination, post-grant review, *inter partes* review and opposition proceedings may be costly. Accordingly, rights under any issued patents may not provide us with sufficient protection against competitive products or processes.

Furthermore, even if not challenged, our patents and patent applications may not adequately protect our technology and any product candidates or products that we develop alone or with collaborators or prevent others from designing their products to avoid being covered by our claims. If the breadth or strength of protection provided by the patent applications we hold with respect to product candidates or potential products is threatened, it could dissuade companies from collaborating with us to develop, and could threaten our or their ability to successfully commercialize, such product candidates. Furthermore, for U.S. applications in which any claim is entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third party or instituted by the USPTO in order to determine who was the first to invent any of the subject matter covered by such patent claims.

In addition, changes in, or different interpretations of, patent laws in the United States and other countries may permit others to use our discoveries or to develop and commercialize our technology and product candidates or products without providing any compensation to us, or may limit the scope of patent protection that we are able to obtain. The laws of some countries do not protect intellectual property rights to the same extent as U.S. laws, and those countries may lack adequate rules and procedures for defending our intellectual property rights.

If the patent applications we hold or have in-licensed with respect to our current and future research and development programs and product candidates fail to issue, if their validity, breadth or strength of protection is threatened, or if they fail to provide meaningful exclusivity for our technology or any products and product candidates that we or our collaborators may develop, it could dissuade companies from collaborating with us to develop product candidates, encourage competitors to develop competing products or technologies and threaten our or our collaborators' ability to commercialize future product candidates. Any such outcome could have a material adverse effect on our business.

Third parties may assert claims against us alleging infringement of their patents and proprietary rights, or we may need to become involved in lawsuits to defend or enforce our patents, either of which could result in substantial costs or loss of productivity, delay or prevent the development and commercialization of product candidates, prohibit our use of proprietary technology or sale of potential products or put our patents and other proprietary rights at risk.

Our commercial success depends in part upon our ability to develop, manufacture, market and sell product candidates without alleged or actual infringement, misappropriation or other violation of the patents and proprietary rights of third parties. Litigation relating to infringement or misappropriation of patent and other intellectual property rights in the pharmaceutical, biotechnology and agricultural biotechnology industries is common, including patent infringement lawsuits, interferences, oppositions and reexamination proceedings before the USPTO and corresponding international patent offices. The various markets in which we plan to operate are subject to frequent and extensive litigation regarding patents and other intellectual property rights. In addition, many companies in intellectual property-dependent industries, including the biotechnology, agricultural biotechnology and pharmaceutical industries, have employed intellectual property litigation as a means to gain an advantage over their competitors. Numerous United States, EU and other internationally issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we and our collaborators are developing product candidates, and as the biotechnology, agricultural biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of the intellectual property rights of third parties. For example, we are aware of certain patents held by third parties relating to the modification of T cells, including the production of CAR T cells. Although conducting clinical trials and other development activities with respect to our CAR T product candidates is not considered an act of infringement in the United States, if and when any of our CAR T product candidates may be approved by the FDA, those third parties may seek to enforce their patents by filing a patent infringement lawsuit against us. As a result of any patent infringement claims, or in order to avoid any potential infringement claims, we may choose to seek, or be required to seek, a license from the third party, which may require payment of substantial royalties or fees, or require us to grant a cross-license under our intellectual property rights, similar to the cross license we granted Cellectis as part of our patent litigation settlement. These licenses may not be available on reasonable terms or at all. Even if a license can be obtained on reasonable terms, the rights may be nonexclusive, which would give our competitors access to the same intellectual property rights. If we are unable to enter into a license on acceptable terms, we or our collaborators could be prevented from commercializing one or more product candidates, or forced to modify such product candidates, or to cease some aspect of our business operations, which could harm our business significantly. We or our collaborators might also be forced to redesign or modify our technology or product candidates so that we no longer infringe the third-party intellectual property rights, which may result in significant cost or delay to us, or which redesign or modification could be impossible or technically infeasible. Even if we were ultimately to prevail, any of these events could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

Further, if a patent infringement suit is brought against us, our collaborators or our third-party service providers, our development, manufacturing or sales activities relating to the product or product candidate that is the subject of the suit may be delayed or terminated. In addition, defending such claims has in the past and may in the future cause us to incur substantial expenses and, if successful, could cause us to pay substantial damages if we are found to be infringing a third party's patent rights. These damages potentially include increased damages and attorneys' fees if we are found to have infringed such rights willfully. Some claimants may have substantially greater resources than we do and may be able to sustain the costs of complex intellectual property litigation to a greater degree and for longer periods of time than we could. In addition, patent holding companies that focus solely on extracting royalties and settlements by enforcing patent rights may target us. In addition, if the breadth or strength of protection provided by the patents and patent applications we own or in-license is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

We have been and may in the future be subject to third-party claims and similar adversarial proceedings or litigation in other jurisdictions regarding our infringement of the patent rights of third parties. Even if such claims are without merit, a court of competent jurisdiction could hold that these third-party patents are valid, enforceable and infringed, and the holders of any such patents may be able to block our or our collaborators' ability to further develop or commercialize the applicable product candidate unless we obtain a license under the applicable patents, or until such patents expire or are finally determined to be invalid or unenforceable. Similarly, if any third-party patents were held by a court of competent jurisdiction to cover aspects of our technologies, compositions, formulations, or methods of treatment, prevention or use, the holders of any such patents may be able to prohibit our use of those technologies, compositions, formulations, methods of treatment, prevention or use or other technologies, effectively

blocking our or our collaborators' ability to develop and commercialize the applicable product candidate until such patent expires or is finally determined to be invalid or unenforceable or unless we or our collaborators obtain a license.

Some of our competitors may be able to sustain the costs of complex intellectual property litigation more effectively than we can because they have substantially greater resources. In addition, intellectual property litigation, regardless of its outcome, may cause negative publicity, adversely impact prospective customers, cause product shipment delays or prohibit us from manufacturing, marketing or otherwise commercializing our products, services and technology. Any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise additional funds or otherwise have a material adverse effect on our business, results of operation, financial condition or cash flows.

If we or one of our licensors were to initiate legal proceedings against a third party to enforce a patent covering our technology or a product candidate, the defendant could counterclaim that our patent is invalid or unenforceable. In patent litigation in the United States and Europe, defendant counterclaims alleging invalidity or unenforceability are common. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Third parties might allege unenforceability of our patents because during prosecution of the patent an individual connected with such prosecution withheld relevant information, or made a misleading statement. The outcome of proceedings involving assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity of patents, for example, we cannot be certain that there is no invalidating prior art of which we and the patent examiner were unaware during prosecution, but that an adverse third party may identify and submit in support of such assertions of invalidity. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our technology or product candidates. Our patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without infringing our patents or other intellectual property rights. Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors view these announcements in a negative light, the price of our common stock could be adversely affected. Such litigation or proceedings could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings.

Developments in patent law could have a negative impact on our business.

From time to time, the United States Supreme Court, or the Supreme Court, other federal courts, the United States Congress, or Congress, the USPTO and similar international authorities may change the standards of patentability, and any such changes could have a negative impact on our business. For example, the America Invents Act, or the AIA, which was passed in September 2011, resulted in significant changes to the U.S. patent system. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned from a "first-to-invent" to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. A third party that files a patent application in the USPTO after that date but before us could therefore be awarded a patent covering an invention of ours even if we made the invention before it was made by the third party. Circumstances could prevent us from promptly filing patent applications on our inventions.

The AIA limited where a patentee may file a patent infringement suit and provided opportunities for third parties to challenge any issued patent in the USPTO. Those provisions apply to all of our U.S. patents, regardless of when issued. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. These provisions could increase the uncertainties and costs surrounding the prosecution of our or our licensors' patent applications and the enforcement or defense of our or our licensors' issued patents.

Additionally, the Supreme Court has ruled on several patent cases in recent years either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations, and there are other open questions under patent law that courts have yet to decisively address. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of our patents and patent applications. Depending on decisions by Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways and could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. In addition, the European patent system is relatively stringent in the type of amendments that are allowed during prosecution, but the complexity and uncertainty of European patent laws has also increased in recent years. Complying with these laws and regulations could limit our ability to obtain new patents in the future that may be important for our business.

If we were unable to protect the confidentiality of our trade secrets and enforce our intellectual property assignment agreements, our business and competitive position would be harmed.

In addition to patent protection, because we operate in the highly technical field of development of product candidates and products using genome editing, we rely significantly on trade secret protection in order to protect our proprietary technology and processes. Trade secrets are difficult to protect. Our policy is to enter into confidentiality and intellectual property assignment agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors. These agreements generally require that the other party keep confidential and not disclose to third parties all confidential information developed by the party or made known to the party by us during the course of the party's relationship with us. These agreements also generally provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, we may be unsuccessful in executing such an agreement with each party who in fact conceives or develops intellectual property that we regard as our own. Our assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property. In addition, these agreements may be held unenforceable and may not effectively assign intellectual property rights to us. If our trade secrets and other unpatented or unregistered proprietary information are disclosed, we are likely to lose such trade secret protection.

In addition, certain provisions in our intellectual property agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could affect the scope of our rights to the relevant intellectual property or technology, or affect financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, agreements with third parties typically restrict the ability of such third parties to publish data potentially relating to our trade secrets. Our academic collaborators typically have rights to publish data, provided that we are notified in advance and may delay publication for a specified period of time in order to secure our intellectual property rights arising from the arrangement. In other cases, publication rights are controlled exclusively by us, although in some cases we may share these rights with other parties. We also conduct joint research and product development activities that may require us to share trade secrets under the terms of our research and development collaborations or similar agreements. In addition to contractual measures, we try to protect the confidential nature of our proprietary information using physical and technological security measures. Such measures may not provide adequate protection for our proprietary information. For example, our security measures may not prevent an employee or consultant with authorized access from misappropriating our trade secrets and providing them to a competitor, and the recourse we have available against such misconduct may not provide an adequate remedy to protect our interests fully. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets. Furthermore, our proprietary information may be independently developed by others in a manner that could prevent legal recourse by us. Competitors could purchase any products we may develop and commercialize and attempt to reverse engineer and replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights or design around our protected technology. In addition, our key employees, consultants, suppliers or other individuals with access to our proprietary technology and know-how may incorporate that technology and know-how into projects and inventions developed independently or with third parties. As a result, disputes may arise regarding the ownership of the proprietary rights to such technology or know-how, and any such dispute may not be resolved in our favor. If any of our confidential or proprietary information, including our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, our competitive position could be harmed and such disclosure or misappropriation could have a material adverse effect on our business.

We will not seek to protect our intellectual property rights in all jurisdictions throughout the world, and we may not be able to adequately enforce our intellectual property rights even in the jurisdictions where we seek protection.

Filing, prosecuting and defending patents on product candidates in all countries and jurisdictions throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than those in the United States, assuming that rights are obtained in the United States. In-licensing patents covering product candidates in all countries throughout the world may similarly be prohibitively expensive, if such opportunities are available at all. In addition, the

laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

We generally apply for patents in those countries where we intend to make, have made, use, offer for sale or sell products and where we assess the risk of infringement to justify the cost of seeking patent protection. However, we do not seek protection in all countries where we sell products and we may not accurately predict all the countries where patent protection would ultimately be desirable. If we fail to timely file a patent application in any such country or major market, we may be precluded from doing so at a later date. Competitors may use our technologies in jurisdictions where we do not pursue and obtain patent protection to develop their own products and may export otherwise infringing products to territories where we have patent protection, but where our ability to enforce our patent rights is not as strong as in the United States. These products may compete with any products that we or our collaborators may develop, and our patents or other intellectual property rights may not be effective or sufficient to prevent such competition.

The laws of some other countries do not protect intellectual property rights to the same extent as the laws of the United States. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does. Patent protection must ultimately be sought on a country-by-country basis, which is an expensive and time-consuming process with uncertain outcomes. Accordingly, we may choose not to seek patent protection in certain countries, and we will not have the benefit of patent protection in such countries. In addition, the legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to biopharmaceuticals or biotechnologies. As a result, many companies have encountered significant difficulties in protecting and defending intellectual property rights in certain jurisdictions outside the United States. Such issues may make it difficult for us to stop the infringement of our patents, if obtained, or the misappropriation of our other intellectual property rights. For example, many other countries, including countries in the EU, have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents and could limit our potential revenue opportunities. Accordingly, our and our licensors' efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

Furthermore, proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, subject our patents to the risk of being invalidated or interpreted narrowly, subject our patent applications to the risk of not issuing or provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded to us, if any, may not be commercially meaningful, while the damages and other remedies we may be ordered to pay such third parties may be significant. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

We have rights, through licenses from third parties and under patents that we own, to the intellectual property to develop the product candidates we are currently developing alone or with collaborators. Because our programs may involve additional product candidates that may require the use of proprietary rights held by third parties, the growth of our business may depend in part on our ability to acquire, in-license or use these proprietary rights. In addition, product candidates may require specific formulations to work effectively and efficiently, and these rights may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies, or companies that have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive to develop or commercialize product candidates. These established companies may have a competitive advantage over us due to their size and greater cash resources and clinical development and commercialization capabilities. We may not be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding product candidates that we may seek to acquire.

For example, we sometimes collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. Typically, these institutions provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the strategic alliance. Regardless of such right of first negotiation, we may be unable to negotiate a license within the specified time frame or under terms that are acceptable to us, and the institution may license such intellectual property rights to third parties, potentially blocking our ability to pursue our development and commercialization plans.

In addition, companies that perceive us to be a competitor may be unwilling to assign or license to us intellectual property rights that we require in order to successfully develop and commercialize potential products. We also may be unable to obtain such a license or assignment on terms that would allow us to make an appropriate return on our investment. In either event, our business and prospects for growth could suffer.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected. We may not be able to protect our rights to our trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our unregistered trademarks or trade names. Over the long term, if we are unable to successfully register our trademarks and trade names and establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights and other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

Risks Related to Owning Our Common Stock

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant to us as a clinical-stage biopharmaceutical company, as our stock price can significantly fluctuate as a result of public announcements regarding the progress of our development efforts for our discovery platform and our product candidates. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

We do not currently intend to pay dividends on our common stock.

We do not intend to pay any dividends to holders of our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. In addition, pursuant to our loan and security agreement with PWB we are prohibited from paying cash dividends without the prior written consent of PWB and future debt instruments may materially restrict our ability to pay dividends on our common stock. Therefore, you are not likely to receive any dividends on your common stock for the foreseeable future, and the success of an investment in our common stock will depend upon any future appreciation in its value. Consequently, you may need to sell all or part of your common stock after price appreciation, which may never occur, as the only way to realize any future gains on your investment.

Provisions in our amended and restated certificate of incorporation and restated bylaws or Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and therefore depress the trading price of our common stock.

Provisions in our amended and restated certificate of incorporation and our restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control of our company that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Among other things, these provisions include those establishing:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from filling vacancies on our board of directors;

- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;

- the ability of our board of directors to alter our bylaws without obtaining stockholder approval;

- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;

- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;

- the requirement that a special meeting of stockholders may be called only by the chairman of the board of directors, our chief executive officer (or our president, in the absence of a chief executive officer) or a majority of our board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and

- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Our amended and restated certificate of incorporation and our amended and restated bylaws include exclusive forum provisions for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum to the fullest extent permitted by law, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim for breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim arising pursuant to any provision of the General Corporation Law of the State of Delaware, our amended and restated certificate of incorporation or our amended and restated bylaws, or (4) any action asserting a claim governed by the internal affairs doctrine. Under our amended and restated certificate of incorporation, this exclusive forum provision will not apply to claims which are vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery of the State of Delaware, or for which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. For instance, the provision would not apply to actions arising under federal securities laws, including suits brought to enforce any liability or duty created by the Exchange Act or the rules and regulations thereunder. Further, our amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States will be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act and that any person or entity purchasing or otherwise acquiring or holding any interest in shares of our capital stock are deemed to have notice of and consented to this provision. These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. For example, stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near the State of Delaware. The Court of Chancery may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders.

We are an "emerging growth company" and a "smaller reporting company," and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. We will remain an emerging growth company until the earlier of (1) December 31, 2024, (2) the last day of the fiscal year in which we have total annual gross revenue of $1.07 billion or more, (3) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years, or (4) the date on which we are deemed to be a large accelerated filer under the rules of the SEC which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to present only two years of "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this Annual Report on Form 10-K;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations in our SEC filings regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have elected to take advantage of this extended transition period.

We are also a smaller reporting company, and we will remain a smaller reporting company until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than $250 million measured on the last business day of our second fiscal quarter, or our annual revenues are more than $100 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than $700 million measured on the last business day of our second fiscal quarter. Similar to emerging growth companies, smaller reporting companies are able to provide simplified executive compensation disclosure and have certain other reduced disclosure obligations, including, among other things, being required to provide only two years of audited financial statements and not being required to provide selected financial data, supplemental financial information or risk factors.

We may choose to take advantage of some, but not all, of the available exemptions for emerging growth companies and smaller reporting companies. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be reduced or more volatile.

General Risk Factors

We or third parties with whom we have relationships may be adversely affected by natural or manmade disasters, public health emergencies and other natural catastrophic events, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Natural or manmade disasters could severely disrupt our operations and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, public health emergency, power outage or other event occurred that prevented us from using all or a significant portion of our facilities, that damaged our infrastructure or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time, and our research and development activities could be setback or delayed. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business, and such an event could disrupt our operations, cause us to incur remediation costs, damage our reputation and cause a loss of confidence in us and our or third parties' ability to conduct clinical trials, which could adversely affect our reputation and delay our research and development programs.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

Global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability, and similar deterioration in the credit and financial markets and confidence in economic conditions may occur in the future. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers or others with whom we have strategic relationships may not survive any difficult economic times, which could directly affect our ability to attain our operating goals.

As of December 31, 2020, we had cash and cash equivalents of $89.8 million. In January 2021, we received an upfront cash payment of $100.0 million and equity investment of $35.0 million in connection with the closing of the Development and License agreement with Lilly. While we are not aware of any downgrades, material losses or other significant deterioration in the fair value of our cash equivalents since December 31, 2020, deterioration of the global credit and financial markets could negatively impact our current portfolio of cash equivalents or our ability to meet our financing objectives. Furthermore, our stock price may decline due in part to the volatility of the stock market and any general economic downturn.

The market price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.

The market price of our common stock is likely to be highly volatile and may fluctuate substantially due to many factors, including:

- inconsistent trading volume levels of our common stock;
- announcements or expectations regarding debt or equity financing efforts;
- sales of common stock by us, our insiders or our other stockholders;
- actual or anticipated fluctuations in our financial condition and operating results;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public;
- results from or delays in our studies or trials, or those of our collaborators, competitors or companies perceived to be similar to us;
- delay, failure or discontinuation of any of our product development and research programs, or those of our collaborators, competitors or companies perceived to be similar to us;
- announcements about new research programs or product candidates from us or our collaborators, our competitors or companies perceived to be similar to us;
- announcements by us, our collaborators, our competitors or companies perceived to be similar to us relating to significant acquisitions, strategic partnerships or alliances, joint ventures, collaborations or capital commitments;
- actual or anticipated changes in our growth rate relative to our competitors or companies perceived to be similar to us;
- fluctuations in the valuation of our collaborators, our competitors or companies perceived to be comparable to us;
- a lack of, limited or withdrawal of coverage by security analysts, or positive or negative recommendations by them;
- actual or expected changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- publication of research reports about us, genome editing or the biopharmaceutical and agricultural biotechnology industries;
- developments or changing views regarding the use of genomic products, including those that involve genome editing;
- our ability to effectively manage our growth;

- the recruitment or departure of key personnel;
- the results of any efforts by us to identify, develop, acquire or in-license additional product candidates, products or technologies;
- unanticipated serious safety concerns related to the use of any of our product candidates, or those of our competitors or companies perceived to be similar to us;
- the termination of a collaboration agreement, licensing agreement or other strategic arrangement or the inability to establish additional strategic arrangements on favorable terms, or at all;
- regulatory actions with respect to any of our product candidates, or those of our competitors or companies perceived to be similar to us;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- regulatory or legal developments in the United States and other countries;
- changes in physician, hospital, healthcare provider or agricultural practices that may make our or our collaborators' products less useful;
- changes in the structure of healthcare payment systems;
- significant lawsuits, such as products liability, patent or stockholder litigation;
- short sales of our common stock; and
- general economic, industry and market conditions.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance. These factors may have a material adverse effect on the market price and liquidity of our common stock, which may limit or prevent you from readily selling your shares of common stock and may affect our ability to obtain financing or enter into desired strategic relationships.

If securities or industry analysts issue an adverse or misleading opinion regarding our common stock, our stock price and trading volume could decline.

The trading market for our common stock relies in part on the research and reports that industry or securities analysts publish about us or our business. We do not control these analysts. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our preclinical studies and clinical trials and operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties.

We currently occupy approximately 69,500 square feet of office and laboratory space at our corporate headquarters in Durham, North Carolina under a lease that expires in 2024. We also occupy approximately 15,500 square feet of laboratory and office space used by our wholly owned subsidiary, Elo Life Systems, in Durham, North Carolina under a lease that expires in 2026, and we occupy approximately 33,800 square feet of manufacturing, laboratory and office space used for our Manufacturing Center for Advanced Technologies in Research Triangle Park, North Carolina under a lease that expires in 2027.

Item 3. Legal Proceedings.

From time to time we may be involved in claims and proceedings arising in the course of our business. The outcome of any such claims or proceedings, regardless of the merits, is inherently uncertain. We are not currently party to any material legal proceedings.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock trades on The Nasdaq Global Select Market under the symbol "DTIL."

Holders of Common Stock

As of March 2, 2021, there were approximately 205 holders of record of our common stock. This number does not include "street name" or beneficial holders, whose shares are held of record by banks, brokers, financial institutions and other nominees.

Dividend Policy

We intend to retain future earnings, if any, to finance the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. In addition, pursuant to our loan and security agreement with PWB, we are prohibited from paying cash dividends without the prior written consent of PWB and future debt instruments may materially restrict our ability to pay dividends on our common stock. Any future determination related to our dividend policy will be made at the discretion of our board of directors after considering our financial condition, results of operations, capital requirements, business prospects and other factors our board of directors deems relevant, and subject to any restrictions applicable to us contained in any future financing instruments.

Item 6. Selected Financial Data.

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes to those statements included elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. As a result of many important factors, including those set forth in Part I. Item 1A. "Risk Factors" of this Annual Report on Form 10-K, our actual results could differ materially from the results described in, or implied by, these forward-looking statements. As used in this Annual Report on Form 10-K, unless the context otherwise requires, references to "we," "us," "our," "the Company" and "Precision" refer to Precision BioSciences, Inc. and its subsidiaries on a consolidated basis.

Overview

We are a life sciences company dedicated to improving life through the application of our pioneering, proprietary ARCUS genome editing platform. We leverage ARCUS in the development of our product candidates, which are designed to treat human diseases and create healthy and sustainable food and agricultural solutions. We are actively developing product candidates in three innovative areas: allogeneic CAR T cell immunotherapy, in vivo gene correction, and food. We are currently conducting a Phase 1/2a clinical trial of PBCAR0191 in adult patients with relapsed or refractory, or R/R, non-Hodgkin lymphoma, or NHL, or R/R B-cell precursor acute lymphoblastic leukemia, or B-ALL. PBCAR0191 is our first gene-edited allogeneic chimeric antigen receptor, or CAR, T cell therapy candidate targeting CD19 and is being developed in collaboration with Servier pursuant to the Servier Agreement. We have received orphan drug designation for PBCAR0191 from the U.S. Food and Drug Administration ("FDA"), for the treatment of acute lymphoblastic leukemia, or ALL. In August 2020, the FDA granted Fast Track Designation for PBCAR0191 for the treatment of B-ALL. The NHL cohort will include patients with mantle cell lymphoma ("MCL"), an aggressive subtype of NHL, for which we have received orphan drug designation from the FDA. Made from donor-derived T cells modified using our ARCUS genome editing technology, PBCAR0191 recognizes the well characterized tumor cell surface protein CD19, an important and validated target in several B-cell cancers, and is designed to avoid graft-versus-host disease, or GvHD, a significant complication associated with donor-derived, cell-based therapies. We believe that this trial, which is designed to assess the safety and tolerability of PBCAR0191 at increasing dose levels, as well as to evaluate anti-tumor activity, is the first U.S.-based clinical trial to evaluate an allogeneic CAR T therapy for R/R NHL. Furthermore, we believe that our proprietary, one-step engineering process for producing allogeneic CAR T cells with a potentially optimized cell phenotype, at large scale in a cost-effective manner, will enable us to overcome the fundamental clinical and manufacturing challenges that have limited the CAR T field to date. We expect to report updated interim data for the PBCAR0191 study in mid-year 2021.

In April 2020, we commenced patient dosing in a Phase 1/2a clinical trial with our second allogeneic CAR T cell therapy product candidate, PBCAR20A. PBCAR20A is wholly owned by us and targets the validated tumor cell surface target CD20. It is being investigated in R/R NHL, including those with R/R chronic lymphocytic leukemia, CLL, or R/R small lymphocytic lymphoma, or SLL. A subset of the NHL patients will have the diagnosis of MCL and we have received orphan drug designation for PBCAR20A from the FDA for the treatment of this disease. Based on the safety profile observed to date with PBCAR0191, the FDA allowed us to commence dosing with PBCAR20A directly at 1 x 10^6 cells/kg. The study has continued to escalate through dose level two (3 x 10^6 cells/kg), and, in February 2021, we commenced patient dosing at dose level 3 (480 x 10^6 cell fixed dose) with a max dose of 6 x 10^6 cells/kg. We expect to report interim data for the PBCAR20A study in 2021.

In June 2020, we commenced patient dosing in a Phase 1/2a clinical trial with our third allogenic CAR T cell therapy product candidate, PBCAR269A. The starting dose of PBCAR269A is 6 x 10^5 cells/kg. PBCAR269A is wholly owned by us and is designed to target the validated tumor cell surface target BCMA. It is being investigated in subjects with R/R multiple myeloma and we have received orphan drug designation and Fast Track Designation from the FDA for this indication. In September 2020, we announced that we entered into a clinical trial collaboration with SpringWorks, a clinical-stage biopharmaceutical company focused on developing medicines for patients with severe rare diseases and cancer. Pursuant to the collaboration, PBCAR269A will be evaluated in combination with nirogacestat, SpringWorks' investigational GSI, in patients with R/R multiple myeloma, which is expected to commence in the first half of 2021. In February 2021, we commenced patient dosing at the highest dose cohort, dose level 3 of 6 x 10^6 cells/kg and we expect to report interim data on the PBCAR269A trial in 2021.

Additionally, in June 2020, Elo, our wholly-owned subsidiary, established a strategic partnership with the Dole and entered into a Research, Development, and Commercialization Agreement with Dole, with the aim to co-develop banana varieties resistant to Foc TR4, utilizing proprietary computational biology workflows and the ARCUS genome editing platform. The disease caused by Foc TR4, commonly known as Fusarium wilt, threatens the continued cultivation of the world's most popular variety of banana called Cavendish, which is of considerable economic significance as this variety is used to produce export bananas for key markets around the globe and Dole is one of the largest producers in the industry. Fungicides, or other traditional means of disease control have failed as the pandemic continues to spread across vital banana growing economies.

In September 2020, we regained full clinical development and commercialization rights, and all data we generated for the *in vivo* chronic HBV program developed under our 2018 collaboration agreement with Gilead Sciences. We are exploring partnership or alternative opportunities to enable the continued development of ARCUS-based HBV therapies.

In October 2020, we announced the U.S. Patent and Trademark Office's PTAB issued judgements in our favor in two patent interference proceedings that challenged nine U.S. patents we owned. The patents, which issued in 2018, relate to allogeneic CAR T cells produced by inserting a gene encoding a CAR into the TRAC locus, as well as methods of using those cells for cancer immunotherapy. In the interference proceedings, a third party argued that it had invented the technology in 2012. The PTAB, however, found that the third-party patent application did not satisfy the written description requirement and rejected these claims while maintaining the claims in all nine of our patents.

In November 2020, we announced a research collaboration and exclusive license agreement with Lilly to utilize ARCUS for the research and development of potential *in vivo* therapies for genetic disorders, with an initial focus on DMD and two other undisclosed gene targets. Under the agreement, Lilly has the right to nominate up to three additional gene targets for genetic disorders over the first four years of the Development and License Agreement, which may be extended to six years upon Lilly's election and payment of an extension fee.

In December 2020, we announced interim clinical results from our Phase 1/2a study of PBCAR0191 as a treatment of R/R NHL and R/R B-ALL. As of the November 16, 2020 cutoff, 27 patients including 16 patients with aggressive NHL and 11 patients with aggressive B-ALL were enrolled and evaluated. In this dose escalation and dose expansion study, PBCAR0191 had an acceptable safety profile with no cases of graft versus host disease, no cases of Grade ≥ 3 cytokine release syndrome, and no cases of Grade ≥ 3 neurotoxicity. PBCAR0191 demonstrated longest durability of response to 11 months in B-ALL. PBCAR0191 with eLD resulted in objective response rate of 83% (5/6) in NHL and B-ALL as compared to 33% (3/9) in NHL with sLD.

Additionally, in December 2020, researchers at Elo in collaboration with Alan Chambers, Ph.D., and the Tropical Research and Education Center at the University of Florida published a paper in *Nature Food*, reporting a chromosome-scale, phased *Vanilla planifolia* genome, which revealed sequence variants for genes that may impact the vanillin pathway, and therefore influence bean quality, including its productivity, flower anatomy, and disease resistance.

In January 2021, we announced that the FDA has accepted our IND application for PBCAR19B, our next-generation, stealth cell, CD19 allogenic CAR T candidate for Non-Hodgkin Lymphoma, and we expect to begin the Phase 1 study by mid-2021. Additionally, in January 2021, we announced that we received a Notice of Allowance from the U.S. Patent and Trademark Office for a patent application covering PBCAR19B. The allowed composition claims of this patent application encompass genetically-modified human T cells comprising the PBCAR19B construct, which is inserted within the T cell receptor alpha constant locus. Once issued, patents arising from this patent family will have standard expiration dates in April 2040. In preclinical studies, PBCAR19B has shown to delay both T cell and natural killer cell mediated allogeneic rejection in vitro and may improve the persistence of allogeneic CAR T cells.

We expect to advance a program targeting the rare genetic disease PH1 as our lead wholly owned *in vivo* gene correction program. PH1 affects approximately 1-3 people per million in the United States and is caused by loss of function mutations in the AGXT gene, leading to the accumulation of calcium oxalate crystals in the kidneys. Patients suffer from painful kidney stones which may ultimately lead to renal failure. Using ARCUS, we are developing a potential therapeutic approach to PH1 that involves knocking out a gene called HAO1 which acts upstream of AGXT. Suppressing HAO1 has been shown in preclinical models by us to prevent the formation of calcium oxalate. We therefore believe that a one-time administration of an ARCUS nuclease targeting HAO1 may be a viable strategy for a durable treatment of PH1 patients. Pre-clinical research has continued to progress, and we expect to provide an update on this program in the first half of 2021.

In January 2021, we disclosed our intention to spinout our wholly owned subsidiary, Elo. We are continuing to explore our strategic options, and the timing of any such sale, spinout or other treatment of Elo remains uncertain.

Since our formation in 2006, we have devoted substantially all of our resources to developing ARCUS, conducting research and development activities, recruiting skilled personnel, developing manufacturing processes, establishing our intellectual property portfolio and providing general and administrative support for these operations. We have financed our operations primarily with proceeds from upfront payments from collaboration and licensing agreements, our IPO, and private placements of convertible preferred stock and convertible debt.

On April 1, 2019, we completed our IPO of 9,085,000 shares of common stock, including the underwriters' full exercise of their option to purchase an additional 1,185,000 additional shares of common stock, at an offering price of $16.00 per share, for net proceeds of approximately $130.5 million after deducting underwriting discounts and commissions and offering expenses payable by us. As of December 31, 2020, we have generated approximately $492.5 million from third parties to date.

Since our inception, we have incurred significant operating losses and have not generated any revenue from the sale of products. Our ability to generate any product revenue or product revenue sufficient to achieve profitability will depend on the successful development and eventual commercialization of one or more of our product candidates or the product candidates of our collaborators for which we may receive milestone payments or royalties. Our net losses were $109.0 million and $92.9 million for the years ended December 31, 2020 and December 31, 2019, respectively. As of December 31, 2020, we had an accumulated deficit of $286.1 million.

We expect our operating expenses to increase substantially in connection with the expansion of our product development programs and capabilities. We will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for one of our product candidates or the product candidates of our collaborators for which we may receive milestone payments or royalties. If we obtain regulatory approval for any of our product candidates, we expect to incur significant expenses related to developing our commercialization capability to support product sales, marketing and distribution. In addition, we expect to continue to incur additional costs associated with operating as a public company.

As a result of these anticipated expenditures, we will need additional financing to support our continuing operations. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our cash needs through a combination of public equity, debt financings or other sources, which may include current and new collaborations with third parties. Adequate additional financing may not be available to us on acceptable terms, or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We cannot assure you that we will ever generate significant revenue to achieve profitability.

Because of the numerous risks and uncertainties associated with the development of therapeutic and agricultural products, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate revenue from product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be required to raise additional capital on terms that are unfavorable to us or we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

We currently conduct our operations through two reportable segments: Therapeutics and Food. Our Therapeutics segment is focused on allogeneic CAR T immunotherapy and *in vivo* gene correction. Our Food segment focuses on applying ARCUS to develop food and nutrition products through collaboration agreements with consumer-facing companies.

Impact of COVID-19 Pandemic

We are closely monitoring how the ongoing COVID-19 pandemic continues to affect our employees, business, preclinical studies and clinical trials. The Company has taken steps in line with guidance from the U.S. Centers for Disease Control and Prevention (“CDC”) and the State of North Carolina to protect the health and safety of its employees and the community. We have implemented measures to mitigate exposure risks and support operations. We initiated a health and safety program addressing mandatory use of face masks, social distancing, sanitary handwashing practices, use of personal protective equipment stations, stringent cleaning and sanitization of all facilities and measures to reduce total occupancy in facilities. We have also implemented temperature and symptom screening procedures at each location, and we have continuously communicated to all our Precisioneers that if they are not comfortable coming to work, regardless of role, then they do not have to do so. Per guidance from the Cybersecurity & Infrastructure Security Agency, our employees are considered essential workforce and may receive the COVID-19 vaccination as Centers for Disease Control and Prevention defined Group 3 and Group 4.

We are working closely with our clinical sites, physician partners and the patient community to monitor and manage the impact of the evolving COVID-19 pandemic. We remain committed to our clinical programs and development plans, however, disruptions, competing resource demands and safety concerns caused by the COVID-19 pandemic have caused, and are likely to continue to cause delays in our clinical trial site activation and impact our ability to enroll patients. We may also experience other difficulties, disruptions or delays in conducting preclinical studies or initiating, enrolling, conducting or completing our planned and ongoing clinical trials, and we may incur other unforeseen costs as a result. We expect that the COVID-19 pandemic may continue to impact our business, including our preclinical studies and clinical trials. At this time, there is still significant uncertainty relating to the trajectory of the COVID-19 pandemic and impact of related responses. The impact of COVID-19 on our preclinical studies and any further impact to our clinical trials will largely depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the pandemic, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions, the ultimate impact of COVID-19 on financial markets and the global economy, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease. The Coronavirus, Aid, Relief and Economic Security Act (“CARES Act”) was signed into law on March 27, 2020, which provides for, among other things, the deferral of the deposit and payment of certain taxes. Pursuant to the CARES Act, the Company elected to defer payment of the employer's share of social security taxes incurred between May 1, 2020 and December 31, 2020. See “Risk Factors— *The outbreak of the ongoing novel coronavirus disease, COVID-19 has impacted our business, or and*

any other pandemic, epidemic or outbreak of an infectious disease may materially and adversely impact our business, including our preclinical studies and clinical trials." in Part I, Item 1A. of this Annual Report on Form 10-K.

Therapeutics Segment Collaborations

Eli Lilly and Company

In November 2020, we entered into a research collaboration and exclusive license agreement (the "Development and License Agreement") with Lilly to utilize ARCUS for the research and development of potential in vivo therapies for genetic disorders. Lilly has initially nominated DMD and two gene targets for other genetic disorders, and has the right to nominate up to three additional gene targets for genetic disorders over the first four years of the Development and License Agreement (the "Nomination Period"). Lilly may extend the Nomination Period for an additional two years from the date on which such initial Nomination Period ends, upon Lilly's election and payment of an extension fee. Under the terms of the Development and License Agreement, Lilly will receive an exclusive license to research, develop, manufacture and commercialize the resulting licensed products to diagnose, prevent and treat any and all diseases by in vivo gene editing directed against the applicable gene target. The Development and License Agreement provides that we will be responsible for conducting certain pre-clinical research and IND-enabling activities with respect to the gene targets nominated by Lilly to be subject to the collaboration, including manufacture of initial clinical trial material for the first licensed product. Lilly will be responsible for, and must use commercially reasonable efforts with respect to, conducting clinical development and commercialization activities for licensed products resulting from the collaboration, and may engage us for additional clinical and/or initial commercial manufacture of licensed products.

In January 2021, we and Lilly closed the Development and License Agreement following clearance under the Hart-Scott Rodino Antitrust Improvements Act of 1976, as amended (the "HSR Act"). In connection with the closing, we received an upfront cash payment of $100.0 million as well as $35.0 million from Lilly's purchase of 3,762,190 newly issued shares of our common stock pursuant to a stock purchase agreement as described below (the "Stock Purchase Agreement"). We will also be eligible to receive milestone payments of up to an aggregate of $420 million per licensed product as well as nomination fees for additional targets and certain research funding. If licensed products resulting from the collaboration are approved and sold, we will also be entitled to receive tiered royalties ranging from the mid-single digit percentages to the low-teens percentages on world-wide net sales of the licensed products, subject to customary potential reductions. Lilly's obligation to pay royalties to us expires on a country-by-country and licensed product-by-licensed product basis, upon the latest to occur of certain events related to expiration of patents, regulatory exclusivity or a period of ten years following first commercial sale of the licensed product.

We have the right to elect to co-fund the clinical development of one licensed product, which may be selected from among the third or any subsequent licensed products to reach IND filing. If we elect to co-fund such licensed product, we would reimburse Lilly for a portion of the clinical development expenses for such product and, in exchange, each royalty tier with respect to net sales of such licensed product would be increased by a low single digit percentage. During the term of the Development and License Agreement, we may not (and may not license or collaborate with any third party to) research, develop, or commercialize any in vivo gene editing product directed against any gene targets that have been nominated and are subject to the Development and License Agreement.

Unless earlier terminated, the Development and License Agreement will remain in effect on a licensed product-by-licensed product and country-by-country basis until the expiration of a defined royalty term for each licensed product and country. Lilly has the right to terminate the Development and License Agreement for convenience by providing advance notice to us. Either party may terminate the Development and License Agreement (i) for material breach by the other party and a failure to cure such breach within the time period specified in the agreement or (ii) due to a challenge to its patents brought by the other party.

Servier

In February 2016, we entered into the Servier Agreement, pursuant to which we have agreed to develop allogeneic CAR T cell therapies for five unique antigen targets. One target was selected at the agreement's inception. Two additional hematological cancer targets beyond CD19 and two new solid tumor targets were selected in 2020. With the addition of these new targets, we received development milestone payments in 2020 and may be eligible to receive additional development milestone payments in 2021. We may also be eligible to receive option fees, as well as clinical, regulatory and sales milestone payments in addition to royalties on product sales. Upon selection of an antigen target under the agreement, we have agreed to perform early-stage research and development on individual T cell modifications for the selected target, develop the resulting therapeutic product candidates through Phase 1 clinical trials and prepare initial clinical trial material of such product candidates for use in Phase 2 clinical trials.

In October 2020, we entered into Amendment No. 6 to the Servier Agreement, effective as of October 2, 2020 ("Amendment No. 6"). Terms of the Servier Agreement were amended, solely as applicable to PBCAR0191. Under Amendment No. 6, we are required to complete the ongoing Phase 1/2a clinical trial of PBCAR0191 in adult patients with R/R NHL and R/R B-ALL (the "Clinical Trial") for a specified number of patients in the Phase 1 portion of the Clinical Trial and a number of patients to be determined by us in the

Phase 2a portion of the Clinical Trial. We will be solely responsible for all costs and expenses we incur to complete the Clinical Trial, including the production and release of all required clinical trial material.

The results of the Clinical Trial will be used to determine whether specified development milestones have been achieved with respect to PBCAR0191, in which case, specified corresponding development milestone payments are payable by Servier to us. The results of the Clinical Trial will also be used to determine whether Phase 2 readiness has been achieved for PBCAR0191 and Servier may determine whether, subject to payment of a commercial option exercise fee, to exercise its commercial option and proceed with development and commercialization of PBCAR0191. Following completion of the Clinical Trial, we are not obligated to conduct any further development activities under the Servier Agreement with respect to PBCAR0191 unless we otherwise agree to conduct such further development activities.

We received an upfront payment of $105.0 million under the Servier Agreement in 2016. We have the ability to receive total payments, including the upfront payment, option fees and milestone payments, in the aggregate across all five targets, of up to approximately $1.4 billion. This includes up to $1.3 billion in milestone payments, consisting of up to $329.3 million in development milestone payments and up to $925.0 million in commercial milestone payments. We are also entitled to receive tiered royalties ranging from the mid-single digit percentages to the sub-teen percentages on worldwide net sales, subject to potential customary reductions. We also have the right to participate in the development and commercialization of any licensed products resulting from the collaboration through a 50/50 co-development and co-promotion option in the United States, subject to our payment of an option fee, which is exercisable after Servier's commercial option exercise.

Under the Servier Agreement, we recognized $18.0 million and $7.3 million in revenue during the years ended December 31, 2020 and December 31, 2019, respectively. The amount recorded as deferred revenue was $82.9 million and $80.9 million as of December 31, 2020 and December 31, 2019, respectively.

SpringWorks Therapeutics

In September 2020, we entered into a Clinical Trial Collaboration Agreement with SpringWorks. Pursuant to the agreement, PBCAR269A will be evaluated in combination with nirogacestat, SpringWorks' investigational GSI, in patients with R/R multiple myeloma. Under the terms of the agreement, we will bear all costs with the conduct of the clinical trial including providing PBCAR269A for use in the trial, and SpringWorks is responsible for providing nirogacestat at its sole cost and expense.

Gilead

On July 6, 2020, Gilead Sciences ("Gilead") notified us of its termination of the collaboration and license agreement dated September 10, 2018, subsequently amended by Amendment No. 1 dated March 10, 2020 or (the "Gilead Agreement"), to develop genome editing tools using ARCUS to target viral DNA associated with the hepatitis B virus. Pursuant to the termination notice, the Gilead Agreement terminated on September 4, 2020. Upon termination, we regained full rights and all data we generated for the *in vivo* chronic hepatitis B program developed under the Gilead Agreement.

We recognized $3.9 million and $13.3 million in revenue under the Gilead Agreement during the years ended December 31, 2020 and December 31, 2019, respectively, and $1.5 million in deferred revenue as of December 31, 2019. We did not receive any milestone payments under the Gilead Agreement during the years ended December 31, 2020 or December 31, 2019.

Trustees of the University of Pennsylvania

In January 2018, we entered into a research, collaboration and license agreement with the Trustees of the University of Pennsylvania ("Penn") to collaborate on the preclinical development for gene editing products involving the delivery of an ARCUS nuclease. On April 29, 2020, both parties agreed to coordinate a wind-down of all activities in their entirety under the agreement, effective as of June 30, 2020, however, in August 2020 and subsequently in January 2021, both parties agreed to extend certain portions of the agreement until 2022. We will not be required to make termination payments to Penn.

Food Segment Collaborations

Dole Food Company

Through our wholly owned subsidiary, Elo, in June 2020, we entered into a Research, Development, and Commercialization Agreement with Dole with the aim to co-develop banana varieties resistant to Foc TR4, utilizing proprietary computational biology workflows and the ARCUS genome editing platform. The disease caused by Foc TR4, commonly known as Fusarium wilt, threatens the continued cultivation of the world's most popular variety of banana called Cavendish, which is of considerable economic significance as this variety is used to produce export bananas for key markets around the globe and Dole is one of the largest

producers in the industry. Fungicides, or other traditional means of disease control have failed as the pandemic continues to spread across vital banana growing economies. Development of Foc TR4 varieties is critically important to save the banana industry, to protect the livelihoods of millions of banana growers and continue to provide consumers an affordable and nutritious fruit. Under the terms of the collaboration, Dole will fully fund research and development efforts executed by Elo, and Elo is eligible to receive royalties on any commercialized plant product.

Cargill, Inc.

In 2014, through Elo, we and Cargill, Inc. entered into a collaboration to produce ARCUS-optimized canola varieties with significantly lower levels of saturated fatty acids compared to the current levels in greenhouse studies. On July 30, 2020, we and Cargill mutually agreed to terminate the collaboration, effective August 31, 2020.

Components of Our Results of Operations

Revenue

To date, we have not generated any revenue from product sales and do not expect to generate any revenue from product sales in the foreseeable future. We record revenue from collaboration agreements, including amounts related to upfront payments, milestone payments, annual fees for licenses of our intellectual property and research and development funding.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts and the development of our product candidates. These include the following:

- salaries, benefits and other related costs, including share-based compensation expense, for personnel engaged in research and development functions;
- expenses incurred under agreements with third parties, including contract research organizations, or CROs, and other third parties that conduct preclinical research and development activities and clinical trials on our behalf;
- costs of developing and scaling our manufacturing process and manufacturing drug products for use in our preclinical studies and ongoing and future clinical trials, including the costs of contract manufacturing organizations, or CMOs, and our MCAT facility that will manufacture our clinical trial material for use in our preclinical studies and ongoing and potential future clinical trials;
- costs of outside consultants, including their fees and related travel expenses;
- costs of laboratory supplies and acquiring, developing and manufacturing preclinical study and clinical trial materials;
- license payments made for intellectual property used in research and development activities; and
- facility-related expenses, which include direct depreciation costs and expenses for rent and maintenance of facilities and other operating costs if specifically identifiable to research activities.

We expense research and development costs as incurred. We track external research and development costs, including the costs of laboratory supplies and services, outsourced research and development, clinical trials, contract manufacturing, laboratory equipment and maintenance and certain other development costs, by product candidate when the program IND application is accepted by the FDA. Internal and external costs associated with infrastructure resources, other research and development costs, facility related costs and depreciation and amortization that are not identifiable to a specific product candidate are included in the platform development and early-stage research expenses category in the table below.

The following table summarizes our research and development expenses by product candidate or development program for the periods presented:

(in thousands)	Years ended December 31, 2020	2019	Change
Direct research and development expenses by product candidate:			
CD19 external development costs	$ 8,586	$ 4,726	$ 3,860
CD20 external development costs	6,660	9,375	(2,715)
BCMA external development costs	3,144	4,928	(1,784)
Platform development and early-stage research expenses:			
Employee-related costs	37,301	26,383	10,918
Laboratory supplies and services	12,225	11,706	519
Outsourced research and development	7,514	12,416	(4,902)
CMOs and research organizations	7,730	1,770	5,960
Laboratory equipment and maintenance	1,412	1,381	31
Facility-related costs	3,354	3,030	324
Depreciation and amortization	7,441	4,186	3,255
Licensing fees	2,415	2,236	179
Other research and development costs	279	279	—
Total research and development expenses	$ 98,061	$ 82,416	$ 15,645

Research and development activities are central to our business model. We expect that our research and development expenses will continue to increase substantially for the foreseeable future and will comprise a larger percentage of our total expenses as we continue our Phase 1/2a clinical trials for our CD19, CD20 and BCMA product candidates, commence our Phase 1 clinical trial of CD19B, and continue to discover and develop additional product candidates.

We cannot determine with certainty the duration and costs of ongoing and future clinical trials of our CD19, CD19B, CD20, and BCMA product candidates, or any other product candidate we may develop or if, when or to what extent we will generate revenue from the commercialization and sale of any product candidate for which we obtain marketing approval. We may never succeed in obtaining marketing approval for any product candidate. The duration, costs and timing of clinical trials and development of our CD19, CD19B, CD20, and BCMA product candidates, and any other our product candidate we may develop will depend on a variety of factors, including:

- the scope, rate of progress, expense and results of clinical trials of our CD19, CD19B, CD20, and BCMA product candidates, as well as of any future clinical trials of other product candidates and other research and development activities that we may conduct;
- increased costs of additional clinical sites to address slowed enrollment due to the impact of COVID-19;
- uncertainties in clinical trial design and patient enrollment rates;
- the actual probability of success for our product candidates, including their safety and efficacy, early clinical data, competition, manufacturing capability and commercial viability;
- significant and changing government regulation and regulatory guidance;
- the timing and receipt of any marketing approvals; and
- the expense of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant delays in our clinical trials due to slower than expected patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and other related costs, including share-based compensation, for personnel in our executive, finance, business development, operations and administrative functions. General and administrative expenses also include legal fees relating to intellectual property and corporate matters; professional fees for accounting, auditing, tax and consulting services; insurance costs; travel expenses; and facility-related expenses, which include direct depreciation costs and expenses for rent and maintenance of facilities and other operating costs that are not specifically attributable to research activities.

We expect that our general and administrative expenses will increase in the future as we continue research activities and development of product candidates.

Change in Fair Value of Convertible Notes Payable

We elected on issuance to account for the convertible notes payable we issued in March 2019, or the 2019 Notes, at fair value until their settlement. The change in fair value of the 2019 Notes was recognized through the statement of operations. The 2019 Notes settled into 2,921,461 shares of common stock on the closing of our IPO on April 1, 2019.

Interest Expense

Interest expense consists of interest from the 2019 Notes at a rate of 6% per annum.

Interest Income

Interest income consists of interest income earned on our cash and cash equivalents.

Income Taxes

Since our inception in 2006, we have generated cumulative federal and state net operating loss and research and development ("R&D") credit carryforwards for which we have not recorded any net tax benefit due to the uncertainty around utilizing these tax attributes within their respective carryforward periods. As of December 31, 2020, we had federal, state, and foreign net operating loss carryforwards of $172.7 million, $116.5 million, and $0.6 million, respectively, which may be available to offset future taxable income. A portion of the U.S. federal net operating loss carryforwards in the amount of $19.7 million will begin to expire in 2030 while the remaining federal net operating loss carryforwards of $153.0 million carry forward indefinitely. The state net operating loss carryforwards begin to expire in 2025. The foreign net operating losses carryforward indefinitely. As of December 31, 2020, we also had federal research and development tax credit carryforwards of $9.9 million, which begin to expire in 2027, and an amount less than $0.1 million, which begin to expire in 2030. As of December 31, 2020 and December 31, 2019, we had federal Orphan Drug credits of $6.0 million and $1.8 million, respectively, which begin to expire in 2038. As of December 31, 2020, we also have federal contribution carryforwards of $0.2 million, which begin to expire in 2021. We have recorded a full valuation allowance against our net deferred tax assets at each balance sheet date.

On December 22, 2017, the TCJA was signed into United States law. The TCJA includes a number of changes to existing tax law, including, among other things, a permanent reduction in the federal corporate income tax rate from a top marginal tax rate of 35% to a flat rate of 21%, effective as of January 1, 2018, as well as a limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such net operating losses may be carried forward indefinitely). The federal tax rate change resulted in a reduction in the gross amount of our deferred tax assets and liabilities recorded as of December 31, 2017, and a corresponding reduction in our valuation allowance. As a result, no income tax expense or benefit was recognized as of the enactment date of the TCJA.

Results of Operations

Comparison of the Years Ended December 31, 2020 and December 31, 2019

The following table summarizes our results of operations for the years ended December 31, 2020 and December 31, 2019, together with the changes in those items in dollars:

(in thousands)	Years ended December 31, 2020	2019	Change
Revenue	$ 24,285	$ 22,238	$ 2,047
Operating expenses:			
Research and development	98,061	82,416	15,645
General and administrative	36,052	27,026	9,026
Total operating expenses	134,113	109,442	24,671
Loss from operations	(109,828)	(87,204)	(22,624)
Other income (expense), net:			
Change in fair value of convertible note payable	—	(9,758)	9,758
Interest expense	—	(182)	182
Interest income	822	4,267	(3,445)
Total other income (expense), net	822	(5,673)	6,495
Net loss	$ (109,006)	$ (92,877)	$ (16,129)

Revenue

Revenue for the year ended December 31, 2020 was $24.3 million, compared to $22.2 million for the year ended December 31, 2019. The increase of $2.1 million in revenue during the year ended December 31, 2020 was primarily the result of a $10.7 million increase in collaboration revenue recognized from Servier in connection with the development milestones achieved and work performed on the new targets under the Servier Agreement, a $0.8 million increase in revenue recognized from food segment partners, partially offset by a $9.5 million decrease in revenue recognized from Gilead due to the termination of the Gilead Agreement.

Research and Development Expenses

(in thousands)	Years ended December 31, 2020	2019	Change
Direct research and development expenses by product candidate:			
CD19 external development costs	$ 8,586	$ 4,726	$ 3,860
CD20 external development costs	6,660	9,375	(2,715)
BCMA external development costs	3,144	4,928	(1,784)
Platform development and early-stage research expenses:			
Employee-related costs	37,301	26,383	10,918
Laboratory supplies and services	12,225	11,706	519
Outsourced research and development	7,514	12,416	(4,902)
CMOs and research organizations	7,730	1,770	5,960
Laboratory equipment and maintenance	1,412	1,381	31
Facility-related costs	3,354	3,030	324
Depreciation and amortization	7,441	4,186	3,255
Licensing fees	2,415	2,236	179
Other research and development costs	279	279	0
Total research and development expenses	$ 98,061	$ 82,416	$ 15,645

Research and development expenses for the year ended December 31, 2020 were $98.1 million, compared to $82.4 million for the year ended December 31, 2019. The increase of $15.7 million was primarily due to a $16.2 million increase in platform development and early-stage research expenses, a $3.9 million increase in direct research and development expenses related to our CD19 program, partially offset by decreases of $2.7 and $1.8 in direct research and development expenses related to our CD20 and BCMA programs, respectively.

The increase in direct research and development expenses for our CD19 program was primarily due to increases in CMO and research organization costs as we continue to enroll additional patients in the Phase 1/2a clinical trial. The decrease in direct research and development expenses for our CD20 and BCMA programs was primarily due to decreases in external CMO costs as we transferred clinical trial material manufacturing activities for CD20 and BCMA in-house to MCAT.

Platform development and early-stage research expenses increased primarily due to a $10.9 million increase in employee-related expense associated with increased headcount to support our technology platform development and manufacturing capabilities, a $6.0 million increase in CMO and research organization expense, primarily related to our planned CD19B clinical trial, a $3.3 million increase in depreciation and amortization expense driven by our higher depreciable asset base during the year ended December 31, 2020, and a $0.3 million increase in facility-related expenses, partially offset by a $4.9 million decrease in outsourced research and development expense in the year ended December 31, 2020 compared to the year ended December 31, 2019.

General and Administrative Expenses

General and administrative expenses were $36.1 million for the year ended December 31, 2020 compared to $27.0 million for the year ended December 31, 2019. The increase of $9.1 million was primarily due to an increase of $4.0 million in employee-related expense as we increased our general and administrative headcount, $2.9 million in consulting fees, and $2.5 million in increased administrative expenses, including insurance, information technology, franchise and property taxes, and costs related to operating as a public company, partially offset by a $0.3 million decrease in bank fees and other general and administrative expenses.

Change in Fair Value of Convertible Notes Payable

We elected on issuance to account for the 2019 Notes at fair value until their settlement. For the year ended December 31, 2019, we recognized $9.8 million of expense as changes in fair value. The 2019 Notes were settled on the closing of the IPO in April 2019.

Interest Expense

Interest expense of $0.2 million for the year ended December 31, 2019 consists of interest from the 2019 Notes at a rate of 6% per annum.

Interest Income

Interest income was $0.8 million for the year ended December 31, 2020 compared to $4.3 million for the year ended December 31, 2019. The decrease of $3.5 million of interest income generated on our cash and cash equivalent balances was the result of lower interest rates and lower cash balances in the year ended December 31, 2020, compared to the year ended December 31, 2019.

Segment Results

The following tables summarize segment revenues and segment operating loss (see Note 13 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information regarding our segments):

	For the Years Ended December 31,	
(in thousands)	**2020**	**2019**
Revenue:		
Therapeutics	$ 21,863	$ 20,632
Food	2,422	1,606
Total segment revenue	24,285	22,238
Segment operational cash expenditures:		
Therapeutics	$ 71,841	$ 70,059
Food	7,587	6,984
Total segment operational cash expenditures	79,428	77,043
Segment operating loss:		
Therapeutics	$ (49,978)	$ (49,427)
Food	(5,165)	(5,378)
Total segment operating loss	$ (55,143)	$ (54,805)

We evaluate the operating performance of each segment based on segment operating loss. Segment operating loss is derived by deducting operational cash expenditures, net, from GAAP revenue. Operational cash expenditures are cash disbursements made that are specifically identifiable to the reportable segment (including specifically identifiable research and development and property, equipment and software expenditures). The reportable segment operational cash expenditures include cash disbursements for compensation, laboratory supplies, purchases of property, equipment and software and procuring services from CROs, CMOs and research organizations. We do not allocate general operational expenses or non-cash income statement amounts to our reportable segments.

Therapeutics Segment

Revenue for the year ended December 31, 2020 was $21.9 million, compared to $20.6 million for the year ended December 31, 2019. The increase of $1.3 million was the result of a $10.7 increase in collaboration revenue recognized from Servier, partially offset by a $9.5 million decrease in revenue recognized from Gilead due to the termination of the Gilead Agreement. Segment operational cash expenditures for the year ended December 31, 2020 were $71.8 million, compared to $70.1 million for the year ended December 31, 2019. The increase of $1.7 million in operational cash expenditures was primarily due to an increase in employee costs and payments made to service providers for contract manufacturing and clinical trial research, partially offset by a decrease in capital expenditures for fixed assets and a reduction in payments to external vendors for early-stage research. Segment operating loss increased $0.6 million from $49.4 million for the year ended December 31, 2019 to $50.0 million for the year ended December 31, 2020 primarily due to the factors discussed above.

Food Segment

Revenue for the year ended December 31, 2020 was $2.4 million, compared to $1.6 million for the year ended December 31, 2019. The increase of $0.8 million was primarily attributable to $0.8 million from an agreement with a new collaboration partner entered into during the year ended December 31, 2020. Segment operational cash expenditures for the year ended December 31, 2020 were $7.6 million, compared to $7.0 million for the year ended December 31, 2019. The increase of $0.6 million was primarily due to an increase in employee costs and rent payments, partially offset by a decrease in capital expenditures for fixed assets. Segment operating loss decreased $0.2 million from $5.4 million for the year ended December 31, 2019 to $5.2 million for the year ended December 31, 2020 primarily due to the factors discussed above. As discussed above, we are assessing various options with respect to a potential separation of Elo from Precision, which could occur during 2021.

Liquidity and Capital Resources

Since our inception, we have incurred significant operating losses. We expect to incur significant expenses and operating losses for the foreseeable future as we advance the preclinical and clinical development of our product candidates. We expect that our research and development and general and administrative costs will continue to increase, including in connection with conducting preclinical studies and clinical trials for our product candidates, contracting with CROs and CMOs, the addition of laboratory equipment to MCAT in support of preclinical studies and clinical trials, expanding our intellectual property portfolio and providing general and administrative support for our operations. As a result, we will need additional capital to fund our operations, which we may obtain from additional equity or debt financings, collaborations, licensing arrangements or other sources.

There are no assurances that we will be successful in obtaining an adequate level of financing as and when needed to finance our operations on terms acceptable to us or at all, particularly in light of the economic downturn and ongoing uncertainty related to the COVID-19 pandemic. If we are unable to secure adequate additional funding as and when needed, we may have to significantly delay, scale back or discontinue the development and commercialization of one or more product candidates. In addition, the magnitude and duration of the COVID-19 pandemic and its impact on our liquidity and future funding requirements remains uncertain as of the filing date of this Annual Report on Form 10-K, as the pandemic continues to evolve globally. See “Impact of COVID-19 Pandemic” above and “Risk Factors— *The ongoing novel coronavirus disease, COVID-19 has impacted our business and any other pandemic, epidemic or outbreak of an infectious disease may materially and adversely impact our business, including our preclinical studies and clinical trials”* in Part I, Item 1A. of this Annual Report on Form 10-K for a further discussion of the potential impact of the COVID-19 pandemic on our business.

We do not currently have any approved products and have never generated any revenue from product sales. Through the date of filing this Annual Report on Form 10-K, we have financed our operations primarily with proceeds from our IPO, private placements of our convertible preferred stock, convertible debt and common stock, and upfront payments from collaboration and licensing arrangements. As of December 31, 2020, we had raised approximately $492.5 million of proceeds from third parties through a combination of financings including our IPO, preferred stock and convertible note financings, payments under the Servier Agreement, and funding from other strategic alliances and grants. We also currently have an effective shelf registration statement on Form S-3 (No. 333-238857) filed with the SEC on June 1, 2020 (the “Form S-3”) under which we may offer from time to time in one or more offerings

any combination of common and preferred stock, debt securities, warrants and units of up to $200.0 million in the aggregate. As of December 31, 2020, we have not sold any securities under our shelf registration statement.

Cash Flows

Our cash and cash equivalents totaled $89.8 million as of December 31, 2020, compared to $180.9 million as of December 31, 2019.

The following table summarizes our sources and uses of cash for the periods presented:

	For the Years Ended December 31,	
(in thousands)	**2020**	**2019**
Net cash used in operating activities	$ (87,386)	$ (71,015)
Net cash used in investing activities	(5,031)	(24,666)
Net cash provided by financing activities	1,329	173,374
Increase (decrease) in cash and cash equivalents	$ (91,088)	$ 77,693

Cash Used in Operating Activities

Our primary use of cash is to fund operating expenses, which consist primarily of research and development and general and administrative expenses. Our losses have resulted from expenses incurred in connection with our research and development activities, including our clinical programs, preclinical development activities, and general and administrative costs associated with our operations. The use of cash in operating activities during the years ended December 31, 2020 and December 31, 2019 resulted from our net loss adjusted for non-cash expenses and changes in working capital.

Cash used in operating activities during the year ended December 31, 2020 was $87.4 million, compared to $71.0 million during the year ended December 31, 2019. The increase in cash used in operating activities in the year ended December 31, 2020 was primarily due to an increase in employee-related costs associated with increased headcount, increased costs related to our clinical programs with our ongoing CD19 Phase 1/2a clinical trial and initiation of Phase 1/2a clinical trials for our CD20 and BCMA product candidates in 2020, an increase in legal fees and an increase in lease payments.

Cash Used in Investing Activities

Cash used in investing activities primarily relates to leasehold additions, equipment and software. Net cash used in investing activities during the year ended December 31, 2020 was $5.0 million, compared to $24.7 million in the year ended December 31, 2019. The decrease in cash used in investing activities during the year ended December 31, 2020 was primarily due to the completion of the build-out of our MCAT facility in Research Triangle Park and other leased facilities in 2019.

Cash Provided by Financing Activities

Net cash provided by financing activities during the year ended December 31, 2020 was $1.3 million, compared to $173.4 million during the year ended December 31, 2019. The higher cash provided by financing activities during the year ended December 31, 2019, compared to the year ended December 31, 2020, was due to proceeds received from our IPO, which closed in April 2019, and proceeds from the 2019 Notes, which were issued in March 2019. Financing activities in the twelve months ended December 31, 2020 related to cash proceeds received from stock option exercise and our employee stock purchase plan.

Debt Obligations

In March 2019, we issued an aggregate principal amount of $39.6 million of 2019 Notes in a private placement transaction. Upon settlement, the change in fair value of the 2019 Notes was $9.8 million and the accrued interest on the 2019 Notes was $0.2 million. Pursuant to their terms, the 2019 Notes were settled in 2,921,461 shares of our common stock upon the closing of our IPO at a settlement price of $13.60 per share, which is equal to 85% of the IPO price per share.

In May 2019, we entered into the Pacific Western Loan Agreement with PWB as amended by the First Amendment to Loan and Security Amendment, effective September 18, 2019, the Second Amendment to Loan and Security Amendment, effective December 3, 2019 (the “Original Agreement”). On June 23, 2020, the Company and PWB entered into the Third Amendment to Loan and Security Agreement (the “Amendment No. 3”) to the Original Agreement (as amended, the “Pacific Western Loan Agreement”). The terms of Amendment No. 3 (a) decrease the aggregate principal amount of advances on a revolving line of credit (the “Revolving Line”) from $50.0 million to $30.0 million and (b) extend the maturity date of the Revolving Line to June 23, 2022, provided that, if the Company receives aggregate cash proceeds of at least $125.0 million from the issuance of the Company’s equity securities and/or

upfront cash proceeds from strategic partnerships on terms and conditions reasonably satisfactory to PWB, the maturity date shall then instead be June 23, 2023. Under the terms of Amendment No. 3, the interest rate increased to a variable annual rate equal to the greater of (a) 2.75% above the Prime Rate (as defined in the Original Agreement), and (b) 6.00%. The Company must also maintain an aggregate balance of unrestricted cash at PWB (not including amounts in certain specified accounts) equal to or greater than $10.0 million.

The Pacific Western Loan Agreement matures on June 23, 2023, as a result of the events discussed in Note 14 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

As of the date of this Annual Report on Form 10-K, there have been no borrowings under our Revolving Line, and we are in compliance with the financial covenants under the Pacific Western Loan Agreement.

Funding Requirements

Our operating expenses increased substantially in 2020 and are expected to continue to increase in the future in connection with the continuation of our current clinical trials, planned initiation of additional clinical trials and expected growth in our portfolio.

We believe that our cash and cash equivalents as of December 31, 2020, cash payments received from Lilly in January 2021 in connection with the closing of the Development and License Agreement, expected operational receipts and available credit will allow us to continue its operations into 2023. We have based these estimates on assumptions that may prove to be imprecise, and we could utilize our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical and agricultural products, it is difficult to estimate with certainty the amount of our working capital requirements. Our future funding requirements will depend on many factors, including:

- the progress, costs and results of our clinical development for our CD19, CD19B, CD20, and BCMA programs as we progress clinical trials, including CRO costs;
- the progress, costs and results of our additional research and preclinical development programs;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA and other comparable foreign regulatory authorities;
- the costs and timing of internal process development and manufacturing scale-up activities and contract with CMOs associated with our CD19, CD19B, CD20, and BCMA programs and other programs we advance through preclinical and clinical development;
- our ability to establish and maintain strategic collaborations, licensing or other agreements and the financial terms of such agreements;
- the scope, progress, results and costs of any product candidates that we may derive from ARCUS or any other product candidates we may develop alone or with collaborators;
- the extent to which we in-license or acquire rights to other products, product candidates or technologies;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights and defending against any intellectual property-related claims; and
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any product candidates for which we or our collaborators obtain marketing approval.

Until such time, if ever, that we can generate product revenue sufficient to achieve profitability, we expect to finance our cash needs through a combination of public or private equity or debt financings, collaboration agreements, other third-party funding, strategic alliances, licensing arrangements and marketing and/or distribution arrangements.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, shareholders' ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our shareholders. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through other third-party funding, collaboration agreements, strategic alliances, licensing arrangements or marketing and distribution arrangements, we may have to relinquish valuable rights to our technologies, future revenue streams, product development and research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market products or product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations

The following is a summary of our contractual obligations and commitments as of December 31, 2020:

	Payments Due by Period				
(in thousands)	Total(2)(3)	Less Than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Lease Obligations(1)	$ 16,040	$ 3,155	$ 6,599	$ 4,262	$ 2,024

(1) Represents future minimum lease payments under our leases for office and/or lab space at the following locations: 302 East Pettigrew Street, Durham, North Carolina expiring in July 2024, 3054 Cornwallis Road, Durham, North Carolina expiring in April 2026 and 20 TW Alexander Drive, Research Triangle Park, North Carolina expiring in August 2027. The lease obligations amounts above also represent future minimum lease payments on the MCAT Expansion Space as we are contractually obligated to make such payments on the MCAT Expansion Space notwithstanding that the lease commencement date for accounting purposes was not reached as of December 31, 2020 (see Note 7 to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information on these lease agreements).

(2) We have entered into a license agreement with an undisclosed licensee for intellectual property used in our research programs. The agreement requires us to pay annual license fees and milestones payments for achievement of specified clinical and commercial events. We have excluded these potential milestone payments in the contractual obligations table because the timing and likelihood of these contingent payments are not currently known and would be difficult to predict or estimate.

(3) This table does not reflect principal and interest payments payable pursuant to our Pacific Western Loan Agreement, pursuant to which we may request advances on the Revolving Line of up to an aggregate principal of $30.0 million. As of December 31, 2020, we had no borrowings under our Revolving Line and, as of the date of this Annual Report on Form 10-K, the maturity date of the Revolving Line is June 23, 2023. The Revolving Line bears interest at a variable annual rate equal to the greater of (a) 2.75% above the Prime Rate (as defined in the Original Agreement), and (b) 6.00%. If the Revolving Line is terminated prior to the maturity date, we are required to pay an early termination fee equal to $0.6 million. Upon maturity or termination of the revolving line, then we are required to pay an amount equal to 1% of the maximum principal amount of the advances outstanding at any time.

In addition, we have entered into the Duke License, under which we are obligated to make aggregate future milestone payments of up to $0.2 million upon the achievement of specified corporate milestones as well as low-single digit percent royalty payments based on future net sales of applicable products and specified royalties based on sublicensing revenue. See “Business—License and Collaboration Agreements” for more information regarding our payment obligations under the Duke License. We have not included future payments under the Duke License in the table above since the payment obligations under the Duke License are contingent upon future events, such as the achievement of specified milestones or generating product sales, and we are unable to estimate the timing or likelihood of achieving these milestones or generating future product sales. We have also not included our contractual payment obligations under the Duke License in connection with the upfront payment under the Development and License Agreement with Lilly in the table above since, as of December 31, 2020, the completion of the transactions contemplated by the Development and License Agreement had not closed. We closed the transactions under the Development and License Agreement on January 6, 2021 following receipt of clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and as a result we will be required to make payments under the Duke License of $3.0 million in 2021, net of any outstanding credits. See Note 14 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information regarding the Development and License Agreement.

We also enter into contracts in the normal course of business with CROs, CMOs, universities and other third parties for preclinical research studies, clinical trials and testing and manufacturing services. These contracts do not contain minimum purchase commitments and are cancelable by us upon prior written notice. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including non-cancelable obligations of our service providers, up to the date of cancellation. These payments are not included in the table above as the amount and timing of such payments are not known.

Critical Accounting Policies and Use of Estimates

Our management’s discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”). The preparation of our consolidated financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, costs and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events and various other factors

that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

Our revenues are generated primarily through collaborative research, license, development and commercialization agreements. The terms of these agreements generally contain multiple elements, or deliverables, which may include (1) licenses, or options to obtain licenses, to use our technology, (2) research and development activities to be performed on behalf of the collaborative partner, and (3) in certain cases, services in connection with the manufacturing of preclinical and clinical material. Payments we receive under these arrangements typically include one or more of the following: non-refundable, upfront license fees; option exercise fees; funding of research and/or development efforts; clinical and development, regulatory, and sales milestone payments; and royalties on future product sales. We classify payments received under these agreements as revenues within our consolidated statements of operations.

We adopted Accounting Standards Update, or ASU, No. 2014-09, *Revenue from Contracts with Customers*, or ASC 606, on January 1, 2019 using the modified retrospective transition method. Under this method, results for reporting periods beginning on January 1, 2019 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with ASC Topic 605, *Revenue Recognition* ("ASC 605"). ASC 606 applies to all contracts with customers, except for contracts that are within the scope of other standards. Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

At contract inception, once the contract is determined to be within the scope of ASC 606, we evaluate the performance obligations promised in the contract that are based on goods and services that will be transferred to the customer and determine whether those obligations are both (i) capable of being distinct and (ii) distinct in the context of the contract. Goods or services that meet these criteria are considered distinct performance obligations. If both these criteria are not met, the goods and services are combined into a single performance obligation. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. Arrangements that include rights to additional goods or services that are exercisable at a customer's discretion are generally considered options. We assess if these options provide a material right to the customer and, if so, these options are considered performance obligations. The exercise of a material right is accounted for as a contract modification for accounting purposes.

We recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) each performance obligation is satisfied at a point in time or over time, and if over time this is based on the use of an output or input method.

Invoices issued as stipulated in contracts prior to revenue recognition are recorded as deferred revenue. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue within current liabilities in our consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as noncurrent deferred revenue. Amounts recognized as revenue, but not yet invoiced are generally recognized as contract assets in the Other line item in our consolidated balance sheets.

Milestone Payments – If an arrangement includes development and regulatory milestone payments, we evaluate whether the milestones are considered probable of being reached and estimate the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within our control or the licensee's control, such as regulatory approvals, are generally not considered probable of being achieved until those approvals are received.

Royalties – For arrangements that include sales-based royalties, including milestone payments based on a level of sales, which are the result of a customer-vendor relationship and for which the license is deemed to be the predominant item to which the royalties relate, we recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied or partially satisfied. To date, we have not recognized any royalty revenue resulting from any of our licensing arrangements.

Significant Financing Component – In determining the transaction price, we adjust consideration for the effects of the time value of money if the timing of payments provides us with a significant benefit of financing. We do not assess whether a contract has a significant financing component if the expectation at contract inception is such that the period between payment by the licensees and the transfer of the promised goods or services to the licensees will be one year or less. We assessed each of our revenue arrangements in order to determine whether a significant financing component exists and concluded that a significant financing component does not exist in any of our arrangements.

Collaborative Arrangements – We have entered into collaboration agreements, which are within the scope of ASC 606, to discover, develop, manufacture and commercialize product candidates. The terms of these agreements typically contain multiple promises or obligations, which may include: (1) licenses, or options to obtain licenses, to use our technology, (2) research and development activities to be performed on behalf of the collaboration partner, and (3) in certain cases, services in connection with the manufacturing of preclinical and clinical material. Payments we receive under these arrangements typically include one or more of the following: non-refundable, upfront license fees; option exercise fees; funding of research and/or development efforts; clinical and development, regulatory, and sales milestone payments; and royalties on future product sales.

We analyze our collaboration arrangements to assess whether they are within the scope of ASU No. 2018-18 *Collaborative Arrangements*, or ASC 808, to determine whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards dependent on the commercial success of such activities. This assessment is performed throughout the life of the arrangement based on changes in the responsibilities of all parties in the arrangement. For collaboration arrangements within the scope of ASC 808 that contain multiple elements, we first determine which elements of the collaboration are deemed to be within the scope of ASC 808 and those that are more reflective of a vendor-customer relationship and, therefore, are within the scope of ASC 606. For elements of collaboration arrangements that are accounted for pursuant to ASC 808, an appropriate recognition method is determined and applied consistently, generally by analogy to ASC 606. For those elements of the arrangement that are accounted for pursuant to ASC 606, we apply the five-step model described above.

In February 2016, we entered into the Servier Agreement for the licensing of our ARCUS proprietary genome editing platform and the research, development, and manufacturing of product for clinical trials and commercialization of products. In September 2018, we entered into a collaboration and license agreement with Gilead, which we refer to as the Gilead Agreement, to develop genome editing tools using our ARCUS proprietary genome editing platform. Both agreements use our genome editing technology for the treatment of certain diseases. Consideration we received, or may receive, under these collaboration and license agreements include upfront nonrefundable payments, research funding payments and payments based upon the achievement of certain milestones and royalties on any resulting net product sales.

Under the guidance of ASC 606, certain judgments affect revenue recognition. Our primary performance obligations under our agreements consist of research and development services. Measuring the amount of time it takes for us to complete these services includes estimating our total effort to satisfy our performance obligations at the outset of the agreement and then comparing that amount to the actual effort expended for a given accounting period. In certain instances, significant judgment is required to estimate the timing of satisfying these obligations and timing may change due to efforts beyond our control, such as changes in the customer's direction of a particular research program or changes to the contractual terms of an agreement. Accordingly, our estimates may change in the future. Such changes to estimates will result in a change in prospective revenue recognition amounts.

Accrued Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated costs incurred for the services when we have not yet been invoiced or otherwise notified of the actual costs. The majority of our service providers invoice us in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some require advance payments. We make estimates of our accrued expenses as of each balance sheet date in our consolidated financial statements based on facts and circumstances known to us at that time. Examples of estimated accrued research and development expenses include fees paid to the following:

- CROs and other third parties in connection with performing research and development activities, conducting preclinical studies and clinical trials on our behalf;
- Vendors in connection with preclinical development activities; and
- CMOs and other vendors in connection with product manufacturing and development and distribution of preclinical supplies.

We base our expenses related to preclinical studies on our estimates of the services received and efforts expended pursuant to quotes and contracts with CROs that conduct and manage preclinical studies and clinical trials and CMOs that manufacture product for our

research and development activities on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. In accruing fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or amount of prepaid expense accordingly.

Share-Based Compensation

We measure stock options and other share-based awards granted to our employees, directors, consultants and advisors based on the fair value on the date of the grant and recognize compensation expense for those awards, net of actual forfeitures, over the requisite service period, which is generally the vesting period of the respective award.

We estimate the fair value of each stock option grant on the date of grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the expected volatility of our common stock, the expected term of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options and our expected dividend yield. As we have limited trading history, we estimate our expected volatility based on the historical volatility of publicly traded peer companies and expect to continue to do so until such time as we have adequate historical data regarding the volatility of our traded share price. The expected term of our options has been determined utilizing a weighted value considering actual exercise history and estimated expected term based on the midpoint of final vest date and expiration date. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that we have never paid cash dividends and do not expect to pay any cash dividends in the foreseeable future.

Recent Accounting Pronouncements

A description of recent accounting pronouncements that may potentially impact our financial position, results of operations or cash flows is disclosed in Note 1 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under SEC rules.

Emerging Growth Company Status

We are an "emerging growth company," as defined in the JOBS Act, and we may take advantage of reduced reporting requirements that are otherwise applicable to public companies. Section 107 of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with those standards. We have elected to take advantage of the extended transition period for complying with new or revised accounting standards. As an "emerging growth company," we are also exempted from having to provide an auditor attestation of internal control over financial reporting under Sarbanes-Oxley Act Section 404(b).

We will remain an "emerging growth company" until the earliest of (1) the last day of the fiscal year in which we have total annual gross revenues of $1.07 billion or more, (2) December 31, 2024, (3) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years or (4) the date on which we are deemed to be a large accelerated filer under the rules of the SEC, which means the market value of our common stock held by non-affiliates exceeds $700 million as of the prior June 30th, we have been a public company for at least 12 months and have filed one Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities. Our interest-earning assets consist of cash and cash equivalents, which are denominated in U.S. dollars. We had cash and cash equivalents of $89.8 million, or 60% of our total assets, at December 31, 2020 and $180.9 million, or 77% of our total assets, at December 31, 2019. Interest income earned on these assets was $0.8 million and $4.3 million for the years ended December 31, 2020 and December 31, 2019, respectively. Our interest income is sensitive to changes in the general level of interest rates, primarily U.S. interest rates, however, we do not anticipate fluctuations in interest rates to have a significant impact on our financial statements.

We are also exposed to foreign exchange rate risk with respect to our global subsidiaries from foreign currency transactions. We do not anticipate foreign exchange rate risk to have a material impact on our financial statements.

Item 8. Financial Statements and Supplementary Data.

The financial statements required to be filed pursuant to this Item 8 are appended to this report and are incorporated herein by reference. An index of those financial statements is found in Item 15 of Part IV of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of disclosure controls and procedures

Our management, with the participation of our Chief Executive Officer and Interim Chief Financial Officer, evaluated, as of the end of the period covered by this Annual Report on Form 10-K, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on that evaluation, our Chief Executive Officer and Interim Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2020.

Management's annual report on internal control over financial reporting

Our management, with the participation of our principal executive officer and our principal financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our management conducted an assessment of the effectiveness of our internal control over financial reporting based on the criteria set forth in "Internal Control–Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that, as of December 31, 2020, our internal control over financial reporting was effective.

Attestation Report of the Registered Public Accounting Firm

Our independent registered accounting firm will not be required to opine on the effectiveness of our internal control over financial reporting pursuant to Section 404 of Sarbanes-Oxley Act of 2002 until we are no longer an "emerging growth company" as defined in the JOBS Act.

Changes in internal control over financial reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be included in our definitive proxy statement (or the "2021 Proxy Statement") to be filed with the SEC within 120 days of the end of our fiscal year covered by this Annual Report on Form 10-K and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this item will be included in our 2021 Proxy Statement to be filed with the SEC within 120 days of the end of our fiscal year covered by this Annual Report on Form 10-K and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item will be included in our 2021 Proxy Statement to be filed with the SEC within 120 days of the end of our fiscal year covered by this Annual Report on Form 10-K and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item will be included in our 2021 Proxy Statement to be filed with the SEC within 120 days of the end of our fiscal year covered by this Annual Report on Form 10-K and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

The information required by this item will be included in our 2021 Proxy Statement to be filed with the SEC within 120 days of the end of our fiscal year covered by this Annual Report on Form 10-K and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a)(1) Financial Statements

The following documents are included on pages F-1 through F-24 attached hereto and are filed as part of this Annual Report on Form 10-K.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

(a)(2) Financial Statement Schedules

All financial statement schedules have been omitted because they are not applicable, not required or the information required is shown in the financial statements or the notes thereto.

(a)(3) Exhibits

The following is a list of exhibits filed as part of this Annual Report on Form 10-K.

Exhibit Index

Exhibit Number	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
3.1	Amended and Restated Certificate of Incorporation of Precision BioSciences, Inc.	8-K	001-38841	3.1	4/1/2019	
3.2	Amended and Restated Bylaws of Precision BioSciences, Inc.	10-Q	001-38841	3.2	11/10/2020	
4.1	Specimen Common Stock Certificate	S-1/A	333-230034	4.1	3/18/2019	
4.2	Amended and Restated Investors' Rights Agreement among Precision BioSciences, Inc. and certain of its stockholders and the holders of the 2019 Notes, dated May 25, 2018, as amended	S-1/A	333-230034	4.2	3/18/2019	
4.3	Amendment No. 2, dated February 3, 2020, to the Amended and Restated Investors' Rights Agreement among Precision BioSciences, Inc. and certain of its stockholders and the holders of the 2019 Notes, dated May 25, 2018, as amended	8-K	001-38841	10.1	2/6/2020	
4.4	Form of Indenture.	S-3	333-238857	4.3	6/1/2020	
4.5	Description of the Registrant's Securities					*
10.1††	Loan and Security Agreement, dated May 15, 2019, among Precision BioSciences, Inc., Elo Life Systems, Inc. and Pacific Western Bank, as amended					*
10.2†	Development and Commercial License Agreement by and between Les Laboratoires Servier and Precision BioSciences, Inc., dated February 24, 2016, as amended	S-1	333-230034	10.1	3/1/2019	
10.3††	Amendment No. 5, dated September 18, 2019, to Development and Commercial License Agreement by and between Les Laboratoires Servier and Precision BioSciences, Inc., dated February 24, 2016, as amended	10-Q	001-38841	10.2	11/12/2019	
10.4††	Amendment No. 6, dated October 16, 2020, to Development and Commercial License Agreement by and between Les Laboratoires Servier, Institut de Recherches Internationales Servier and Precision BioSciences, Inc., dated February 24, 2016, as amended	10-Q	001-38841	10.2	11/10/2020	
10.5††	Development and License Agreement between Eli Lilly and Company and Precision BioSciences, Inc., dated November 19, 2020					*
10.6	Stock Purchase Agreement between Eli Lilly and Company and Precision BioSciences, Inc., dated November 19, 2020					*
10.7†	License Agreement by and between Duke University and Precision BioSciences, Inc., dated April 17, 2006, as amended	S-1	333-230034	10.2	3/1/2019	
10.8†	Patent Cross-License Agreement by and between Cellectis SA and Precision BioSciences, Inc., dated January 23, 2014	S-1	333-230034	10.3	3/1/2019	
10.9	Lease Agreement between Precision BioSciences, Inc. and Venable Tenant, LLC, dated April 5, 2010, as amended					*
10.10	Lease Agreement between Elo Life Systems, Inc. and ARE-NC Region No. 17, LLC, dated March 29, 2018, as amended	S-1	333-230034	10.6	3/1/2019	
10.11	Lease Agreement between Precision BioSciences, Inc. and Durham TW Alexander, LLC, dated October 2, 2018, as amended					*
10.12#	2006 Stock Incentive Plan, as amended, and form of award agreements thereunder	S-1	333-230034	10.8	3/1/2019	

Exhibit Number	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
10.13#	2015 Stock Incentive Plan, as amended, and form of award agreements thereunder	S-1	333-230034	10.9	3/1/2019	
10.14#	2019 Incentive Award Plan, and forms of award agreements thereunder					*
10.15#	2019 Employee Stock Purchase Plan	S-1/A	333-230034	10.11	3/18/2019	
10.16#	Employment Agreement between Precision BioSciences, Inc. and Matthew Kane, dated February 27, 2019	S-1/A	333-230034	10.12	3/18/2019	
10.17#	Employment Agreement between Precision BioSciences, Inc. and Derek Jantz, dated February 27, 2019	S-1/A	333-230034	10.13	3/18/2019	
10.18#	Employment Agreement between Precision BioSciences, Inc. and David Thomson, dated February 27, 2019, as amended	10-K	001-38841	10.19	3/10/2020	
10.19#	Employment Agreement between Precision BioSciences, Inc. and Fayaz Khazi, dated February 27, 2019	S-1/A	333-230034	10.16	3/18/2019	
10.20#	Employment Agreement between Precision BioSciences, Inc. and Christopher Ryan Heery, dated April 1, 2019	10-K	001-38841	10.21	3/10/2020	
10.21#	Employment Agreement between Precision BioSciences, Inc. and Dario, Scimeca dated April 11, 2019	10-K	001-38841	10.22	3/10/2020	
10.22#	Form of Indemnification Agreement between Precision BioSciences, Inc. and its directors and officers	S-1A	333-230034	10.17	3/18/2019	
10.23#	Non-Employee Director Compensation Plan	S-1A	333-230034	10.18	3/18/2019	
21.1	Subsidiaries of Precision BioSciences, Inc.					*
23.1	Consent of Deloitte & Touche LLP					*
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					*
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					*
32.1	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					**
32.2	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					**
101.INS	XBRL Instance Document					*
101.SCH	XBRL Taxonomy Extension Schema Document					*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					*

* Filed herewith
** Furnished herewith
† Confidential treatment of certain provisions has been granted by the SEC pursuant to Rule 406 under the Securities Act of 1933, as amended.

†† Portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.
# Denotes a management contract or compensation plan or arrangement

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized**.**

Precision BioSciences, Inc.

Date: March 18, 2021

By: /s/Matthew Kane

Matthew Kane
President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Matthew Kane **Matthew Kane**	President, Chief Executive Officer and Director (*principal executive officer*)	March 18, 2021
/s/ Derek Jantz **Derek Jantz, Ph.D.**	Chief Scientific Officer and Director (*principal executive officer*)	March 18, 2021
/s/ John Alexander Kelly **John Alexander Kelly**	Interim Chief Financial Officer (*principal financial officer*)	March 18, 2021
/s/ Shane Barton **Shane Barton**	Vice President and Corporate Controller (*principal accounting officer)*	March 18, 2021
/s/ Raymond Schinazi **Raymond Schinazi, Ph.D., DSc**	Director	March 18, 2021
/s/ Shalini Sharp **Shalini Sharp**	Director	March 18, 2021
/s/ Kevin Buehler **Kevin Buehler**	Director	March 18, 2021
/s/ Geno Germano **Geno Germano**	Director	March 18, 2021
/s/ Tony Yao **Tony Yao, M.D., Ph.D.**	Director	March 18, 2021

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Precision BioSciences, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Precision BioSciences, Inc. and subsidiaries (the "Company") as of December 31, 2020 and 2019, the related consolidated statements of operations, changes in stockholders' equity (deficit), and cash flows, for each of the two years in the period ended December 31, 2020, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP

Raleigh, North Carolina

March 18, 2021

We have served as the Company's auditor since 2017.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.

PRECISION BIOSCIENCES, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	December 31, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 89,798	$ 180,886
Accounts receivable	10,000	965
Prepaid expenses	5,762	9,497
Other current assets	4	2,324
Total current assets	105,564	193,672
Property, equipment, and software—net	35,090	39,571
Intangible assets—net	1,373	1,432
Right-of-use assets—net	6,410	—
Other assets	1,721	558
Total assets	$ 150,158	$ 235,233
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 792	$ 2,037
Accrued compensation	5,745	4,425
Accrued clinical and research and development expenses	3,269	2,400
Deferred revenue	30,236	16,486
Lease liabilities	1,933	—
Other current liabilities	854	1,584
Total current liabilities	42,829	26,932
Deferred revenue	53,926	65,895
Deferred rent	—	4,092
Lease liabilities	8,586	—
Other noncurrent liabilities	392	—
Total liabilities	105,733	96,919
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.0001 par value— 10,000,000 shares authorized as of December 31, 2020 and December 31, 2019; no shares issued and outstanding as of December 31, 2020 and December 31, 2019	—	—
Common stock; $0.000005 par value— 200,000,000 shares authorized, 53,503,124 shares issued and 52,692,652 shares outstanding as of December 31, 2020; 51,965,708 shares issued and 51,155,236 shares outstanding as of December 31, 2019	—	—
Additional paid-in capital	331,450	316,333
Accumulated deficit	(286,073)	(177,067)
Treasury stock	(952)	(952)
Total stockholders' equity	44,425	138,314
Total liabilities and stockholders' equity	$ 150,158	$ 235,233

See notes to consolidated financial statements

PRECISION BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except share and per share amounts)

	For the Years Ended December 31,	
	2020	2019
Revenue	$ 24,285	$ 22,238
Operating expenses		
Research and development	98,061	82,416
General and administrative	36,052	27,026
Total operating expenses	134,113	109,442
Loss from operations	(109,828)	(87,204)
Other income (expense), net:		
Change in fair value of convertible notes payable	—	(9,758)
Interest expense	—	(182)
Interest income	822	4,267
Total other income (expense), net	822	(5,673)
Net loss and net loss attributable to common stockholders	$ (109,006)	$ (92,877)
Net loss per share attributable to common stockholders-basic and diluted	$ (2.09)	$ (2.21)
Weighted average shares of common stock outstanding-basic and diluted	52,031,740	41,991,162

See notes to consolidated financial statements

PRECISION BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
(In thousands, except share amounts)

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Treasury Stock	Total Stockholder's Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance- January 1, 2019	25,650,000	$ 3	21,956,095	$ 2	16,717,117	$ —	$ 126,094	$ (85,187)	$ (952)	$ 39,960
Adjustment to beginning accumulated deficit from adoption of ASU 2014-09	—	—	—	—	—	—	—	997	—	997
Conversion of convertible preferred stock into common stock upon initial public offering	(25,650,000)	(3)	(21,956,095)	(2)	22,301,190	—	5	—	—	—
Issuance of common stock upon conversion of convertible notes payable	—	—	—	—	2,921,461	—	49,490	—	—	49,490
Issuance of common stock in initial public offering, net of discounts and issuance costs	—	—	—	—	9,085,000	—	130,543	—	—	130,543
Stock option exercises	—	—	—	—	940,940	—	1,261	—	—	1,261
Share-based compensation expense	—	—	—	—	—	—	8,940	—	—	8,940
Net loss	—	—	—	—	—	—	—	(92,877)	—	(92,877)
Balance- December 31, 2019	—	—	—	—	51,965,708	—	316,333	(177,067)	(952)	138,314
Stock option exercises	—	—	—	—	1,411,188	—	691	—	—	691
Issuance of common stock under employee stock purchase plan					126,228		640			640
Share-based compensation expense	—	—	—	—	—	—	13,786	—	—	13,786
Net loss	—	—	—	—	—	—	—	(109,006)	—	(109,006)
Balance- December 31, 2020	—	$ —	—	$ —	53,503,124	$ —	$ 331,450	$ (286,073)	$ (952)	$ 44,425

See notes to consolidated financial statements

PRECISION BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	For the Years Ended December 31,	
	2020	**2019**
Cash flows from operating activities:		
Net loss	$ (109,006)	$ (92,877)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	8,777	5,317
Share-based compensation	13,786	8,940
Loss on disposal of property, equipment, and software	35	22
Non-cash interest expense	—	182
Change in fair value of convertible notes payable	—	9,758
Amortization of right-of-use assets	1,036	—
Changes in operating assets and liabilities:		
Prepaid expenses	3,735	(584)
Accounts receivable	(9,035)	(441)
Other assets and other current assets	2,194	1,032
Accounts payable	(1,455)	667
Other current liabilities	2,084	4,835
Deferred revenue	1,781	(7,866)
Lease liabilities and right-of-use assets	(1,709)	—
Other noncurrent liabilities	391	—
Net cash used in operating activities	(87,386)	(71,015)
Cash flows from investing activities:		
Purchases of property, equipment and software	(5,031)	(24,666)
Net cash used in investing activities	(5,031)	(24,666)
Cash flows from financing activities:		
Proceeds from stock option exercises	689	1,261
Proceeds from employee stock purchase plan	640	—
Deferred offering costs	—	(2,622)
Issuance of convertible notes payable	—	39,550
Proceeds from IPO, net of underwriting discounts and commissions	—	135,185
Net cash provided by financing activities	1,329	173,374
Net increase (decrease) in cash and cash equivalents	(91,088)	77,693
Cash and cash equivalents—beginning of period	180,886	103,193
Cash and cash equivalents —end of period	$ 89,798	$ 180,886
Supplemental disclosures of noncash financing and investing activities:		
Common stock issued on conversion of convertible notes payable	$ —	$ 49,490
Property, equipment and software additions included in accounts payable, accrued expenses and other current liabilities	$ 665	$ 401
Deferred offering costs included in accounts payable, accrued expenses and other current liabilities	$ —	$ 168

See notes to consolidated financial statements

NOTE 1: DESCRIPTION OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business

Precision BioSciences, Inc. (the "Company") was incorporated on January 26, 2006 under the laws of the State of Delaware and is based in Durham, North Carolina. The Company is dedicated to improving life through the application of its pioneering, proprietary ARCUS genome editing platform to treat human diseases and create healthy and sustainable food and agricultural solutions. The Company is actively developing product candidates through two reportable segments: Therapeutics and Food. The Therapeutics segment is focused on allogeneic CAR T cell immunotherapy and *in vivo* gene correction. The Food segment focuses on applying ARCUS to develop food and nutrition products through collaboration agreements with consumer-facing companies.

The Company's 100% owned subsidiary, Precision PlantSciences, Inc., was incorporated on January 4, 2012. Precision PlantSciences, Inc. amended its certificate of incorporation on January 16, 2018 to change its name to Elo Life Systems, Inc. Elo Life Systems Australia Pty Ltd was incorporated on May 29, 2018 as a 100% owned subsidiary of Elo Life Systems, Inc. Additionally, the Company's 100% owned subsidiary, Precision BioSciences UK Limited, was incorporated on June 17, 2019. The accompanying consolidated financial statements include the accounts of the Company and its subsidiaries. Intercompany balances and transactions have been eliminated in consolidation.

Since its inception, the Company has devoted substantially all of its efforts to research and development activities, recruiting skilled personnel, developing manufacturing processes, establishing its intellectual property portfolio and providing general and administrative support for these operations. The Company is subject to a number of risks similar to those of other companies conducting high-risk, early-stage research and development of product candidates. Principal among these risks are dependence on key individuals and intellectual property, competition from other products and companies, and the technical risks associated with the successful research, development and clinical manufacturing of its product candidates. The Company's success is dependent upon its ability to continue to raise additional capital in order to fund ongoing research and development, obtain regulatory approval of its products, successfully commercialize its products, generate revenue, meet its obligations, and, ultimately, attain profitable operations.

On April 1, 2019, the Company completed its initial public offering ("IPO") in which the Company issued and sold 9,085,000 shares of its common stock at a public offering price of $16.00 per share and received approximately $130.5 million in net proceeds, after deducting underwriting discounts and commission of approximately $10.2 million and issuance costs of approximately $4.6 million.

In connection with the IPO, on March 15, 2019 the Company effected a reverse split of shares of the Company's common stock on a 1-for-2.134686 basis (the "Reverse Stock Split") of its issued and outstanding shares of common stock and a proportional adjustment to the existing conversion ratios for the Company's Series A and Series B preferred stock. Accordingly, all common shares, stock option shares, and per share amounts for all periods presented in the accompanying financial statements and notes thereto have been retroactively adjusted, where applicable, to reflect this Reverse Stock Split and adjustment of the preferred stock conversion ratios.

Authorized common shares were not affected by the Reverse Stock Split. Upon the closing of the IPO, all of the outstanding shares of convertible preferred stock automatically converted into 22,301,190 shares of common stock at the applicable ratio then in effect and the outstanding convertible notes payable, including accrued interest, were settled into 2,921,461 shares of common stock. Subsequent to the closing of the IPO, there were no shares of Series A or Series B convertible preferred stock or convertible notes payable outstanding.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and disclosures made in the accompanying notes to the consolidated financial statements. Actual results could differ from those estimates. Significant estimates include recording revenue for performance obligations recognized over time, determination of the fair value of share-based compensation grants and estimating services expended by third-party service providers used to recognize research and development expense.

Basis of Presentation

These financial statements have been prepared in accordance with GAAP. Additionally, the accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. As of December 31, 2020, the Company has not generated any revenue from product sales and does not expect to generate any revenue from the sale of product in the foreseeable future. During the year ended December 31, 2020, the Company incurred a net loss of $109.0 million and, as of December 31, 2020, has an accumulated deficit of $286.1 million. The Company has financed operations primarily through upfront payments from collaboration and licensing agreements, its initial public

offering ("IPO"), and private placements of convertible preferred stock and convertible debt. The Company expects to incur additional operating losses and negative operating cash flows for the foreseeable future.

Management believes that cash and cash equivalents as of December 31, 2020, cash payments received from Lilly in January 2021 in connection with the closing of the Development and License Agreement, expected operational receipts and available credit will allow the Company to continue its operations into 2023. In the absence of a significant source of recurring revenue, the continued viability of the Company beyond that point is dependent on its ability to continue to raise additional capital to finance its operations. There can be no assurance that the Company will be able to obtain sufficient capital to cover its costs on acceptable terms, if at all.

Summary of Significant Accounting Policies

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. As of December 31, 2020, the Company held an insignificant amount of cash equivalents. As of December 31, 2019, the Company held cash equivalents composed of money market funds and repurchase agreements that were purchased through repurchase intermediary banks and collateralized by deposits in the form of government securities and obligations.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash. All of the Company's cash and cash equivalents are held at financial institutions that management believes to be of high credit quality. The Company may maintain cash deposits in financial institutions in excess of government insured limits. The Company regularly invests excess cash deposits in money market funds and repurchase agreements. The Company believes that the credit risk arising from the holdings of these financial instruments is mitigated by the fact that these securities are of short duration, government backed and of high credit rating. The Company has not experienced any losses on cash and cash equivalents to date.

Revenue from two development and license agreements accounted for 16% and 74% of revenue during 2020 and 60% and 33% of revenue during 2019. One development and license agreement accounted for 98% of deferred revenue as of December 31, 2020.

Deferred Equity Offering Costs

The Company capitalizes incremental legal, professional accounting and other third-party fees directly associated with the Company's planned equity offerings as other current assets until the equity offering is consummated. After consummation, these costs are recorded in stockholders' equity (deficit) as a reduction of additional paid-in capital. If the equity offering is aborted, any costs deferred are expensed immediately.

Property, Equipment and Software

Property, equipment and software are stated at cost, net of depreciation and amortization. Depreciation and amortization are calculated using the straight-line method over the estimated useful lives of the assets ranging from three to seven years. Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term or estimated useful life of the asset.

The depreciation and amortization periods for the Company's significant property, equipment and software categories are as follows:

Laboratory equipment	5 to 7 years
Furniture and fixtures and office equipment	3 to 5 years
Leasehold improvements	Lesser of remaining lease term or useful life

Repairs and maintenance are charged to operations as incurred, and expenditures for additions and improvements that extend the useful life of the asset are capitalized.

Intangible Assets

Intangible assets primarily include licenses and patents. The Company capitalizes license fees paid to acquire access to proprietary technology if the technology is expected to have alternative future use in multiple research and development projects. The cost of licensed technology rights is amortized using the straight-line method over the estimated useful life of the technology. If the access to use the technology rights is one year or less, the cost is recorded as a prepaid expense and amortized over the period identified in the agreement. Amortization expense for licensed technology and capitalized patent costs is included in research and development expenses within the accompanying consolidated statement of operations.

Impairment of Long-Lived Assets

Long-lived assets, such as property, equipment and software and intangible assets, subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss is assessed when future undiscounted cash flows are less than the assets' carrying value and recognized when the carrying value of the asset exceeds fair value. Fair value is calculated by estimating the discounted future cash flows expected to be generated by the asset as well as other valuation techniques. An impairment charge is recognized for the amount by which the carrying amount exceeds the fair value of the asset.

Leases

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-02, *Leases* ("ASC 842"), to enhance the transparency and comparability of financial reporting related to leasing arrangements. The Company adopted ASC 842 on January 1, 2020, or the effective date, and used the effective date as its date of initial application.

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present. Leases with a term greater than one year are recognized on the balance sheet as right-of-use assets and lease liabilities. The Company has elected not to recognize on the balance sheet leases with terms of one year or less. Lease liabilities and corresponding right-of-use assets are recorded based on the present value of lease payments over the expected remaining lease term. Certain adjustments to the right-of-use asset were required for items such as prepaid and deferred rent. In calculating the present value of the lease payments, the Company has elected to apply the discount rate based on the remaining lease term as of the transition date, January 1, 2020. As the rate implicit in the lease is not readily determinable, the Company utilizes its incremental borrowing rates, which are the rates incurred to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment.

The Company has elected to account for the lease and non-lease components of each of its operating leases as a single lease component. In addition, the Company elected the package of practical expedients permitted under the transition guidance within ASC 842, in which the Company need not reassess (i) the historical lease classification, (ii) whether any expired or existing contract is or contains a lease, or (iii) the initial direct costs for any existing leases. The operating right-of-use asset recorded on the balance sheet is amortized on a straight-line basis as lease expense.

Revenue Recognition for Contracts with Customers

The Company's revenues are generated primarily through collaborative research, license, development and commercialization agreements.

Effective January 1, 2019, the Company adopted Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers* ("ASC 606"), using the modified retrospective transition method. The Company applied the modified retrospective transition method to contracts that were not completed as of January 1, 2019. ASC 606 applies to all contracts with customers, except for contracts that are within the scope of other standards. Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

At contract inception, once the contract is determined to be within the scope of ASC 606, the Company evaluates the performance obligations promised in the contract that are based on goods and services that will be transferred to the customer and determines whether those obligations are both (i) capable of being distinct and (ii) distinct in the context of the contract. Goods or services that meet these criteria are considered distinct performance obligations. If both these criteria are not met, the goods and services are

combined into a single performance obligation. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. Arrangements that include rights to additional goods or services that are exercisable at a customer's discretion are generally considered options. The Company assesses if these options provide a material right to the customer and if so, these options are considered performance obligations. The exercise of a material right is accounted for as a contract modification for accounting purposes.

The Company recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) each performance obligation is satisfied at a point in time or over time, and if over time this is based on the use of an output or input method. For the year ended December 31, 2020, the Company recorded cumulative catch up adjustments that reduced revenue recognition by $5.2 million, in addition to a contract liability adjustment, for changes in total estimated effort to be incurred in the future to satisfy the performance obligation and changes to the transaction price related to variable consideration for development milestones that were constrained in prior periods.

Invoices issued as stipulated in contracts prior to revenue recognition are recorded as deferred revenue. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue within current liabilities in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as noncurrent deferred revenue. Amounts recognized as revenue, but not yet invoiced are generally recognized as contract assets in the other current assets line item in the accompanying consolidated balance sheets.

Milestone Payments – If an arrangement includes development and regulatory milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the Company's or the licensee's control, such as regulatory approvals, are not considered probable of being achieved until those approvals are received and therefore revenue recognized is constrained as management is unable to assert that a reversal of revenue would not be probable. The transaction price is then allocated to each performance obligation on a relative standalone selling price basis, for which the Company recognizes revenue as or when the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development milestones and any related constraint, and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect collaboration revenues and earnings in the period of adjustment.

Royalties – For arrangements that include sales-based royalties, including milestone payments based on a level of sales, which are the result of a customer-vendor relationship and for which the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation linked to some or all of the royalty has been satisfied or partially satisfied. To date, the Company has not recognized any royalty revenue resulting from any of its licensing arrangements.

Significant Financing Component – In determining the transaction price, the Company adjusts consideration for the effects of the time value of money if the timing of payments provides the Company with a significant benefit of financing. The Company does not assess whether a contract has a significant financing component if the expectation at contract inception is such that the period between payment by the licensees and the transfer of the promised goods or services to the licensees will be one year or less. The Company assessed each of its revenue arrangements in order to determine whether a significant financing component exists and concluded that a significant financing component does not exist in any of its arrangements.

Collaborative Arrangements – The Company has entered into collaboration agreements, which are within the scope of ASC 606, to discover, develop, manufacture and commercialize product candidates. The terms of these agreements typically contain multiple promises or obligations, which may include: (1) licenses, or options to obtain licenses, to use the Company's technology, (2) research and development activities to be performed on behalf of the collaboration partner, and (3) in certain cases, services in connection with the manufacturing of preclinical and clinical material. Payments the Company receives under these arrangements typically include one or more of the following: non-refundable, upfront license fees; option exercise fees; funding of research and/or development efforts; clinical and development, regulatory, and sales milestone payments; and royalties on future product sales.

The Company analyzes its collaboration arrangements to assess whether the collaboration agreements are within the scope of accounting standards codification ("ASC") ASC 808, *Collaborative Arrangements* ("ASC 808") to determine whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards dependent on the commercial success of such activities. This assessment is performed throughout the life of the arrangement based on changes in the responsibilities of all parties in the arrangement. For collaboration arrangements within the scope of ASC 808 that contain multiple elements, the Company first determines which elements of the collaboration are deemed to be within the scope of ASC 808 and those that are more reflective of a vendor-customer relationship and, therefore, are within the scope

of ASC 606. For elements of collaboration arrangements that are accounted for pursuant to ASC 808, an appropriate recognition method is determined and applied consistently, generally by analogy to ASC 606. For those elements of the arrangement that are accounted for pursuant to ASC 606, the Company applies the five-step model described above.

For additional discussion of accounting for collaboration revenues, see Note 12, “Collaboration and license agreements.”

Research and Development

Research and development costs are expensed as incurred. Research and development expenses are comprised of costs incurred in performing research and development activities including salaries, benefits, share-based compensation, allocations for rent and facility costs, depreciation, preclinical manufacturing expenses, costs of services provided by contract research organizations (“CROs”) in connection with preclinical trials and contract manufacturing organizations (“CMOs”) engaged to manufacture clinical trial material, costs of licensing technology, and costs of services provided by research organizations and service providers. Upfront payments and milestone payments made for the licensing of technology are expensed as research and development in the period in which they are incurred if the technology is not expected to have any alternative future uses other than the specific research and development project for which it was intended. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed rather than when the payment is made.

The Company is required to estimate accrued research and development expenses resulting from its obligations under contracts with CROs, CMOs, research organizations, service providers, vendors and consultants in connection with research and development activities. The financial terms of these contracts are subject to negotiations and vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided to the Company under such contracts. The Company’s objective is to reflect the appropriate research and development expenses in its consolidated financial statements by matching those expenses with the period in which the services and efforts are expended. There may be instances in which payments made to the Company’s vendors will exceed the level of services provided and result in a prepayment of the expense. In accruing fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the Company’s estimate, the Company adjusts the accrual or amount of prepaid expense accordingly.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders’ equity (deficit) that result from transactions and economic events other than those with stockholders. For the years ended December 31, 2020 and December 31, 2019, there was no difference between net loss and comprehensive loss in the accompanying consolidated financial statements.

Net Loss Per Share

Basic net loss per share is computed by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is computed using the weighted-average number of shares of common stock outstanding during the period and, if dilutive, the weighted-average number of potential shares of common stock. Diluted net loss per share is the same as basic net loss per share for the years ended December 31, 2020 and December 31, 2019 given all potential shares of common stock are anti-dilutive as a result of the net loss.

Share-Based Compensation

The Company accounts for all share-based compensation, including stock options and the employee stock purchase plan at fair value and recognizes compensation expense for those equity awards, net of actual forfeitures, over the requisite service period, which is generally the vesting period of the respective award.

The fair value of each equity grant is estimated on the date of grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of the Company’s common stock and assumptions the Company makes for the expected volatility of its common stock, the expected term of the stock options, the risk-free interest rate for a period that approximates the expected term of the stock options and the Company’s expected dividend yield. As the Company has limited trading history, expected volatility is estimated based on the historical volatility of publicly traded peer companies and the Company expects to continue to do so until such time as it has adequate historical data regarding the volatility of its traded share price. The expected term of the options has been determined utilizing a weighted value considering actual exercise history and estimated expected term based on the midpoint of final vest date and expiration date. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

Income Taxes

Deferred tax assets and liabilities are determined based on the temporary differences between the consolidated financial statement carrying amounts and the tax basis of assets and liabilities using the enacted tax rates in effect in the years in which the differences are expected to reverse. In estimating future tax consequences, all expected future events are considered other than the enactment of changes in the tax law or rates. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes.

The Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position is measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement.

The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

Accounting Standards Updates

The Company is an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and may take advantage of reduced reporting requirements that are otherwise applicable to public companies. Section 107 of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with those standards. The Company has elected to use the extended transition period for complying with new or revised accounting standards. The JOBS Act also exempts the Company from having to provide an auditor attestation of internal controls over financial reporting under Sarbanes-Oxley Act Section 404(b).

The Company will remain an "emerging growth company" until the earliest of (i) December 31, 2024, (ii) the last day of the fiscal year in which it has total annual gross revenues of $1.07 billion or more, (iii) the date on which it has issued more than $1.0 billion in nonconvertible debt during the previous three years or (iv) the date on which it is deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission ("SEC"), which generally is when it has more than $700 million in market value of its stock held by non-affiliates as of the prior June 30th.

In February 2016, the FASB issued ASU 2016-02, Leases ("ASC 842"). This standard was issued in order to improve comparability among organizations by recognizing lease assets and liabilities for all leases, with certain exceptions, on the balance sheet. The Company elected to early adopt ASC 842 on January 1, 2020, or the effective date, and used the effective date as its date of initial application. As such, the Company did not adjust prior period amounts. The Company also elected to utilize various practical expedients upon transition, which permits companies to not reassess lease identification, classification, and initial direct costs under ASC 842 for leases that commenced prior to the effective date. Upon adoption, the Company recorded lease liabilities of $11.6 million, right-of-use assets of $6.8 million, and a reduction of existing deferred rent balances of $4.8 million on the balance sheet as of January 1, 2020.

In May 2014, the FASB, issued ASC 606, which superseded the revenue requirements in ASC 605. In 2015 and 2016, the FASB issued additional ASUs related to ASC 606 that delayed the effective date of the guidance and clarified various aspects of the new revenue guidance, including principal versus agent considerations, identifying performance obligations, and licensing, and they include other improvements and practical expedients. Effective January 1, 2019, the Company adopted ASC 606 using the modified retrospective transition method.

As a result of adopting ASC 606, the Company recorded a $1.0 million transition adjustment in the first quarter of 2019 to reduce the opening balance of accumulated deficit as of January 1, 2019 primarily as a result of the treatment of the up-front consideration received from the Company's collaboration agreements under prior revenue recognition guidance. During the year ended December 31, 2020, the Company recorded $19.5 million in revenue that was included in deferred revenue as of December 31, 2019.

Other accounting standards updates issued, but not effective until after December 31, 2020, are not expected to have a material effect on the Company's consolidated financial position, statements of operations or cash flows.

NOTE 2: PROPERTY, EQUIPMENT AND SOFTWARE

Property, equipment and software consisted of the following as of December 31 (in thousands):

	2020	2019
Construction in progress	$ 1,894	$ 697
Leasehold improvements	26,580	25,969
Software	394	328
Laboratory equipment	21,240	19,251
Office equipment	1,542	1,602
Furniture and fixtures	2,518	2,373
Total property, equipment and software	54,168	50,220
Less accumulated depreciation and amortization	19,078	10,649
Property, equipment and software - net	$ 35,090	$ 39,571

Depreciation expense, including amortization of leasehold improvements and software, was $8.7 million and $5.3 million for the years ended December 31, 2020 and December 31, 2019, respectively.

NOTE 3: INTANGIBLE ASSETS

Intangible assets, net, consisted of the following as of December 31 (in thousands):

	2020	2019
License cost	$ 1,831	$ 1,831
Less: accumulated amortization	(340)	(281)
Less: impairments	(118)	(118)
Intangible assets, net	1,373	1,432

Amortization expense of intangible assets was less than $0.1 million for the years ended December 31, 2020 and December 31, 2019. Amortization expense for intangible assets with definite lives will be less than $0.1 million for each of the next five years with the remaining $0.7 million amortized to expense in 2026 and beyond.

NOTE 4: STOCKHOLDERS' EQUITY

Capital Structure

Upon the closing of the IPO, all of the Company's outstanding shares of the Series A and Series B convertible preferred stock automatically converted into 22,301,190 shares of common stock and the Company's outstanding convertible notes payable, including accrued interest, converted into 2,921,461 shares of common stock at the applicable conversion ratio. Subsequent to the closing of the IPO, there were no shares of preferred stock outstanding.

On April 1, 2019, the Company filed an amendment to its amended and restated certificate of incorporation pursuant to which, among other things, the Company increased its authorized shares to 210,000,000 shares of capital stock, of which 200,000,000 shares were designated as $0.000005 par value common stock and 10,000,000 shares were designated as $0.0001 par value preferred stock.

NOTE 5: SHARE-BASED COMPENSATION

The Company previously granted stock options under its 2006 Stock Incentive Plan (the "2006 Plan") and its 2015 Stock Incentive Plan (the "2015 Plan"). As of December 31, 2020 there were 5,031,848 stock options outstanding under the 2006 Plan and 2015 Plan and no remaining stock options available to be granted under such plans.

On March 12, 2019, the Company's board of directors adopted, and, on March 14, 2019 the Company's stockholders approved, the Precision BioSciences, Inc. 2019 Incentive Award Plan ("2019 Plan") and the 2019 Employee Stock Purchase Plan ("2019 ESPP"), both of which became effective on March 27, 2019.

The 2019 Plan provides for the grant of incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units and other share-based awards. The number of shares available for issuance under the 2019 Plan initially equaled 4,750,000 shares of common stock. The 2019 Plan provides for an annual increase to the number of shares of common stock available for issuance on the first day of each calendar year beginning January 1, 2020 and ending on and including January 1, 2029 by an amount equal to the lesser of (i) 4% of the aggregate number of shares of common stock outstanding on the final day of the immediately preceding calendar year and (ii) such smaller number of shares of common stock as determined by the board of directors. As of January 1, 2021, the aggregate number of shares available for issuance under the 2019 Plan has been increased by 4,153,915 pursuant to this provision. Any shares that are subject to awards outstanding under the Company's 2006 Plan and 2015 Plan as of the effective date of the 2019 Plan that expire, lapse, or are terminated, exchanged for cash, surrendered, repurchased, or canceled without having been fully exercised or forfeited, to the extent so unused, will become available for award grants under the 2019 Plan. As of December 31, 2020, 1,933,781 shares were available to be issued under the 2019 Plan. The 2019 Plan had 5,512,422 stock options outstanding as of December 31, 2020.

Up to 525,000 shares of the Company's common stock were initially reserved for issuance under the 2019 ESPP. The 2019 ESPP provides for an annual increase to the number of shares available for issuance on the first day of each calendar year beginning January 1, 2020 and ending on and including January 1, 2029 by an amount equal to the lesser of (i) 1% of the shares outstanding on the final day of the immediately preceding calendar year and (ii) such smaller number of shares as is determined by our board of directors. As of January 1, 2021, the aggregate number of shares available for issuance under the 2019 ESPP has been increased by 1,038,478 shares pursuant to this provision. No more than 5,250,000 shares of our common stock may be issued under our 2019 ESPP. The purchase price of the shares under the 2019 ESPP, in the absence of a contrary designation, will be 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the purchase date. As of December 31, 2020, we had issued 126,228 shares under the 2019 ESPP. As of December 31, 2020, 910,324 shares were available to be issued under the 2019 ESPP. The Company recognized share-based compensation expense related to the ESPP of $0.4 million and less than $0.1 million during the years ended December 31, 2020 and December 31, 2019, respectively.

The Company recorded employee and nonemployee share-based compensation expense as follows (in thousands):

	Years Ended December 31,	
	2020	2019
Employee	$ 12,639	$ 8,354
Nonemployee	1,147	586
	$ 13,786	$ 8,940

Share-based compensation expense is included in the following line items in the consolidated statements of operations (in thousands):

	Years Ended December 31,	
	2020	2019
Research and development	$ 8,338	$ 5,639
General and administrative	5,448	3,301
	$ 13,786	$ 8,940

Determining the appropriate fair value model to measure the fair value of the stock option grants on the date of grant and the related assumptions requires judgment. The fair value of each stock option grant is estimated using a Black-Scholes option-pricing model on the date of grant as follows:

	Years Ended December 31,	
	2020	2019
Estimated dividend yield	0.00%	0.00%
Weighted-average expected stock price volatility	73.70%	68.25%
Weighted-average risk-free interest rate	0.60%	1.98%
Expected term of options (in years)	6.55	6.61
Weighted-average fair value per option	$ 4.81	$ 7.62

The expected volatility rates are estimated based on the actual volatility of comparable public companies over the expected term. The expected term represents the average time that stock options that vest are expected to be outstanding. The Company does not have sufficient history of exercising stock options to estimate the expected term of employee stock options and thus utilizes a weighted value considering actual history and estimated expected term based on the midpoint of final vest date and expiration date. The risk-free rate is based on the United States Treasury yield curve during the expected life of the option.

The following table summarizes activity in the Company's stock option plans for the years ended December 31, 2020 and December 31, 2019:

	Outstanding Option Shares	Weighted-Average Exercise Price
Balance as of January 1, 2019	7,763,464	5.00
Granted	2,647,236	11.64
Exercised	(940,940)	1.34
Forfeited/canceled	(550,644)	10.47
Balance as of December 31, 2019	8,919,116	7.02
Granted	4,011,728	7.26
Exercised	(1,411,188)	0.49
Forfeited/canceled	(975,386)	8.17
Balance as of December 31, 2020	10,544,270	7.88

The intrinsic value of stock options exercised was $10.3 million and $10.6 million during the years ended December 31, 2020 and December 31, 2019, respectively.

There was approximately $30.5 million of total unrecognized compensation cost related to unvested stock options as of December 31, 2020, which is expected to be recognized over a weighted-average period of 2.5 years.

The following table summarizes certain information about stock options granted under the stock option plans which are vested or expected to vest as of December 31, 2020 and December 31, 2019.

Years Ended December 31,		Number of Options	Weighted-Average Remaining Contractual Life (in years)	Weighted-Average Exercise Price
2020	Expected to be exercisable	10,544,270	7.23	$ 7.88
2020	Currently exercisable	4,582,708	5.48	$ 6.69
2019	Expected to be exercisable	8,919,116	7.19	$ 7.02
2019	Currently exercisable	4,082,663	5.08	$ 3.12

The following table summarizes certain information about stock options outstanding under the stock option plans for the years ending December 31, 2020 and December 31, 2019, respectively:

Year Ended December 31, 2020			
Exercise price	Number of Options Outstanding	Weighted-Average Remaining Life	Number of Options Exercisable
$0.01 - $0.04	717,949	0.61	717,949
$0.41 - $1.20	1,472,717	5.11	1,364,991
$5.67 - $9.46	4,414,103	8.75	494,811
$10.17 - $13.80	3,874,957	7.58	1,954,663
$14.91 - $16.00	64,544	4.51	50,294
	10,544,270		4,582,708

Year Ended December 31, 2019			
Exercise price	Number of Options Outstanding	Weighted-Average Remaining Life	Number of Options Exercisable
$0.01 - $0.04	1,385,203	1.50	1,385,203
$0.41 - $1.20	2,310,993	6.32	1,721,811
$7.74 - $9.46	1,266,454	9.44	131,644
$10.17 - $13.80	3,891,922	8.96	844,005
$14.91 - $16.00	64,544	9.59	—
	8,919,116		4,082,663

NOTE 6: RETIREMENT PLAN

In January 2011, the Company established a defined contribution 401(k) retirement savings plan (the "Retirement Plan") to all full-time employees. Employee contributions to the Retirement Plan can be 100% of annual compensation up to the prescribed annual maximum under the Internal Revenue Code. Administrative fees of less than $0.1 million were paid by the Company for the years ended December 31, 2020 and December 31, 2019.

The Retirement Plan includes a safe-harbor matching employer contribution equal to 100% of participants' deferral contributions up to 4%. The Company made contributions of $0.8 million and $0.6 million to the Retirement Plan during the years ended December 31, 2020 and December 31, 2019, respectively. Retirement plan contributions made by the Company are recorded to research and development expense and general and administrative expense as incurred and are included in the consolidated statement of operations.

NOTE 7: COMMITMENTS AND CONTINGENCIES

Litigation

The Company is subject to various legal matters and claims in the ordinary course of business. Although the results of legal proceedings and claims cannot be predicted with certainty, in the opinion of management, there are currently no such known matters that will have a material effect on the consolidated financial condition, results of operations or cash flows of the Company.

COVID-19 Pandemic

In March 2020, the World Health Organization designated the outbreak of the novel strain of coronavirus known as COVID-19 as a global pandemic. The Company has taken steps in line with guidance from the U.S. Centers for Disease Control and Prevention ("CDC") and the State of North Carolina to protect the health and safety of its employees and the community.

The Company is working closely with its clinical sites, physician partners and the patient community to monitor and manage the ongoing impact of the COVID-19 pandemic. The Company remains committed to its clinical programs and development plans, however, disruptions, competing resource demands and safety concerns caused by the COVID-19 pandemic have caused delays in the Company's clinical trial site activation and impacted its ability to enroll patients. The Company may also experience other difficulties, disruptions or delays in conducting preclinical studies or initiating, enrolling, conducting or completing its planned and ongoing clinical trials, and the Company may incur other unforeseen costs as a result. While the extent to which COVID-19 may continue to impact the Company's future results will depend on future developments, the pandemic and associated economic impacts could result in a material impact to the Company's future financial condition, results of operations and cash flows. The Company is continuing to assess the impact of the COVID-19 pandemic to best mitigate risk and continue the operations of its business.

Leases

The Company has operating leases for real estate in North Carolina and does not have any finance leases.

Many of the Company's leases contain options to renew and extend lease terms and options to terminate leases early. Reflected in the right-of-use asset and lease liabilities on the Company's consolidated balance sheet are the periods provided by renewal and extension options that the Company is reasonably certain to exercise, as well as the periods provided by termination options that the Company is reasonably certain to not exercise.

The Company has existing leases that include variable lease payments that are not included in the right-of-use asset and lease liabilities and are reflected as an expense in the period incurred. Such payments primarily include common area maintenance charges and fluctuations in rent payments that are driven by factors such as future changes in an index (e.g. the Consumer Price Index).

The Company has existing leases in which the non-lease components (e.g., common area maintenance, consumables, etc.) are paid separately from rent based on actual costs incurred and therefore are not included in the right-of-use assets and lease liabilities but rather reflected as an expense in the period incurred. The elements of lease expense were as follows:

(in thousands)	Year Ended December 31, 2020
Lease Cost	
Operating lease cost	$ 1,922
Short-term lease cost	405
Variable lease cost	926
Total Lease Cost	$ 3,253
Other Information	
Operating cash flows used for operating leases	2,755
Operating lease liabilities arising from obtaining right-of-use assets	623
Operating Leases	
Weighted average remaining lease term (in years)	4.7
Operating Leases	
Weighted average discount rate	7.9%

Future lease payments under non-cancelable leases with terms of greater than one year as of December 31, 2020, were as follows:

(in thousands)	December 31, 2020
2021	$ 2,685
2022	2,769
2023	2,848
2024	2,134
2025	1,086
2026 and beyond	1,108
Total lease payments	12,630
Less: imputed interest	2,111
Total operating lease liabilities	$ 10,519

Supply Agreements

The Company enters into contracts in the normal course of business with CMOs for the manufacture of clinical trial materials and CROs for clinical trial services. These agreements provide for termination at the request of either party with less than one-year notice and are, therefore, cancelable contracts and, if canceled, are not anticipated to have a material effect on the consolidated financial condition, results of operations, or cash flows of the Company.

NOTE 8: NET LOSS PER SHARE

The Company's potential dilutive securities have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted-average number of shares of common stock outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same.

The Company excluded the following potential shares of common stock from the computation of diluted net loss per share attributable to common stockholders because including them would have had an anti-dilutive effect:

	Years Ended December 31,	
	2020	2019
Outstanding share-based compensation awards	10,544,270	4,032,359
Total	10,544,270	4,032,359

NOTE 9: DEBT

In March 2019, the Company entered into a note purchase agreement pursuant to which it sold and issued an aggregate of $39.6 million of convertible notes payable (the "2019 Notes").

The 2019 Notes accrued interest at a rate of 6% per annum. The 2019 Notes were settled in 2,921,461 shares of common stock in connection with the closing of the Company's IPO (see Note 1) at a settlement price of $13.60 per share (equal to 85% of the IPO price per share).

On issuance, the Company elected to account for the 2019 Notes at fair value with any changes in fair value being recognized through the consolidated statements of operations until the 2019 Notes were settled. The fair value of the 2019 Notes was determined to be $39.6 million on issuance and $49.4 million as of April 1, 2019, the settlement date. For the year ended December 31, 2019, the Company recognized $9.8 million of expense as changes in fair value and $0.2 million of interest expense.

Revolving Line

On June 23, 2020, the Company and Pacific Western Bank ("Bank") entered into the Third Amendment to Loan and Security Agreement to the revolving line of credit agreement dated as of May 15, 2019 (as amended, the "Pacific Western Loan").

The aggregate availability under the Pacific Western Loan is $30.0 million. The Pacific Western Loan matures on June 23, 2023 as a result of the events discussed in Note 14, Subsequent Events. All outstanding principal amounts are due on the maturity date. The Company must also maintain an aggregate balance of unrestricted cash at Bank (not including amounts in certain specified accounts) equal to or greater than $10.0 million.

The interest rate under the Pacific Western Loan is a variable annual rate equal to the greater of (a) 2.75% above the Prime Rate (as defined in the Pacific Western Loan), or (b) 6.00%. There have been no borrowings under the Pacific Western Loan as of the date of this Annual Report on Form 10-K. The Company was in compliance with its financial covenants under the Pacific Western Loan as of December 31, 2020.

NOTE 10: INCOME TAXES

The Company recorded no federal income tax expense and due to the operating losses incurred for the years ended December 31, 2020 and December 31, 2019. The Company recorded less than $0.1 million and no state income expense for the years ended December 31, 2020 and December 31, 2019, respectively.

Significant components of the Company's deferred tax assets and deferred tax liabilities are as follows (in thousands):

	Years Ended December 31,	
	2020	2019
Noncurrent deferred tax assets:		
Net operating loss carryforwards	$ 39,264	$ 23,358
Contribution carryforwards	39	34
Deferred rent	—	1,099
Lease liability	2,336	—
Deferred revenue	18,684	13,172
Other assets	5,015	2,444
Tax credits	15,959	9,090
Less: valuation allowance	(79,273)	(47,734)
Total deferred tax assets, noncurrent	2,024	1,463
Noncurrent deferred tax liability:		
Property and equipment	601	1,463
Right of use asset	1,423	—
Total deferred tax liabilities, noncurrent	2,024	1,463
Net deferred tax assets	$ —	$ —

As of December 31, 2020 and December 31, 2019, the Company has provided a valuation allowance for the full amount of the net deferred tax assets as the realization of the net deferred tax assets is not determined to be more likely than not. The net increase in the valuation allowance for the year ended December 31, 2020 of $31.5 million is comprised of an increase in the valuation allowance recorded against the deferred tax assets, primarily related to tax credits and net operating loss carryforwards for the year.

The reasons for the difference between actual income tax benefit for the years ended December 31, 2020 and December 31, 2019 and the amount computed by applying the statutory federal income tax rate to losses before income tax benefit are as follows (in thousands):

	Year Ended December 31, 2020		Year Ended December 31, 2019	
	Amount	% of Pre-Tax Earnings	Amount	% of Pre-Tax Earnings
Income tax expense at statutory rate	$ (22,887)	21.0%	$ (19,505)	21.0%
State income taxes, net of federal tax benefit	(1,309)	1.2%	(1,827)	2.0%
Non-deductible expenses	(963)	0.9%	1,784	(1.9%)
R&D and orphan drug credits	(6,869)	6.3%	(4,810)	5.1%
Other	7	0.1%	(639)	0.7%
Change in state tax rate	512	(0.6%)	—	0.0%
Change in valuation allowance	31,532	(28.9%)	24,997	(26.9%)
Income tax (benefit) expense	$ 23	0.0%	$ —	—

As of December 31, 2020, the Company had federal, state, and foreign net operating loss ("NOL") carryforwards of approximately $172.7 million, $116.5 million, and $0.6 million respectively. As of December 31, 2019, the Company had federal, state, and foreign NOL carryforwards of approximately $101.3 million, $101.7 million, and $0.4 million, respectively. Federal NOL carryforwards of $19.7 million begin to expire in 2030 while the remaining federal NOL carryforward of $153.0 million carries forward indefinitely. The state NOL carryforwards begin to expire in 2025. The foreign NOLs carryforward indefinitely. At December 31, 2020, the Company had federal and state research and development ("R&D") tax credits of $9.9 million and an amount less than $0.1 million, which begin to expire in 2027 and 2030, respectively. At December 31, 2019, the Company had federal and state tax R&D credits of $7.2 million and an amount less than $0.1 million which begin to expire in 2027 and 2030, respectively. As of December 31, 2020 and December 31, 2019, the Company had federal Orphan Drug credits of $6.0 million and $1.8 million, respectively, which begin to expire in 2038. At December 31, 2020 and December 31, 2019, the Company had federal contribution carryforwards of $0.2 million and $0.1 million, respectively, which begin to expire in 2021.

The Company incorporated a subsidiary in Australia in 2018. However, the subsidiary has had minimal losses since inception. As such, there are no undistributed earnings as of December 31, 2020 and December 31, 2019.

The Company incorporated a subsidiary in the United Kingdom in 2019. However, the subsidiary has had minimal activity since inception. As such, there are no undistributed earnings as of December 31, 2020 and December 31, 2019.

The Company's ability to utilize its NOL and R&D credit carryforwards may be substantially limited due to ownership changes that may have occurred or that could occur in the future, as required by Section 382 of the Internal Revenue Code of 1986, as amended (the Code), as well as similar state provisions. These ownership changes may limit the amount of NOL and R&D credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an "ownership change," as defined by Section 382 of the Code, results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50 percent of the outstanding stock of a company by certain stockholders or public groups. The Company has not completed a study to assess whether one or more ownership changes have occurred since the Company became a loss corporation under the definition of Section 382. If the Company has experienced an ownership change, utilization of the NOL or R&D credit carryforwards would be subject to an annual limitation, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term, tax-exempt rate, and then could be subject to additional adjustments, as required. Any such limitation may result in the expiration of a portion of the NOL or R&D credit carryforwards before utilization. Until a study is completed and any limitation known, no amounts are being considered as an uncertain tax position or disclosed as an unrecognized tax benefit. Any carryforwards that expire prior to utilization as a result of such limitations will be removed from deferred tax assets with a corresponding reduction of the valuation allowance. Due to the existence of the valuation allowance, it is not expected that any possible limitation will have an impact on the results of operations of the Company.

The Company reflects in the accompanying consolidated financial statements the benefit of positions taken in a previously filed tax return or expected to be taken in a future tax return only if it is considered 'more-likely-than-not' that the position taken will be sustained by the appropriate taxing authority. As of December 31, 2020 and December 31, 2019, the Company had no unrecognized income tax benefits. The Company's policy for recording interest and penalties relating to uncertain income tax positions is to record

them as a component of income tax expense in the accompanying consolidated statements of operations. As of December 31, 2020 and December 31, 2019, the Company had no such accruals.

The Tax Cuts and Jobs Act of 2017 subjects a U.S. shareholder to tax on global intangible low-taxed income ("GILTI") earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740, No. 5, *Accounting for Global Intangible Low-Taxed Income*, states that an entity can make an accounting policy election to either recognized deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only. The Company has elected to account for GILTI in the year the tax is incurred. The Company does not have a GILTI inclusion in years ends December 31, 2020 or December 31, 2019 and therefore, no GILTI tax has been recorded for the years then ended.

NOTE 11: FAIR VALUE MEASUREMENTS

The carrying amounts of the Company's financial instruments, including accounts receivable, accounts payable, and accrued expenses and other current liabilities, approximate their respective fair values due to their short-term nature. The Company uses a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis and to minimize the use of unobservable inputs when determining their fair value. The three tiers are defined as follows:

Level 1—Observable inputs based on unadjusted quoted prices in active markets for identical assets or liabilities

Level 2—Inputs, other than quoted prices in active markets, that are observable either directly or indirectly

Level 3—Unobservable inputs for which there is little or no market date, which require the Company to develop its own assumptions

The Company classifies investments in money market funds within Level 1 as the prices are available from quoted prices in active markets. Investments in repurchase agreements are classified within Level 2 as these instruments are valued using observable market inputs including reported trades, broker/dealer quotes, bids and/or offers.

As of December 31, 2020, the Company held an insignificant amount of cash equivalents. As of December 31, 2019, the Company held cash equivalents which were composed of money market funds and repurchase agreements that were purchased through repurchase intermediary banks and collateralized by deposits in the form of government securities and obligations.

The following represents assets measured at fair value on a recurring basis by the Company (in thousands):

December 31, 2020	Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds	$ 10	$ 10	$ —	$ —
Repurchase agreements	—	—	—	—
	$ 10	$ 10	$ —	$ —

December 31, 2019	Fair Value	Level 1	Level 2	Level 3
Assets:				
Money market funds	$ 3,395	$ 3,395	$ —	$ —
Repurchase agreements	173,000	—	173,000	—
	$ 176,395	$ 3,395	$ 173,000	$ —

NOTE 12: COLLABORATION AND LICENSE AGREEMENTS

Development and Commercial License Agreement with Servier

On February 24, 2016, the Company entered into a development and commercial license agreement, as subsequently amended, with predecessor entities to Servier. This agreement establishes a collaboration between the Company and Servier to develop allogeneic chimeric antigen receptor T ("CAR T") cell therapies for up to six unique antigen targets selected by Servier. Servier selected one target at the agreement's inception and, in 2020, selected two additional hematological cancer targets beyond CD19 and two new solid tumor targets. Servier is required to make a milestone payment to the Company upon achievement of an early-stage pre- investigational new drug application ("IND") development milestone event completed for each of the four targets selected after execution of the contract. The Company granted Servier a development license and will perform early-stage R&D on the selected targets and develop the resulting therapeutic product candidates through Phase 1 clinical trials and manufacture clinical trial material

for use in Phase 2 clinical trials. Also, the Company and Servier have formed a joint steering committee ("JSC") to provide high-level oversight and decision making regarding the activities covered under the agreement.

The Company received an upfront payment of $105.0 million under the agreement in 2016. At the Phase 2 readiness stage for any product candidate, Servier may exercise a commercial option, subject to payment of commercial option exercise fees, to proceed with development and commercialization of the product candidate and perform late-stage R&D, including Phase 2 and Phase 3 clinical trials and obtaining regulatory approvals. The Company has the ability to receive total payments, in the aggregate across all five targets selected by Servier, of up to approximately $1.4 billion, including the upfront payment of $105.0 million and up to $1.3 billion in milestone payments, consisting of up to $329.3 million in development milestone payments and up to $925.0 million in commercial milestone payments. The Company is also entitled to receive tiered royalties ranging from the mid-single digit percentages to the sub-teen percentages on worldwide net sales of any products developed, subject to customary potential reductions. The Company also has the right to opt in and participate in the development and commercialization of any products resulting from the collaboration through a 50/50 co-development and co-promotion option in the United States. This will require the Company to pay a co-development and co-promotion option fee on each licensed product for which the Company elects to participate. This option is exercisable at the Phase 2 readiness stage and only after Servier exercises its commercial option.

The Company assessed this arrangement in accordance with ASC 606 and concluded that the promises in the agreement represent transactions with a customer. The Company has determined that the promises associated with the research and development activities for each of the five targets are not distinct because they are all based on the ARCUS proprietary genome editing platform. The Company has concluded that the agreement with Servier contains the following promises: (i) a development license; (ii) performance of early-stage R&D services, (iii) the manufacture of clinical trial material for use in Phase 2 clinical trials, and (iv) JSC participation. The Company determined that the license, manufacture of clinical trial material, and R&D services were not distinct from each other, as the license, pre-clinical and clinical supply, and R&D services are highly interdependent upon one another. Participation on the JSC to oversee the research and development activities are combined into the single performance obligation as these activities are highly interdependent with the other R&D services. As such, the Company determined that these promises should be combined into a single performance obligation.

Under the agreement with Servier, in order to evaluate the appropriate transaction price, the Company determined that the upfront amount of $105.0 million constituted the entire consideration to be included in the transaction price as of the outset of the arrangement. As such, this amount was allocated to the single performance obligation. The commercial option exercise fees that may be received are excluded from the transaction price until each customer option is exercised as it was determined that the options are not material rights. The potential development milestone payments that the Company is eligible to receive prior to the exercise of the options as well as commercial milestones, were excluded from the transaction price at the outset of the arrangement, as all milestone amounts were fully constrained based on the probability of achievement, since the milestones relate to successful achievement of certain developmental goals, which might not be achieved. None of the future royalty payments were included in the transaction price, as the potential payments represent sales-based consideration. The Company will reevaluate the transaction price, including all constrained amounts, at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and, if necessary, adjust its estimate of the transaction price.

The Company recognizes revenue from the upfront payment of $105.0 million and variable consideration related to development milestones achieved on an input method in the form of research effort relative to expected research effort at the completion of the performance obligation, which is based on the actual time of R&D activities performed relative to expected time to be incurred in the future to satisfy the performance obligation. Management evaluates and adjusts the total expected research effort for the performance obligation on a quarterly basis based upon actual research accomplishments and the probability of continuing research efforts in the future. The transfer of control occurs over this time period and, in management's judgment, is the best measure of progress towards satisfying the performance obligation. The remaining performance obligation is expected to be satisfied over approximately a five year period as of December 31, 2020.

During the years ended December 31, 2020 and December 31, 2019, the Company recognized revenue under the agreement with Servier of approximately $18.0 million and $7.3 million, respectively. Deferred revenue related to the agreement with Servier amounted to $82.9 million and $80.9 million as of December 31, 2020 and December 31, 2019, respectively, of which $28.9 million and $15.0 million, respectively, is included in current liabilities.

Collaboration and License Agreement with Gilead

On July 6, 2020 (the "Termination Notice Date"), Gilead Sciences ("Gilead") notified the Company of its termination of the Collaboration and License Agreement between Gilead and the Company, dated September 10, 2018, as subsequently amended by Amendment No. 1 to the Collaboration and License Agreement, dated March 10, 2020 (as amended, the "Gilead Agreement"). Pursuant to the termination notice, the Gilead Agreement terminated on September 4, 2020, upon which the Company regained full

rights and all data it generated for the *in vivo* chronic hepatitis B virus ("HBV") program developed under the Gilead Agreement. The Company is exploring partnership or alternative opportunities to enable the continued development of ARCUS-based HBV therapies, the progression toward the submission of an IND for this product candidate and the reassessment of the timing of such IND submission.

Revenue associated with the combined performance obligation was recognized on a straight-line basis as the R&D services were provided through the Termination Notice Date. During the years ended December 31, 2020 and 2019, the Company recognized revenue under the Gilead Agreement of approximately $3.9 million and $13.3 million, respectively. The Company did not have deferred revenue related to the Gilead Agreement as of December 31, 2020. Deferred revenue was $1.5 million as of December 31, 2019. No development or sales-based milestone payments were received during the twelve months ended December 31, 2020.

NOTE 13: SEGMENT REPORTING

The Company has developed a genome editing platform and performed related research for human therapeutic and agricultural applications. The Company's Chief Operating Decision Maker ("CODM") evaluates the Company's financial performance based on two reportable segments: Therapeutics and Food. The Therapeutics segment is focused on the development of products in the field of immuno-oncology and of novel products outside immuno-oncology to treat human diseases. The Food segment is focused on applying ARCUS to develop food and nutrition products through collaboration agreements with consumer-facing companies. The CODM reviews segment performance and allocates resources based upon segment revenue and segment operating loss of the Therapeutics and Food reportable segments.

Segment operating loss is derived by deducting operational cash expenditures, net, from GAAP revenue. Operational cash expenditures are cash disbursements made that are directly attributable to the reportable segment (including directly attributable research and development and property, equipment, and software expenditures). The Company previously allocated centralized research and development expenditures for early stage research, nuclease development and the purchase of general laboratory supplies to the Therapeutics and Food segments based on headcount and presented such allocated expenditures separately from segment operational cash expenditures. Beginning January 1, 2020, such allocated expenditures are included within segment operational cash expenditures. Prior period information was presented consistent with the current period presentation. In January 2019, the Food segment moved into a new leased facility at Research Triangle Park, North Carolina. The Company determined that the Food segment is no longer deriving benefit from the Company's centralized research and development expenditures for early stage research, nuclease development and the purchase of general laboratory supplies and, as such, all these expenditures are allocated to the Therapeutics segment. Certain reclassifications have been made to the presentation of reportable segments as centralized research and development expenditures are no longer reported separately. The reportable segment operational cash expenditures include cash disbursements for compensation, laboratory supplies, purchases of property, equipment and software and procuring services from CROs, CMOs and research organizations.

Certain cost items are not allocated to the Company's reportable segments. These cost items primarily consist of compensation and general operational expenses associated with the Company's executive, business development, finance, operations, human resources and legal functions. The Company does not allocate non-cash income statement amounts to its reportable segments, such as share based compensation, depreciation and amortization, intangible asset impairment charges, non-cash interest expense and losses on the disposal of assets. When reconciling segment operating loss to consolidated loss from operations, the Company makes an adjustment to convert the cash expenditures to the accrual basis to reflect GAAP.

All segment revenue is earned in the United States and there are no intersegment revenues. Additionally, the Company reports assets on a consolidated basis and does not allocate assets to its reportable segments for purposes of assessing segment performance or allocating resources.

Presented below is the financial information with respect to the Company's reportable segments:

(in thousands)	For the Years Ended December 31, 2020	2019
Revenue:		
Therapeutics	$ 21,863	$ 20,632
Food	2,422	1,606
Total segment revenue	24,285	22,238
Segment operational cash expenditures:		
Therapeutics	$ 71,841	$ 70,059
Food	7,587	6,984
Total segment operational cash expenditures	79,428	77,043
Segment operating loss:		
Therapeutics	$ (49,978)	$ (49,427)
Food	(5,165)	(5,378)
Total segment operating loss	$ (55,143)	$ (54,805)
Adjustments to reconcile segment operating loss to consolidated loss from operations		
Corporate general and administrative cash expenditures	$ (30,090)	$ (32,569)
Interest income received included in segment operating loss	(822)	(4,267)
Depreciation and amortization	(8,777)	(5,317)
Amortization of right-of-use asset	(1,036)	-
Share-based compensation	(13,786)	(8,940)
Loss on disposal of assets	35	(22)
Adjustments to reconcile cash expenditures to GAAP expenses	(209)	18,716
Total consolidated loss from operations	$ (109,828)	$ (87,204)

Note 14: Subsequent Events

Closing of Development and License Agreement and Stock Purchase Agreement with Eli Lilly and Company

On January 6, 2021, the Company and Eli Lilly and Company ("Lilly") closed their previously announced Development and License Agreement ("the Development and License Agreement") following clearance under the Hart-Scott Rodino Antitrust Improvements Act of 1976, as amended (the "HSR Act") and completed the transactions under their previously announced Stock Purchase Agreement (the "Stock Purchase Agreement"). In connection with the closing, the Company received an upfront cash payment of $100.0 million pursuant to the Development and License Agreement and received $35.0 million from Lilly's purchase of 3,762,190 newly issued shares of the Company's common stock pursuant to the Stock Purchase Agreement.

Under the Development and License Agreement, the Company will collaborate with Lilly to discover and develop *in vivo* gene editing products incorporating the Company's ARCUS nucleases. Lilly has initially nominated Duchenne muscular dystrophy and two gene targets for other genetic disorders, and has the right to nominate up to three additional gene targets for genetic disorders over the first four years of the Development and License Agreement (the "Nomination Period"). Lilly may extend the Nomination Period for an additional two years from the date on which such initial Nomination Period ends, upon Lilly's election and payment of an extension fee. Under the terms of the Development and License Agreement, Lilly will receive an exclusive license to research, develop, manufacture and commercialize the resulting licensed products to diagnose, prevent and treat any and all diseases by in vivo gene editing directed against the applicable gene target. The Development and License Agreement provides that the Company will be responsible for conducting certain pre-clinical research and IND-enabling activities with respect to the gene targets nominated by Lilly to be subject to the collaboration, including manufacture of initial clinical trial material for the first licensed product. Lilly will be responsible for, and must use commercially reasonable efforts with respect to, conducting clinical development and commercialization activities for licensed products resulting from the collaboration, and may engage the Company for additional clinical and/or initial commercial manufacture of licensed products.

Pursuant to the Development and License Agreement, the Company will also be eligible to receive milestone payments of up to an aggregate of $420.0 million per licensed product as well as nomination fees for additional targets and certain research funding. If licensed products resulting from the collaboration are approved and sold, the Company will also be entitled to receive tiered royalties ranging from the mid-single digit percentages to the low-teens percentages on world-wide net sales of the licensed products, subject to customary potential reductions. Lilly's obligation to pay royalties to the Company expires on a country-by-country and licensed

product-by-licensed product basis, upon the latest to occur of certain events related to expiration of patents, regulatory exclusivity or a period of ten years following first commercial sale of the licensed product. No revenue was recognized under the Development and License agreement in the twelve months ended December 31, 2020.

Duke License

As a result of the closing of the Development and License Agreement in January 2021, we will be required to make payments under the Duke License of $3.0 million in 2021, net of any outstanding credits.

Extension of Maturity date of Revolving Line with Pacific Western bank

Pursuant to the terms of the Pacific Western Loan regarding the Company receiving cash from the issuance of the Company's equity securities and/or from strategic partnerships, the maturity date of the Revolving Line was extended from June 23, 2022 to June 23, 2023 as a result of the proceeds received from Lilly in connection with the closing of the Development and License Agreement and Stock Purchase Agreement in January 2021.

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

As of December 31, 2020, Precision BioSciences, Inc. had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). References herein to "we," "us," "our" and the "Company" refer to Precision BioSciences, Inc. and not to any of its subsidiaries.

The following description of our common stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified in their entirety by reference to the full text of our amended and restated certificate of incorporation and our amended and restated bylaws, each of which have been publicly filed with the Securities and Exchange Commission (the "SEC"). We encourage you to read our amended and restated certificate of incorporation and our amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law (the "DGCL") for additional information.

Authorized Capital Stock

Our authorized capital stock consists of 200,000,000 shares of common stock, par value $0.000005 per share, and 10,000,000 shares of preferred stock, par value $0.0001 per share, all of which are undesignated.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. An election of directors by our stockholders shall be determined by a plurality of the votes cast. All other elections and questions presented to the stockholders shall be decided by the affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively (excluding abstentions) at the meeting by the holders entitled to vote thereon. Holders of common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of any series of preferred stock that we may designate and issue in the future.

In the event of our liquidation or dissolution, the holders of our common stock are entitled to receive proportionately our net assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. Our outstanding shares of common stock are, and the shares offered by us in this offering will be, when issued and paid for, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Under the terms of our amended and restated certificate of incorporation, our board of directors is authorized to direct us to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third-party to acquire, or could discourage a third-party from seeking to acquire, a majority of our outstanding voting stock.

Anti-takeover Provisions

Some provisions of Delaware law and our amended and restated certificate of incorporation and our amended and restated bylaws could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter

transactions that stockholders may otherwise consider to be in their best interests or in our best interests, including transactions that provide for payment of a premium over the market price for our shares.

Undesignated Preferred Stock

The ability of our board of directors, without action by our stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to effect a change in control of the Company. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of the Company.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by the chairman of our board of directors, our chief executive officer or president (in the absence of a chief executive officer), or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of our board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation eliminates the right of stockholders to act by written consent without a meeting.

Staggered Board

In accordance with our amended and restated certificate of incorporation, our board of directors is divided into three classes. The directors in each class serve for a three-year term, with one class being elected each year by our stockholders. Our amended and restated certificate of incorporation and amended and restated bylaws provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This system of electing and removing directors may delay or prevent a change of our management or a change in control of our company and may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of the holders of at least two-thirds in voting power of the outstanding shares of stock entitled to vote in the election of directors.

Stockholders not Entitled to Cumulative Voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors will be able to elect all of the directors standing for election, if they choose, other than any directors that holders of our convertible preferred stock may be entitled to elect.

Choice of Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum to the fullest extent permitted by law, the Court of Chancery of the State of

Delaware will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware or our certificate of incorporation or bylaws, or (4) any action asserting a claim governed by the internal affairs doctrine. Under our amended and restated certificate of incorporation, this exclusive forum provision does not apply to claims which are vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery of the State of Delaware, or for which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. For instance, the provision would not apply to actions brought to enforce any liability or duty created by the Exchange Act or the rules and regulations thereunder. Our amended and restated certificate of incorporation also provides that any person or entity holding, purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision. It is possible that a court of law could rule that the choice of forum provision contained in our amended and restated certificate of incorporation is inapplicable or unenforceable if it is challenged in a proceeding or otherwise.

Our amended and restated bylaws provide that, unless the Corporation consents in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, and that any person or entity purchasing or otherwise acquiring or holding any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to such provision.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock and the provision prohibiting cumulative voting, would require approval by holders of at least two-thirds in voting power of the outstanding shares of stock entitled to vote thereon.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the General Corporation Law of the State of Delaware (the "DGCL"), which prohibits persons deemed to be "interested stockholders" from engaging in a "business combination" with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by our board of directors.

Exhibit 10.1

Certain information marked as [***] has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential.

PRECISION BIOSCIENCES, INC.

ELO LIFE SYSTEMS, INC.

LOAN AND SECURITY AGREEMENT

This LOAN AND SECURITY AGREEMENT (the "Agreement") is entered into as of May 15, 2019, by and between PACIFIC WESTERN BANK, a California state chartered bank ("Bank") and PRECISION BIOSCIENCES, INC., a Delaware corporation ("Parent"), and ELO LIFE SYSTEMS, INC., a Delaware corporation ("ELO" and together with Parent, individually and collectively, jointly and severally, "Borrower").

RECITALS

Borrower wishes to obtain credit from time to time from Bank, and Bank desires to extend credit to Borrower. This Agreement sets forth the terms on which Bank will advance credit to Borrower, and Borrower will repay the amounts owing to Bank.

AGREEMENT

The parties agree as follows:

1. DEFINITIONS AND CONSTRUCTION.

1.1 Definitions. As used in this Agreement, all capitalized terms shall have the definitions set forth on Exhibit A. Any term used in the Code and not defined herein shall have the meaning given to the term in the Code.

1.2 Accounting Terms. Any accounting term not specifically defined on Exhibit A shall be construed in accordance with GAAP and all calculations shall be made in accordance with GAAP (except for non-compliance with FAS 123R in monthly reporting). The term "financial statements" shall include the accompanying notes and schedules.

2. LOAN AND TERMS OF PAYMENT.

2.1 Credit Extensions.

(a) Promise to Pay. Borrower promises to pay to Bank, in lawful money of the United States of America, the aggregate unpaid principal amount of all Credit Extensions made by Bank to Borrower, together with interest on the unpaid principal amount of such Credit Extensions at rates in accordance with the terms hereof.

(b) Advances Under Revolving Line.

(i) Amount. Subject to and upon the terms and conditions of this Agreement, Borrower may request Advances in an aggregate outstanding principal amount not to exceed the Revolving Line. Amounts borrowed pursuant to this Section 2.1(b) may be repaid and reborrowed at any time prior to the Revolving Maturity Date, at which time all Advances under this Section 2.1(b) shall be immediately due and payable. Borrower may prepay any Advances without penalty or premium at any time.

(ii) Form of Request. Whenever Borrower desires an Advance, Borrower will notify Bank (which notice shall be irrevocable) by facsimile transmission or email no later than 3:30 p.m. Eastern time (2:30 p.m. Eastern time for wire transfers), on the Business

Day that the Advance is to be made. Each such notification shall be given by a Loan Advance/Paydown Request Form in substantially the form of Exhibit C. Bank is authorized to make Advances under this Agreement, based upon instructions received from an Authorized Officer, or without instructions if in Bank's discretion such Advances are necessary to meet Obligations which have become due and remain unpaid. Bank shall be entitled to rely on any notice given by a person whom Bank reasonably believes to be an Authorized Officer, and Borrower shall indemnify and hold Bank harmless for any damages, loss, costs and expenses suffered by Bank as a result of such reliance. Bank will credit the amount of Advances made under this Section 2.1(b) to Borrower's deposit account.

(c) Usage of Credit Card Services Under the Credit Card Line.

(i) Usage Period. Subject to and upon the terms and conditions of this Agreement, at any time from the Closing Date through the Credit Card Maturity Date, Borrower may use the Credit Card Services (as defined below) in amounts and upon terms as provided in Section 2.1(c)(ii) below.

(ii) Credit Card Services. Subject to and upon the terms and conditions of this Agreement, Borrower may request corporate credit cards and standard and e-commerce merchant account services from Bank (collectively, the "Credit Card Services"). The aggregate limit of the corporate credit cards and merchant credit card processing reserves shall not exceed the Credit Card Line. The terms and conditions (including repayment and fees) of such Credit Card Services shall be subject to the terms and conditions of Bank's standard forms of application and agreement for the Credit Card Services, which Borrower hereby agrees to execute.

(iii) Collateralization of Obligations Extending Beyond Maturity. If Borrower has not cash secured its obligations with respect to any Credit Card Services by the Credit Card Maturity Date, then, effective as of such date, the balance in any deposit accounts held by Bank and the certificates of deposit or time deposit accounts issued by Bank in Borrower's name (and any interest paid thereon or proceeds thereof, including any amounts payable upon the maturity or liquidation of such certificates or accounts), shall automatically secure such obligations to the extent of the then continuing or outstanding Credit Card Services. Borrower authorizes Bank to hold such balances in pledge and to decline to honor any drafts thereon or any requests by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the applicable Credit Card Services are outstanding or continue.

2.2 Overadvances. If the aggregate amount of the outstanding Advances exceeds the Revolving Line at any time, Borrower shall immediately pay to Bank, in cash, the amount of such excess.

2.3 Interest Rates, Payments, and Calculations.

(a) Interest Rates.

(i) Advances. Except as set forth in Section 2.3(b), the Advances shall bear interest, on the outstanding daily balance thereof, at a variable annual rate equal to (1) at all times when Borrower maintains a daily balance of Cash in its demand deposit

accounts at Bank of at least $25,000,000, the greater of (A) 1.25% below the Prime Rate then in effect, or (B) 4.25%; and (2) at all times when Borrower does not maintain a daily balance of Cash in demand deposit accounts at Bank of at least $25,000,000, the greater of: (A) 0.25% above the Prime Rate then in effect; or (B) 5.75%.

(b) Late Fee; Default Rate. If any payment is not made within 15 days after the date such payment is due, Borrower shall pay Bank a late fee equal to the lesser of (i) 5% of the amount of such unpaid amount or (ii) the maximum amount permitted to be charged under applicable law. All Obligations shall bear interest, from and after the occurrence and during the continuance of an Event of Default, at a rate equal to 3 percentage points above the interest rate applicable immediately prior to the occurrence of the Event of Default.

(c) Payments. Interest under the Revolving Line shall be due and payable on the first calendar day of each month during the term hereof. Borrower authorizes Bank to, at its option, charge such interest, all Bank Expenses, all Periodic Payments, and any other amounts due and owing in accordance with the terms of this Agreement against any of Borrower's deposit accounts or against the Revolving Line, in which case those amounts shall thereafter accrue interest at the rate then applicable hereunder. Any interest not paid when due shall be compounded by becoming a part of the Obligations, and such interest shall thereafter accrue interest at the rate then applicable hereunder.

(d) Computation. In the event the Prime Rate is changed from time to time hereafter, the applicable rate of interest hereunder shall be increased or decreased, effective as of the day the Prime Rate is changed, by an amount equal to such change in the Prime Rate. All interest chargeable under the Loan Documents shall be computed on the basis of a 360-day year for the actual number of days elapsed.

2.4 Crediting Payments. Prior to the occurrence of an Event of Default, Bank shall credit a wire transfer of funds, check or other item of payment to such deposit account or Obligation as Borrower specifies. After the occurrence and during the continuance of an Event of Default, Bank shall have the right, in its sole discretion, to immediately apply any wire transfer of funds, check, or other item of payment Bank may receive to conditionally reduce Obligations, but such applications of funds shall not be considered a payment on account unless such payment is of immediately available federal funds or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or payment received by Bank after 5:30 p.m. Eastern time shall be deemed to have been received by Bank as of the opening of business on the immediately following Business Day. Whenever any payment to Bank under the Loan Documents would otherwise be due (except by reason of acceleration) on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension.

2.5 Fees. Borrower shall pay to Bank the following:

(a) Facility Fee. On or before the Closing Date, a fee equal to $25,000, which shall be nonrefundable;

(b) **Bank Expenses**. On the Closing Date, all Bank Expenses incurred through the Closing Date, and, after the Closing Date, all Bank Expenses, as and when they become due.

(c) **Early Termination Fee**. If this Agreement is terminated prior to the Revolving Maturity Date, a fee (the "Early Termination Fee") in an amount equal to one percent (1.00%) of the Revolving Line.

(d) **Unused Fee**. A fee, payable quarterly in arrears one Business Day after each quarter and on the Revolving Maturity Date, in an amount equal to 0.50% per annum of the unused portion of the Revolving Line during such quarter, measured daily and averaged over such quarter, as determined by Bank. Notwithstanding the foregoing, the unused fee shall be waived for any quarter in which Borrower maintains a daily balance of Cash in its demand deposit accounts at Bank of at least $25,000,000 at all times during such quarter.

2.6 **Term**. This Agreement shall become effective on the Closing Date and, subject to Section 12.7, shall continue in full force and effect for so long as any Obligations remain outstanding or Bank has any obligation to make Credit Extensions under this Agreement. Notwithstanding the foregoing, Bank shall have the right to terminate its obligation to make Credit Extensions under this Agreement immediately and without notice upon the occurrence and during the continuance of an Event of Default.

3. CONDITIONS OF LOANS.

3.1 **Conditions Precedent to Closing**. The agreement of Bank to enter into this Agreement on the Closing Date is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, each of the following items and completed each of the following requirements:

(a) this Agreement;

(b) an officer's certificate of Borrower with respect to incumbency and resolutions authorizing the execution and delivery of this Agreement;

(c) a financing statement (Form UCC-1);

(d) the certificates for the Shares, together with Assignments separate from Certificates, duly executed by the pledgor in blank;

(e) payment of the fees and Bank Expenses then due specified in Section 2.5, which may be debited from any of Borrower's accounts with Bank;

(f) current SOS Reports indicating that except for Permitted Liens, there are no other security interests or Liens of record in the Collateral;

(g) current financial statements, including audited statements for Borrower's most recently ended fiscal year, together with an unqualified opinion (or an opinion qualified only for going concern so long as Borrower's investors provide additional equity as

needed), company prepared consolidated and consolidating balance sheets, income statements, and statements of cash flows for the most recently ended month in accordance with Section 6.2, and such other updated financial information as Bank may reasonably request;

(h) a current Compliance Certificate in accordance with Section 6.2;

(i) evidence satisfactory to Bank that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and additional insured clauses or endorsements in favor of Bank,

(j) a Borrower Information Certificate for each Borrower;

(k) a Securities Account Control Agreement, duly executed by Bank, Borrower, and the applicable custodian;

(l) a legal opinion of Borrower's counsel, together with the duly executed signature thereto; and

(m) such other documents or certificates, and completion of such other matters, as Bank may reasonably request.

3.2 Conditions Precedent to all Credit Extensions. The obligation of Bank to make each Credit Extension, including the initial Credit Extension, is contingent upon Borrower's compliance with Section 3.1 above, and is further subject to the following conditions:

(a) timely receipt by Bank of the Loan Advance/Paydown Request Form as provided in Section 2.1;

(b) Borrower shall be in compliance with Section 6.6 hereof;

(c) in Bank's good faith sole discretion, there has not been a Material Adverse Effect; and

(d) the representations and warranties contained in Section 5 shall be true and correct in all material respects on and as of the date of such Loan Advance/Paydown Request Form and on the effective date of each Credit Extension as though made at and as of each such date, and no Event of Default shall have occurred and be continuing, or would exist after giving effect to such Credit Extension (provided, however, that those representations and warranties expressly referring to another date shall be true and correct in all material respects as of such date, and provided further that any representation or warranty that contains a materiality qualification therein shall be true and correct in all respects). The making of each Credit Extension shall be deemed to be a representation and warranty by Borrower on the date of such Credit Extension as to the accuracy of the facts referred to in this Section 3.2.

3.3 Covenant to Deliver.

(a) Except as otherwise provided in Section 3.3(b), Borrower agrees to deliver to Bank each item required to be delivered to Bank under this Agreement as a condition

precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Bank of any such item shall not constitute a waiver by Bank of Borrower's obligation to deliver such item, and the making of any Credit Extension in the absence of a required item shall be in Bank's sole discretion.

(b) Unless otherwise provided in writing, within thirty (30) days after the Closing Date, Bank shall have received, in form and substance satisfactory to Bank:

(i) a landlord waiver with respect to Borrower's leased location at 302 East Pettigrew Street, Dibrell Building, Suite A-100, Durham, NC 27701, and a landlord or bailee waiver for each other location where Borrower maintains Collateral with an aggregate book value in excess of $250,000.

4. CREATION OF SECURITY INTEREST.

4.1 Grant of Security Interest. Borrower grants and pledges to Bank a continuing security interest in the Collateral to secure prompt repayment of any and all Obligations and to secure prompt performance by Borrower of each of its covenants and duties under the Loan Documents. Except for Permitted Liens or as disclosed in the Schedule, such security interest constitutes a valid, first-priority security interest in the presently existing Collateral, and will constitute a valid, first-priority security interest in later-acquired Collateral. Borrower also hereby agrees not to sell, transfer, assign, mortgage, pledge, lease, grant a security interest in, or encumber any of its Intellectual Property (other than through the licensing thereof to third parties pursuant to clause (b) of the definition of "Permitted Transfer"). Notwithstanding any termination of this Agreement or of any filings undertaken related to Bank's rights under the Code, Bank's Lien on the Collateral shall remain in effect for so long as any Obligations are outstanding.

4.2 Perfection of Security Interest. Borrower authorizes Bank to file at any time financing statements, continuation statements, and amendments thereto that (i) either specifically describe the Collateral or describe the Collateral as all assets of Borrower of the kind pledged hereunder, and (ii) contain any other information required by the Code for the sufficiency of filing office acceptance of any financing statement, continuation statement, or amendment, including whether Borrower is an organization, the type of organization and any organizational identification number issued to Borrower, if applicable. Borrower shall have possession of the Collateral, except where expressly otherwise provided in this Agreement or where Bank chooses to perfect its security interest by possession in addition to the filing of a financing statement. Where Collateral is in possession of a third party bailee, Borrower shall take such steps as Bank reasonably requests for Bank to (i) subject to Section 7.11 below, obtain an acknowledgment, in form and substance satisfactory to Bank, of the bailee that the bailee holds such Collateral for the benefit of Bank, and (ii) obtain "control" of any Collateral consisting of investment property, deposit accounts, letter-of-credit rights or electronic chattel paper (as such items and the term "control" are defined in Revised Article 9 of the Code) by causing the securities intermediary or depositary institution or issuing bank to execute a control agreement in form and substance satisfactory to Bank. Borrower will not create any chattel paper without placing a legend on the chattel paper acceptable to Bank indicating that Bank has a security interest in the chattel paper. Borrower from time to time may deposit with Bank specific cash collateral to secure specific Obligations; Borrower authorizes Bank to hold such specific balances in pledge and to decline to

honor any drafts thereon or any request by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the specific Obligations are outstanding. If Borrower shall acquire a commercial tort claim in excess of $250,000 (for any single claim or related claims), Borrower shall promptly notify Bank in a writing signed by Borrower of the general details thereof and grant to Bank in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Bank. Borrower shall take such other actions as Bank reasonably requests to perfect its security interests granted under this Agreement.

4.3 Pledge of Collateral. Borrower hereby pledges, assigns and grants to Bank a security interest in all the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. On the Closing Date, the certificate or certificates for the Shares will be delivered to Bank, accompanied by an instrument of assignment duly governing the Shares. Borrower shall cause the books of each entity whose Shares are part of the Collateral and any transfer agent to reflect the pledge of the Shares. Upon the occurrence of an Event of Default hereunder, Bank may effect the transfer of any securities included in the Collateral (including but not limited to the Shares) into the name of Bank and cause new certificates representing such securities to be issued in the name of Bank or its transferee. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon notice from Bank to Borrower following the occurrence and during the continuance of an Event of Default.

5. REPRESENTATIONS AND WARRANTIES.

Borrower represents and warrants as follows:

5.1 Due Organization and Qualification. Borrower and each Subsidiary is duly existing under the laws of the state in which it is organized and qualified and licensed to do business in any state in which the conduct of its business or its ownership of property requires that it be so qualified, except where the failure to do so would not reasonably be expected to cause a Material Adverse Effect.

5.2 Due Authorization; No Conflict. The execution, delivery, and performance of the Loan Documents are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a breach of any provision contained in Borrower's Certificate of Incorporation or Bylaws, nor will they constitute an event of default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement by which it is bound, except to the extent such default would not reasonably be expected to cause a Material Adverse Effect.

5.3 Collateral. Borrower has rights in or the power to transfer the Collateral, and its title to the Collateral is free and clear of Liens, adverse claims, and restrictions on transfer or pledge except for Permitted Liens. Other than movable items of personal property such as laptop computers, all Collateral having an aggregate book value in excess of $100,000, is located solely in the Collateral States. All Inventory is in all material respects of good and merchantable quality, free from all material defects, except for Inventory for which adequate reserves have been made. Except as set forth in the Schedule, none of Borrower's Cash is maintained or invested with a Person other than Bank or Bank's affiliates.

5.4 Intellectual Property. Borrower is the sole owner of the Intellectual Property created or purchased by Borrower, except for licenses granted by Borrower to its customers in the ordinary course of business. To the best of Borrower's knowledge, each of the copyrights, trademarks and patents created or purchased by Borrower is valid and enforceable, and no part of the Intellectual Property created or purchased by Borrower has been judged invalid or unenforceable, in whole or in part, and no claim has been made to Borrower that any part of the Intellectual Property created or purchased by Borrower violates the rights of any third party except to the extent such claim would not reasonably be expected to cause a Material Adverse Effect.

5.5 Name; Location of Chief Executive Office. Except as disclosed in the Schedule, Borrower has not done business under any name other than that specified on the signature page hereof, and its exact legal name is as set forth in the first paragraph of this Agreement. The chief executive office of Borrower is located at the address indicated in Section 10 hereof.

5.6 Litigation. Except as set forth in the Schedule, there are no actions or proceedings pending by or against Borrower or any Subsidiary before any court or administrative agency in which a likely adverse decision would reasonably be expected to have a Material Adverse Effect.

5.7 No Material Adverse Change in Financial Statements. All consolidated and consolidating financial statements related to Borrower and any Subsidiary that are delivered by Borrower to Bank fairly present in all material respects Borrower's consolidated and consolidating financial condition as of the date thereof and Borrower's consolidated and consolidating results of operations for the period then ended. There has not been a material adverse change in the consolidated or in the consolidating financial condition of Borrower since the date of the most recent of such financial statements submitted to Bank.

5.8 Solvency, Payment of Debts. Borrower is able to pay its debts (including trade debts) as they mature; the fair saleable value of Borrower's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; and Borrower is not left with unreasonably small capital after the transactions contemplated by this Agreement.

5.9 Compliance with Laws and Regulations. Borrower and each Subsidiary have met the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. No event has occurred resulting from Borrower's failure to comply with ERISA that is reasonably likely to result in Borrower's incurring any liability that could have a Material Adverse Effect. Borrower is not an "investment company" or a company "controlled" by an

"investment company" within the meaning of the Investment Company Act of 1940. Borrower is not engaged principally, or as one of its important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations T and U of the Board of Governors of the Federal Reserve System). Borrower has not violated any statutes, laws, ordinances or rules applicable to it, the violation of which would reasonably be expected to have a Material Adverse Effect. Borrower and each Subsidiary have filed or caused to be filed all tax returns required to be filed, and have paid, or have made adequate provision for the payment of, all taxes reflected therein except those being contested in good faith with adequate reserves under GAAP or where the failure to file such returns or pay such taxes would not reasonably be expected to have a Material Adverse Effect.

5.10 Subsidiaries. Borrower does not own any stock, partnership interest or other equity securities of any Person, except for Permitted Investments.

5.11 Government Consents. Borrower and each Subsidiary have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary for the continued operation of Borrower's business as currently conducted, except where the failure to do so would not reasonably be expected to cause a Material Adverse Effect.

5.12 Inbound Licenses. Except as disclosed on the Schedule, and except for non-customized, "off-the-shelf" licenses, Borrower is not a party to, nor is bound by, any material license or other agreement important for the conduct of Borrower's business that prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such license or agreement or any other property important for the conduct of Borrower's business, other than this Agreement or the other Loan Documents.

5.13 Shares. Borrower has full power and authority to create a first lien on the Shares, and no disability or contractual obligations exists that would prohibit Borrower from pledging the Shares pursuant to this Agreement. To Borrower's knowledge, there are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will remain duly authorized and validly issued, and are fully paid and non-assessable. To Borrower's knowledge, the Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and Borrower knows of no reasonable grounds for the institution of any such proceedings.

5.14 Full Disclosure. No representation, warranty or other statement made by Borrower in any certificate or written statement furnished to Bank taken together with all such certificates and written statements furnished to Bank contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading in light of the circumstances in which they were made, it being recognized by Bank that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not to be viewed as facts and that actual results during the period or periods covered by any such projections and forecasts may differ from the projected or forecasted results.

6. AFFIRMATIVE COVENANTS.

Borrower covenants that, until payment in full of all outstanding Obligations, and for so long as Bank may have any commitment to make a Credit Extension hereunder, Borrower shall do all of the following:

6.1 Good Standing and Government Compliance. Borrower shall maintain its and each of its Subsidiaries' corporate existence and good standing in the respective states of formation, shall maintain qualification and good standing in each other jurisdiction in which the failure to so qualify would reasonably be expected to have a Material Adverse Effect, and shall furnish to Bank the organizational identification number issued to Borrower by the authorities of the state in which Borrower is organized, if applicable. Borrower shall meet, and shall cause each Subsidiary to meet, the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. Borrower shall comply, and shall cause each Subsidiary to comply, with all statutes, laws, ordinances and government rules and regulations to which it is subject, and shall maintain, and shall cause each of its Subsidiaries to maintain, in force all licenses, approvals and agreements, the loss of which or failure to comply with which would reasonably be expected to have a Material Adverse Effect.

6.2 Financial Statements, Reports, Certificates, Collateral Audits.

(a) Borrower shall deliver to Bank: (i) as soon as available, but in any event within 30 days after the end of each calendar month, a company prepared consolidated and consolidating balance sheet, income statement, and statement of cash flows covering Borrower's operations during such period, in a form reasonably acceptable to Bank and certified by a Responsible Officer; (ii) as soon as available, but in any event within 180 days after the end of Borrower's fiscal year, audited consolidated and consolidating financial statements of Borrower prepared in accordance with GAAP, consistently applied, together with an opinion which is either unqualified, qualified only for going concern so long as Borrower's investors provide additional equity as needed (or qualified for going concern as a result of the scheduled occurrence of the Maturity Date), or otherwise consented to in writing by Bank on such financial statements of an independent certified public accounting firm reasonably acceptable to Bank; (iii) annual budget approved by Borrower's Board of Directors as soon as available but not later than 15 days after the end of each fiscal year during the term hereof; (iv) if applicable, copies of all statements, reports and notices sent or made available generally by Borrower to its security holders or to any holders of Subordinated Debt and all reports on Forms 10-K and 10-Q filed with the Securities and Exchange Commission; (v) promptly upon receipt of notice thereof, a report of any legal actions pending or threatened against Borrower or any Subsidiary that could reasonably be expected to result in damages or costs to Borrower or any Subsidiary of $500,000 or more; (vi) promptly upon receipt, each management letter prepared by Borrower's independent certified public accounting firm regarding Borrower's management control systems; and (vii) such budgets, sales projections, operating plans or other financial information as Bank may reasonably request from time to time.

(b) Within 30 days after the last day of each month, Borrower shall deliver to Bank detailed aged listings by invoice date of accounts receivable and accounts payable.

(c) Within 30 days after the last day of each month, Borrower shall deliver to Bank with the monthly financial statements a Compliance Certificate certified as of the last day of the applicable month and signed by a Responsible Officer in substantially the form of Exhibit D hereto.

(d) As soon as possible and in any event within 3 Business Days after becoming aware of the occurrence or existence of an Event of Default hereunder, a written statement of a Responsible Officer setting forth details of the Event of Default, and the action which Borrower has taken or proposes to take with respect thereto.

(e) Bank (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours but no more than once a year (unless an Event of Default has occurred and is continuing), to inspect Borrower's Books and to make copies thereof and to check, test, inspect, audit and appraise the Collateral at Borrower's expense in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral.

(f) Borrower shall deliver to Bank, promptly following the end of each calendar quarter, quarterly strategic business updates in a form satisfactory to Bank.

Borrower may deliver to Bank on an electronic basis any certificates, reports or information required pursuant to this Section 6.2, and Bank shall be entitled to rely on the information contained in the electronic files, provided that Bank in good faith believes that the files were delivered by a Responsible Officer. Borrower shall include a submission date on any certificates and reports to be delivered electronically.

6.3 Inventory and Equipment; Returns. Borrower shall keep all Inventory and Equipment in good and merchantable condition, ordinary wear and tear excepted, free from all material defects except for Inventory and Equipment (i) sold in the ordinary course of business, and (ii) for which adequate reserves have been made, in all cases in the United States and such other locations as to which Borrower gives prior written notice. Returns and allowances, if any, as between Borrower and its account debtors shall be on the same basis and in accordance with the usual customary practices of Borrower, as they exist on the Closing Date. Borrower shall promptly notify Bank of all returns and recoveries and of all disputes and claims involving inventory having a book value of more than $250,000.

6.4 Taxes. Borrower shall make, and cause each Subsidiary to make, due and timely payment or deposit of all material federal, state, and local taxes, assessments, or contributions required of it by law, including, but not limited to, those laws concerning income taxes, F.I.C.A., F.U.T.A. and state disability, and will execute and deliver to Bank, on demand, proof satisfactory to Bank indicating that Borrower or a Subsidiary has made such payments or deposits and any appropriate certificates attesting to the payment or deposit thereof; provided that Borrower or a Subsidiary need not make any payment if the amount or validity of such payment is contested in good faith by appropriate proceedings and is reserved against (to the extent required by GAAP) by Borrower or such Subsidiary.

6.5 Insurance. Borrower, at its expense, shall (i) keep the Collateral insured against loss or damage, and (ii) maintain liability and other insurance, in each case as ordinarily insured against by other owners in businesses similar to Borrower's. All such policies of insurance shall be in such form, with such companies, and in such amounts as reasonably satisfactory to Bank. All policies of property insurance shall contain a lender's loss payable endorsement, in a form satisfactory to Bank, showing Bank as lender's loss payee. All liability insurance policies shall show, or have endorsements showing, Bank as an additional insured. Any such insurance policies shall specify that the insurer must give at least 20 days' notice to Bank before canceling its policy for any reason. Within 30 days of the Closing Date, Borrower shall cause to be furnished to Bank a copy of its policies including any endorsements covering Bank or showing Bank as an additional insured. Upon Bank's request, Borrower shall deliver to Bank certified copies of the policies of insurance and evidence of all premium payments. Proceeds payable under any casualty policy will, at Borrower's option, be payable to Borrower to replace the property subject to the claim, provided that any such replacement property shall be deemed Collateral in which Bank has been granted a first priority security interest, provided that if an Event of Default has occurred and is continuing, all proceeds payable under any such policy shall, at Bank's option, be payable to Bank to be applied on account of the Obligations.

6.6 Primary Depository. At all times when the aggregate balance of Borrower's Cash at Bank and Bank's affiliates is less than the Deposit Account Threshold, Borrower shall maintain, and shall cause all of its Subsidiaries to maintain, all depository and operating accounts with Bank and all investment accounts with Bank or Bank's affiliates. At all times when the aggregate balance of Borrower's Cash at Bank and Bank's affiliates equals or exceeds the Deposit Account Threshold, Borrower and its Subsidiaries may maintain Cash balances that exceed the Deposit Account Threshold in depository, operating, and investments accounts outside of Bank or Bank's affiliates, so long as each such account outside of Bank is subject to a duly-executed account control agreement in favor of Bank, and in form and substance reasonably satisfactory to Bank. Prior to Borrower maintaining any investment accounts with Bank's affiliates, Borrower, Bank, and any such affiliate shall have entered into a securities account control agreement with respect to any such investment accounts, in form and substance reasonably satisfactory to Bank.

6.7 Financial Covenants. Borrower shall at all times maintain the following financial ratios and covenants:

(a) Minimum Cash. At all times, an aggregate balance of Cash at Bank and Bank's Affiliates (excluding any amounts held in Excluded Accounts) equal to or greater than the aggregate outstanding amount of Obligations. Borrower acknowledges and agrees that any request by Borrower or any other Person to pay or otherwise transfer funds that would cause Borrower's balance of Cash at Bank to be less than the amount required pursuant to this Section 6.7(a) shall constitute an Event of Default under this Agreement.

6.8 Intellectual Property.

(a) Borrower shall promptly give Bank written notice of any applications or registrations of intellectual property rights filed with the United States Patent and

Trademark Office, including the date of such filing and the registration or application numbers, if any.

(b) Borrower shall use commercially reasonably efforts to (i) protect, defend and maintain the validity and enforceability of the trade secrets, Trademarks, Patents and Copyrights, (ii) use commercially reasonable efforts to detect infringements of the Trademarks, Patents and Copyrights and promptly advise Bank in writing of material infringements detected, and (iii) not allow any material Trademarks, Patents or Copyrights to be abandoned, forfeited or dedicated to the public without the written consent of Bank, which shall not be unreasonably withheld.

6.9 Consent of Inbound Licensors. Prior to entering into or becoming bound by any material inbound license or agreement (other than non-customized, "off-the-shelf" licenses), Borrower shall: (i) provide written notice to Bank of the material terms of such license or agreement with a description of its likely impact on Borrower's business or financial condition; and (ii) in good faith use commercially reasonable efforts to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for Borrower's interest in such licenses or contract rights to be deemed Collateral and for Bank to have a security interest in it that might otherwise be restricted by the terms of the applicable license or agreement, whether now existing or entered into in the future, provided, however, that the failure to obtain any such consent or waiver shall not constitute a default under this Agreement.

6.10 Creation/Acquisition of Subsidiaries. In the event any Borrower or any Subsidiary of any Borrower creates or acquires any Subsidiary, Borrower or such Subsidiary shall promptly notify Bank of such creation or acquisition, and Borrower or such Subsidiary shall take all actions reasonably requested by Bank to achieve any of the following with respect to such "***New Subsidiary***" (defined as a Subsidiary formed after the date hereof during the term of this Agreement): (i) to cause New Subsidiary to become either a co-Borrower or a secured guarantor with respect to the Obligations hereunder, if such New Subsidiary is organized under the laws of the United States; and (ii) to grant and pledge to Bank a perfected security interest in 100% of the stock, units or other evidence of ownership held by Borrower or its Subsidiaries of any such New Subsidiary which is organized under the laws of the United States, and 65% of the stock, units or other evidence of ownership held by Borrower or its Subsidiaries of any such New Subsidiary which is not organized under the laws of the United States.

6.11 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Bank to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS.

Borrower covenants and agrees that, so long as any credit hereunder shall be available and until the outstanding Obligations are paid in full or for so long as Bank may have any commitment to make any Credit Extensions, Borrower will not do any of the following without Bank's prior written consent, which shall not be unreasonably withheld:

7.1 Dispositions. Convey, sell, lease, license, transfer or otherwise dispose of (collectively, to "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, or move cash balances on deposit with Bank to accounts opened at another financial institution, other than Permitted Transfers.

7.2 Change in Name, Location, Executive Office, or Executive Management; Change in Business; Change in Fiscal Year; Change in Control. Change its name or the state of Borrower's formation or relocate its chief executive office without 30 days prior written notification to Bank; replace or suffer the departure of its chief executive officer or chief financial officer without delivering written notification to Bank within 10 days; fail to appoint an interim replacement or fill a vacancy in the position of chief executive officer or chief financial officer for more than 30 consecutive days; suffer a change on Parent's board of directors which results in the failure of at least one partner of venBio (or its Affiliates) to serve as a voting member without the prior written consent of Bank, which may be withheld in Bank's sole discretion; take action to liquidate, wind up, or otherwise cease to conduct business in the ordinary course; engage in any business, or permit any of its Subsidiaries to engage in any business, other than or reasonably related or incidental to the businesses currently engaged in by Borrower; change its fiscal year end; have a Change in Control.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of a Subsidiary into another Subsidiary or into Borrower), or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person except where (a) each of the following conditions is applicable: (i) the consideration paid in connection with such transactions (including assumption of liabilities) does not in the aggregate exceed $500,000 during any fiscal year, (ii) no Event of Default has occurred, is continuing or would exist after giving effect to such transactions, (iii) such transactions do not result in a Change in Control, and (iv) Borrower is the surviving entity; or (b) the Obligations are repaid in full concurrently with the closing of any merger or consolidation of Borrower in which Borrower is not the surviving entity; provided, however, that Borrower shall not, without Bank's prior written consent, enter into any binding contractual arrangement with any Person to attempt to facilitate a merger or acquisition of Borrower, unless (i) no Event of Default exists when such agreement is entered into by Borrower, (ii) such agreement does not give such Person the right to claim any fee, payment or damages from any parties, other than from Borrower or Borrower's investors, in connection with a sale of Borrower's stock or assets pursuant to or resulting from an assignment for the benefit of creditors, an asset turnover to Borrower's creditors (including, without limitation, Bank), foreclosure, bankruptcy or similar liquidation, and (iii) Borrower notifies Bank in advance of entering into such an agreement (provided, the failure to give such notification shall not be deemed a material breach of this Agreement).

7.4 Indebtedness. Create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except Indebtedness to Bank.

7.5 Encumbrances. Create, incur, assume or allow any Lien with respect to its property, or assign or otherwise convey any right to receive income, including the sale of any

Accounts, or permit any of its Subsidiaries so to do, except for Permitted Liens, or covenant to any other Person (other than (i) the licensors of in-licensed property with respect to such property or (ii) the lessors of specific equipment or lenders financing specific equipment with respect to such leased or financed equipment) that Borrower in the future will refrain from creating, incurring, assuming or allowing any Lien with respect to any of Borrower's property.

7.6 Distributions. Pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock, except that Borrower may (i) repurchase the stock of former employees or directors pursuant to stock repurchase agreements in an aggregate amount not to exceed $500,000 in any fiscal year, as long as an Event of Default does not exist prior to such repurchase or would not exist after giving effect to such repurchase, and (ii) repurchase the stock of former employees or directors pursuant to stock repurchase agreements by the cancellation of indebtedness owed by such former employees or directors to Borrower regardless of whether an Event of Default exists.

7.7 Investments. Directly or indirectly acquire or own an Investment in, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments, or maintain or invest any of its investment property with a Person other than Bank or permit any Subsidiary to do so unless such Person has entered into a control agreement with Bank, in form and substance satisfactory to Bank, or suffer or permit any Subsidiary to be a party to, or be bound by, an agreement that restricts such Subsidiary from paying dividends or otherwise distributing property to Borrower.

7.8 Capitalized Expenditures. Make Capitalized Expenditures in excess of Forty Million Dollars ($40,000,000) in the aggregate during each fiscal year of Borrower.

7.9 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for (i) transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person, and (ii) the sale of Borrower's equity securities in bona fide transactions with Borrower's existing investors that do not result in a Change in Control.

7.10 Subordinated Debt. Make any payment in respect of any Subordinated Debt, or permit any of its Subsidiaries to make any such payment, except in compliance with the terms of such Subordinated Debt, or amend any provision affecting Bank's rights contained in any documentation relating to the Subordinated Debt without Bank's prior written consent.

7.11 Inventory and Equipment. Store the Inventory or the Equipment of an aggregate book value in excess of $500,000 with a bailee, warehouseman, collocation facility or similar third party unless the third party has been notified of Bank's security interest and Bank (a) has received an acknowledgment from the third party that it is holding or will hold the Inventory or Equipment for Bank's benefit or (b) is in possession of the warehouse receipt, where negotiable, covering such Inventory or Equipment. Except for Inventory sold in the ordinary course of business and for movable items of personal property having an aggregate book value not in excess of $200,000, and except for such other locations as Bank may approve in writing, Borrower shall keep the Inventory and Equipment only at the location set forth in Section 10 and such other

locations of which Borrower gives Bank prior written notice and as to which Bank is able to take such actions as may be necessary to perfect its security interest or to obtain a bailee's acknowledgment of Bank's rights in the Collateral.

7.12 No Investment Company; Margin Regulation. Become or be controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose.

8. EVENTS OF DEFAULT.

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. If Borrower fails to pay any of the Obligations when due;

8.2 Covenant Default.

(a) If Borrower fails to perform any obligation under Sections 6.2 (financial reporting), 6.4 (taxes), 6.5 (insurance), 6.6 (primary accounts), or 6.7 (financial covenants), or violates any of the covenants contained in Article 7 of this Agreement; or

(b) If Borrower fails or neglects to perform or observe any other material term, provision, condition, covenant contained in this Agreement, in any of the Loan Documents, or in any other present or future agreement between Borrower and Bank and as to any default under such other term, provision, condition or covenant that can be cured, has failed to cure such default within 15 days after Borrower receives notice thereof or any officer of Borrower becomes aware thereof; provided, however, that if the default cannot by its nature be cured within the 15 day period or cannot after diligent attempts by Borrower be cured within such 15 day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional reasonable period (which shall not in any case exceed 30 days) to attempt to cure such default, and within such reasonable time period the failure to have cured such default shall not be deemed an Event of Default but no Credit Extensions will be made;

8.3 Material Adverse Change. If there occurs any circumstance or any circumstances which would reasonably be expected to have a Material Adverse Effect;

8.4 Attachment. If any material portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within 10 days, or if Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or if a notice of lien, levy, or assessment is filed of record with respect to any material portion of Borrower's assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county,

municipal, or governmental agency, and the same is not paid within ten days after Borrower receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower (provided that no Credit Extensions will be made during such cure period);

8.5 Insolvency. If Borrower becomes insolvent, or if an Insolvency Proceeding is commenced by Borrower, or if an Insolvency Proceeding is commenced against Borrower and is not dismissed or stayed within 45 days (provided that no Credit Extensions will be made prior to the dismissal of such Insolvency Proceeding);

8.6 Other Agreements. If (a) there is a default or other failure to perform in any agreement to which Borrower is a party with a third party or parties (i) resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of $500,000, (ii) in connection with any lease of real property material to the conduct of Borrower's business, if such default or failure to perform gives another party the right to terminate the lease, or (iii) that would reasonably be expected to have a Material Adverse Effect, or (b) any default or event of default (however designated) shall occur with respect to any Subordinated Debt which is not cured within any applicable cure period;

8.7 Judgments. If a final, uninsured judgment or judgments for the payment of money in an amount, individually or in the aggregate, of at least $500,000 shall be rendered against Borrower and shall remain unsatisfied and unstayed for a period of 10 days (provided that no Credit Extensions will be made prior to the satisfaction or stay of the judgment); or

8.8 Misrepresentations. If any material misrepresentation or material misstatement exists now or hereafter in any warranty or representation set forth herein or in any certificate delivered to Bank by any Responsible Officer pursuant to this Agreement or to induce Bank to enter into this Agreement or any other Loan Document.

9. BANK'S RIGHTS AND REMEDIES.

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, immediately due and payable (provided that upon the occurrence of an Event of Default described in Section 8.5 (insolvency), all Obligations shall become immediately due and payable without any action by Bank);

(b) Demand that Borrower (i) deposit cash with Bank in an amount equal to the amount of any Letters of Credit remaining undrawn, as collateral security for the repayment of any future drawings under such Letters of Credit, and (ii) pay in advance all Letter of Credit fees scheduled to be paid or payable over the remaining term of the Letters of Credit, and Borrower shall promptly deposit and pay such amounts;

(c) Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement or under any other agreement between Borrower and Bank;

(d) Settle or adjust disputes and claims directly with account debtors for amounts, upon terms and in whatever order that Bank reasonably considers advisable;

(e) Make such payments and do such acts as Bank considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Bank so requires, and to make the Collateral available to Bank as Bank may designate. Borrower authorizes Bank to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any encumbrance, charge, or lien which in Bank's determination appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's owned premises, Borrower hereby grants Bank a license to enter into possession of such premises and to occupy the same, without charge, in order to exercise any of Bank's rights or remedies provided herein, at law, in equity, or otherwise;

(f) place a "hold" on any account maintained with Bank and not honor any presentment (including but not limited to checks, wires and ACH drafts) against such account at Bank and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any control agreement or similar agreements providing control of any Collateral;

(g) Set off and apply to the Obligations any and all (i) balances and deposits of Borrower held by Bank, and (ii) indebtedness at any time owing to or for the credit or the account of Borrower held by Bank;

(h) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Bank is hereby granted a license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's labels, patents, copyrights, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section 9.1, Borrower's rights under all licenses and all franchise agreements shall inure to Bank's benefit;

(i) Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Bank determines is commercially reasonable, and apply any proceeds to the Obligations in whatever manner or order Bank deems appropriate. Bank may sell the Collateral without giving any warranties as to the Collateral. Bank may specifically disclaim any warranties of title or the like. This procedure will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral. If Bank sells any of the Collateral upon credit, Borrower will be credited only with payments actually made by the purchaser, received by Bank, and applied to the indebtedness of the purchaser. If the purchaser fails to pay for the Collateral, Bank may resell the Collateral and Borrower shall be credited with the proceeds of the sale;

(j) Bank may credit bid and purchase at any public sale;

(k) Apply for the appointment of a receiver, trustee, liquidator or conservator of the Collateral, without notice and without regard to the adequacy of the security for the Obligations and without regard to the solvency of Borrower, any guarantor or any other Person liable for any of the Obligations; and

(l) Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

Bank may comply with any applicable state or federal law requirements in connection with a disposition of the Collateral and compliance will not be considered adversely to affect the commercial reasonableness of any sale of the Collateral.

9.2 Power of Attorney. Effective only upon the occurrence and during the continuance of an Event of Default, Borrower hereby irrevocably appoints Bank (and any of Bank's designated officers, or employees) as Borrower's true and lawful attorney to: (a) send requests for verification of Accounts or notify account debtors of Bank's security interest in the Accounts; (b) endorse Borrower's name on any checks or other forms of payment or security that may come into Bank's possession; (c) sign Borrower's name on any invoice or bill of lading relating to any Account, drafts against account debtors, schedules and assignments of Accounts, verifications of Accounts, and notices to account debtors; (d) dispose of any Collateral; (e) make, settle, and adjust all claims under and decisions with respect to Borrower's policies of insurance; (f) settle and adjust disputes and claims respecting the accounts directly with account debtors, for amounts and upon terms which Bank determines to be reasonable; and (g) file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral; provided Bank may exercise such power of attorney to sign the name of Borrower on any of the documents described in clause (g) above, regardless of whether an Event of Default has occurred. The appointment of Bank as Borrower's attorney in fact, and each and every one of Bank's rights and powers, being coupled with an interest, is irrevocable until all of the Obligations have been fully repaid and performed and Bank's obligation to provide advances hereunder is terminated.

9.3 Accounts Collection. At any time after the occurrence and during the continuation of an Event of Default, Bank may notify any Person owing funds to Borrower of Bank's security interest in such funds and verify the amount of such Account. Borrower shall collect all amounts owing to Borrower for Bank, receive in trust all payments as Bank's trustee, and immediately deliver such payments to Bank in their original form as received from the account debtor, with proper endorsements for deposit.

9.4 Bank Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Bank may do any or all of the following after reasonable notice to Borrower: (a) make payment of the same or any part thereof; and/or (b) set up such reserves under the Revolving Line as Bank deems necessary to protect Bank from the exposure created by such failure; or (c) obtain and maintain insurance policies of the type discussed in Section 6.5 of this Agreement, and take any action with respect to such policies as Bank deems prudent. Any amounts so paid or deposited by Bank shall constitute Bank Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the

Collateral. Any payments made by Bank shall not constitute an agreement by Bank to make similar payments in the future or a waiver by Bank of any Event of Default under this Agreement.

9.5 Bank's Liability for Collateral. Bank has no obligation to clean up or otherwise prepare the Collateral for sale. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

9.6 No Obligation to Pursue Others. Bank has no obligation to attempt to satisfy the Obligations by collecting them from any other person liable for them and Bank may release, modify or waive any collateral provided by any other Person to secure any of the Obligations, all without affecting Bank's rights against Borrower. Borrower waives any right it may have to require Bank to pursue any other Person for any of the Obligations.

9.7 Remedies Cumulative. Bank's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Bank shall have all other rights and remedies not inconsistent herewith as provided under the Code, by law, or in equity. No exercise by Bank of one right or remedy shall be deemed an election, and no waiver by Bank of any Event of Default on Borrower's part shall be deemed a continuing waiver. No delay by Bank shall constitute a waiver, election, or acquiescence by it. No waiver by Bank shall be effective unless made in a written document signed on behalf of Bank and then shall be effective only in the specific instance and for the specific purpose for which it was given. Borrower expressly agrees that this Section 9.7 may not be waived or modified by Bank by course of performance, conduct, estoppel or otherwise.

9.8 Demand; Protest. Except as otherwise provided in this Agreement, Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment and any other notices relating to the Obligations.

10. NOTICES.

Unless otherwise provided in this Agreement, all notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other reporting required pursuant to Section 6.2 of this Agreement, which shall be sent as directed in the monthly reporting forms provided by Bank) shall be personally delivered or sent by a recognized overnight delivery service, certified mail, postage prepaid, return receipt requested, or by telefacsimile or electronic mail to Borrower or to Bank, as the case may be, at its addresses set forth below:

If to Borrower: Precision Biosciences, Inc.
ELO Life Systems, Inc.
302 East Pettigrew Street
Dibrell Bldg., Suite A-100
Durham, NC 27701
Attn: Abid Ansari, VP Finance
FAX: (____) _____
E-Mail: abid.ansari@precisionbiosciences.com

If to Bank: Pacific Western Bank
406 Blackwell Street, Suite 240
Durham, North Carolina 27701
Attn: Loan Operations Manager
FAX: (919) 314-3080
E-Mail: loannotices@square1bank.com

with a copy to: Pacific Western Bank
406 Blackwell Street, Suite 240
Durham, North Carolina 27701
Attn: Evan Travis
FAX: (919) 314-3090

The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

11. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER.

This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of North Carolina, without regard to principles of conflicts of law. Jurisdiction shall lie in the State of North Carolina. All disputes, controversies, claims, actions and similar proceedings arising with respect to Borrower's account or any related agreement or transaction shall be brought in the General Court of Justice of North Carolina sitting in Durham County, North Carolina or the United States District Court for the Middle District of North Carolina, except as provided below with respect to arbitration of such matters. BANK AND BORROWER EACH ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL ONE, BUT THAT IT MAY BE WAIVED. EACH OF THEM, AFTER CONSULTING OR HAVING HAD THE OPPORTUNITY TO CONSULT, WITH COUNSEL OF THEIR CHOICE, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ANY RIGHT ANY OF THEM MAY HAVE TO A TRIAL BY JURY IN ANY LITIGATION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR ANY RELATED INSTRUMENT OR LOAN DOCUMENT OR ANY OF THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT OR ANY COURSE OF CONDUCT, DEALING, STATEMENTS (WHETHER ORAL OR WRITTEN), OR ACTION OF ANY OF THEM. THESE PROVISIONS SHALL NOT BE DEEMED TO HAVE BEEN MODIFIED IN ANY RESPECT OR RELINQUISHED BY BANK OR BORROWER, EXCEPT BY A WRITTEN INSTRUMENT EXECUTED BY EACH OF THEM. If the jury waiver set forth in this Section 11 is not enforceable, then any dispute, controversy, claim, action or similar proceeding arising out of or relating to this Agreement, the Loan Documents or any of the transactions contemplated therein shall be settled by final and binding arbitration held in Durham County, North Carolina in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association by one arbitrator appointed in accordance with those rules. The arbitrator shall apply North Carolina law to the resolution of any dispute, without reference to rules of conflicts of law or rules of statutory arbitration. Judgment upon any award resulting from arbitration may be entered into and enforced by any state or federal court having jurisdiction thereof. Notwithstanding the foregoing, the parties may apply to any court of competent jurisdiction for preliminary or interim equitable relief, or to compel arbitration in accordance with this Section. The costs and expenses of the arbitration, including without limitation, the

arbitrator's fees and expert witness fees, and reasonable attorneys' fees, incurred by the parties to the arbitration may be awarded to the prevailing party, in the discretion of the arbitrator, or may be apportioned between the parties in any manner deemed appropriate by the arbitrator. Unless and until the arbitrator decides that one party is to pay for all (or a share) of such costs and expenses, both parties shall share equally in the payment of the arbitrator's fees as and when billed by the arbitrator.

12. GENERAL PROVISIONS.

12.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties and shall bind all persons who become bound as a debtor to this Agreement; provided, however, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Bank's prior written consent, which consent may be granted or withheld in Bank's sole discretion. Bank shall have the right without the consent of or notice to Borrower to sell, assign, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights and benefits hereunder. Notwithstanding the preceding sentence, an assignment or transfer by Bank of its obligations, rights, and benefits hereunder shall require the consent of Borrower (not to be unreasonably withheld, delayed, or conditioned) if (a) no Event of Default has occurred at any time during the term of this Agreement, and (b) such assignment or transfer is not in connection with a merger or acquisition of the stock or assets of Bank generally or to an Affiliate of Bank.

12.2 Indemnification. Borrower shall defend, indemnify and hold harmless Bank and its officers, directors, employees, affiliates, advisors and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement; and (b) all losses or Bank Expenses in any way suffered, incurred, or paid by Bank, its officers, employees and agents as a result of or in any way arising out of, following, or consequential to transactions between Bank and Borrower whether under this Agreement, or otherwise (including without limitation reasonable attorneys' fees and expenses), except for losses caused by Bank's gross negligence or willful misconduct as determined by a court of competent jurisdiction by final and non-appealable order.

12.3 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

12.5 Amendments in Writing, Integration. All amendments to or terminations of this Agreement or the other Loan Documents must be in writing. All prior agreements, understandings, representations, warranties, and negotiations between the parties hereto with respect to the subject matter of this Agreement and the other Loan Documents, if any, are merged into this Agreement and the Loan Documents.

12.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and

delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement. Executed copies of the signature pages of this Agreement sent by facsimile or transmitted electronically in Portable Document Format ("PDF"), or any similar format, shall be treated as originals, fully binding and with full legal force and effect, and the parties waive any rights they may have to object to such treatment.

12.7 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations remain outstanding or Bank has any obligation to make any Credit Extension to Borrower. The obligations of Borrower to indemnify Bank with respect to the expenses, damages, losses, costs and liabilities described in Section 12.2 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Bank have run.

12.8 Confidentiality and Publicity.

(a) Borrower shall not, and shall not permit any of its Affiliates to: (i) publish or disclose any materials containing Bank's name, including in any press release or otherwise in connection with any advertising or marketing, without first obtaining Bank's prior written consent, or (ii) use Bank's name (or the name of any of its Affiliates) in connection with its operations or business. Notwithstanding the foregoing, Bank acknowledges that Borrower may disclose and make available to the public materials containing Bank's name or other information to the extent required by the Securities and Exchange Commission or in connection with Borrower's submission of reports or information to the Securities and Exchange Commission.

(b) In handling any confidential information, Bank shall exercise commercially reasonable efforts to maintain in confidence, in accordance with its customary procedures for handling confidential information, all written non-public information furnished to Bank on a confidential basis clearly identified at the time of delivery as such ("Confidential Information") other than any such Confidential Information that becomes generally available to the public or becomes available to Bank from a source other than Borrower and that is not known to Bank to be subject to confidentiality obligations; provided, that Bank and its Affiliates shall have the right to disclose Confidential Information to: (i) such Person's Affiliates; (ii) such Person or such Person's Affiliates' lenders, funding sources, or financing sources; (iii) such Person's or such Person's Affiliates' directors, officers, trustees, partners, members, managers, employees, agents, advisors, representatives, attorneys, equity owners, professional consultants, portfolio management services and rating agencies; (iv) any successor or assign of Bank; (v) any Person to whom Bank offers to sell, assign or transfer any Credit Extension or any part thereof or any interest or participation therein; (vi) any Person that provides statistical analysis and/or information services to Bank or its Affiliates; and (vii) any Person (A) to the extent required by it by law, (B) as may be required in connection with the examination, audit, or similar investigation of Bank, (C) in response to any subpoena or other legal process or informal investigative demand, (D) in connection with any litigation, or (E) in connection with the actual or potential exercise or enforcement of any right or remedy under any Loan Document. The obligations of Bank and its Affiliates under this Section 12.8 shall supersede and replace any other confidentiality obligations agreed to by Bank or its Affiliates.

13. CO-BORROWER PROVISIONS.

13.1 Primary Obligation. This Agreement is a primary and original obligation of each Borrower and shall remain in effect notwithstanding future changes in conditions, including any change of law or any invalidity or irregularity in the creation or acquisition of any Obligations or in the execution or delivery of any agreement between Bank and any Borrower. Each Borrower shall be liable for existing and future Obligations as fully as if all of all Credit Extensions were advanced to such Borrower. Bank may rely on any certificate or representation made by any Borrower as made on behalf of, and binding on, all Borrowers, including without limitation Disbursement Request Forms and Compliance Certificates.

13.2 Enforcement of Rights. Borrowers are jointly and severally liable for the Obligations and Bank may proceed against one or more of the Borrowers to enforce the Obligations without waiving its right to proceed against any of the other Borrowers.

13.3 Borrowers as Agents. Each Borrower appoints the other Borrower as its agent with all necessary power and authority to give and receive notices, certificates or demands for and on behalf of both Borrowers, to act as disbursing agent for receipt of any Credit Extensions on behalf of each Borrower and to apply to Bank on behalf of each Borrower for Credit Extensions, any waivers and any consents. This authorization cannot be revoked, and Bank need not inquire as to each Borrower's authority to act for or on behalf of Borrower.

13.4 Subrogation and Similar Rights. Notwithstanding any other provision of this Agreement or any other Loan Document, each Borrower irrevocably waives all rights that it may have at law or in equity (including, without limitation, any law subrogating Borrower to the rights of Bank under the Loan Documents) to seek contribution, indemnification, or any other form of reimbursement from any other Borrower, or any other Person now or hereafter primarily or secondarily liable for any of the Obligations, for any payment made by Borrower with respect to the Obligations in connection with the Loan Documents or otherwise and all rights that it might have to benefit from, or to participate in, any security for the Obligations as a result of any payment made by Borrower with respect to the Obligations in connection with the Loan Documents or otherwise. Any agreement providing for indemnification, reimbursement or any other arrangement prohibited under this Section 13.4 shall be null and void. If any payment is made to a Borrower in contravention of this Section 13.4, such Borrower shall hold such payment in trust for Bank and such payment shall be promptly delivered to Bank for application to the Obligations, whether matured or unmatured.

13.5 Waivers of Notice. Except as otherwise provided in this Agreement, each Borrower waives notice of acceptance hereof; notice of the existence, creation or acquisition of any of the Obligations; notice of an Event of Default; notice of the amount of the Obligations outstanding at any time; notice of intent to accelerate; notice of acceleration; notice of any adverse change in the financial condition of any other Borrower or of any other fact that might increase Borrower's risk; presentment for payment; demand; protest and notice thereof as to any instrument; default; and all other notices and demands to which Borrower would otherwise be entitled. Each Borrower waives any defense arising from any defense of any other Borrower, or by reason of the cessation from any cause whatsoever of the liability of any other Borrower. Bank's failure at any time to require strict performance by any Borrower of any provision of the

Loan Documents shall not waive, alter or diminish any right of Bank thereafter to demand strict compliance and performance therewith. Nothing contained herein shall prevent Bank from foreclosing on the Lien of any deed of trust, mortgage or other security instrument, or exercising any rights available thereunder, and the exercise of any such rights shall not constitute a legal or equitable discharge of any Borrower. Each Borrower also waives any defense arising from any act or omission of Bank that changes the scope of Borrower's risks hereunder.

13.6 Subrogation Defenses. Each Borrower hereby waives any defense based on impairment or destruction of its subrogation or other rights against any other Borrower and waives all benefits which might otherwise be available to it under any statutory or common law suretyship defenses or marshalling rights, now or hereafter in effect.

13.7 Right to Settle, Release.

(a) The liability of Borrowers hereunder shall not be diminished by (i) any agreement, understanding or representation that any of the Obligations is or was to be guaranteed by another Person or secured by other property, or (ii) any release or unenforceability, whether partial or total, of rights, if any, which Bank may now or hereafter have against any other Person, including another Borrower, or property with respect to any of the Obligations.

(b) Without affecting the liability of any Borrower hereunder, Bank may (i) compromise, settle, renew, extend the time for payment, change the manner or terms of payment, discharge the performance of, decline to enforce, or release all or any of the Obligations with respect to a Borrower, (ii) grant other indulgences to a Borrower in respect of the Obligations, (iii) modify in any manner any documents relating to the Obligations with respect to a Borrower, (iv) release, surrender or exchange any deposits or other property securing the Obligations, whether pledged by a Borrower or any other Person, or (v) compromise, settle, renew, or extend the time for payment, discharge the performance of, decline to enforce, or release all or any obligations of any guarantor, endorser or other Person who is now or may hereafter be liable with respect to any of the Obligations.

13.8 Subordination. All indebtedness of a Borrower now or hereafter arising held by another Borrower is subordinated to the Obligations and the Borrower holding the indebtedness shall take all actions reasonably requested by Bank to effect, to enforce and to give notice of such subordination.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written.

PRECISION BIOSCIENCES, INC.

By: /s/ Abid Ansari
Name: Abid Ansari
Title: Chief Financial Officer

ELO LIFE SYSTEMS, INC.

By: /s/ Fayaz Khazi
Name: Fayaz Khazi
Title: Chief Executive Officer

PACIFIC WESTERN BANK

By: /s/ Zack Robbins
Name: Zack Robbins
Title: VP

EXHIBIT A

DEFINITIONS

"Accounts" means all presently existing and hereafter arising accounts, contract rights, payment intangibles and all other forms of obligations owing to Borrower arising out of the sale or lease of goods (including, without limitation, the licensing of software and other technology) or the rendering of services by Borrower and any and all credit insurance, guaranties, and other security therefor, as well as all merchandise returned to or reclaimed by Borrower and Borrower's Books relating to any of the foregoing.

"Advance" or "Advances" means a cash advance or cash advances under the Revolving Line.

"Affiliate" means, with respect to any Person, any Person that owns or controls directly or indirectly such Person, any Person that controls or is controlled by or is under common control with such Person, and each of such Person's senior executive officers, directors, and general partners.

"Authorized Officer" means someone designated as such in the corporate resolution provided by Borrower to Bank in which this Agreement and the transactions contemplated hereunder are authorized by Borrower's board of directors. If Borrower provides subsequent corporate resolutions to Bank after the Closing Date, the individual(s) designated as "Authorized Officer(s)" in the most recently provided resolution shall be the only "Authorized Officers" for purposes of this Agreement.

"Bank Expenses" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses, whether generated by in-house or by outside counsel) incurred in connection with the preparation, negotiation, administration, and enforcement of the Loan Documents; reasonable Collateral audit fees; and Bank's reasonable attorneys' fees and expenses (whether generated in-house or by outside counsel) incurred in amending, enforcing or defending the Loan Documents (including fees and expenses of appeal), incurred before, during and after an Insolvency Proceeding, whether or not suit is brought.

"Borrower's Books" means all of Borrower's books and records, including: ledgers; records concerning Borrower's assets or liabilities, the Collateral, business operations or financial condition; and all computer programs, or tape files, and the equipment, containing such information.

"Business Day" means any day that is not a Saturday, Sunday, or other day on which banks in the State of North Carolina are authorized or required to close.

"Capitalized Expenditures" means current period unfinanced cash expenditures that are capitalized and amortized over a period of time in accordance with GAAP, including but not limited to capitalized cash expenditures for capital equipment, capitalized manufacturing and labor costs as they relate to inventory, and capitalized cash expenditures for software development.

"Cash" means unrestricted cash and cash equivalents.

“Change in Control” shall mean (a) a transaction other than a bona fide equity financing or series of financings on terms and from investors reasonably acceptable to Bank in which any “person” or “group” (within the meaning of Section 13(d) and 14(d)(2) of the Securities Exchange Act of 1934) becomes the “beneficial owner” (as defined in Rule 13d-3 under the Securities Exchange Act of 1934), directly or indirectly, of a sufficient number of shares of all classes of stock then outstanding of Parent ordinarily entitled to vote in the election of directors, empowering such “person” or “group” to elect a majority of the Board of Directors of Parent, who did not have such power before such transaction; or (b) Borrower shall cease to own and control 100% of the equity interests in each of its Subsidiaries.

“Closing Date” means the date of this Agreement.

“Code” means the North Carolina Uniform Commercial Code as amended or supplemented from time to time.

“Collateral” means the property described on Exhibit B attached hereto and all Negotiable Collateral to the extent not described on Exhibit B, except to the extent any such property (i) is non-assignable by its terms without the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, Sections §25-9-406 and §25-9-408 of the Code), (ii) is property for which the granting of a security interest therein is contrary to applicable law, provided that upon the cessation of any such restriction or prohibition, such property shall automatically become part of the Collateral, (iii) constitutes the capital stock of a controlled foreign corporation (as defined in the IRC), in excess of 65% of the voting power of all classes of capital stock of such controlled foreign corporations entitled to vote, (iv) property (including any attachments, accessions or replacements) that is subject to a Lien that is permitted pursuant to clause (c) of the definition of Permitted Liens, if the grant of a security interest with respect to such property pursuant to this Agreement would be prohibited by the agreement creating such Permitted Lien or would otherwise constitute a default thereunder, provided, that such property will be deemed "Collateral" hereunder upon the termination and release of such Permitted Lien, or (v) is an Excluded Account.

“Collateral State” means the state or states where the Collateral is located, which is North Carolina.

“Compliance Certificate” means a compliance certificate, in substantially the form of Exhibit D attached hereto, executed by a Responsible Officer of Borrower.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including, without limitation, any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term “Contingent Obligation” shall not include endorsements for collection or deposit in the ordinary course of

business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

"Copyrights" means any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held.

"Credit Card Line" means a Credit Extension of up to $75,000, to be used exclusively for the provision of Credit Card Services.

"Credit Card Maturity Date" means the date that is 364 days after the Closing Date.

"Credit Extension" means each Advance, the Credit Card Services provided under the Credit Card Line, or any other extension of credit by Bank to or for the benefit of Borrower hereunder.

"Deposit Account Threshold" means One Hundred Million Dollars ($100,000,000), provided that the calculation of Borrower's Cash held at Bank and Bank's affiliates shall exclude any amounts held in Excluded Accounts for purposes of calculating whether Borrower meets the Deposit Account Threshold as of any date of determination.

"Early Termination Fee" is defined in Section 2.5(c).

"Equipment" means all present and future machinery, equipment, tenant improvements, furniture, fixtures, vehicles, tools, parts and attachments in which Borrower has any interest.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

"Event of Default" has the meaning assigned in Article 8.

"Excluded Accounts" means deposit accounts exclusively used for payroll, payroll taxes, and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such; provided that the amount of funds in such accounts does not at any time exceeds in the aggregate: the sum of (x) two (2) weeks of Borrower's then-current payroll expenses, plus (y) the amount held in trust for Borrower's employees directly from employee wage and benefit payments.

"Extension Milestone" means Borrower has delivered evidence acceptable to Bank that Borrower has received, during the twelve-month period beginning on March 1, 2019, aggregate gross Cash proceeds of not less than $175,000,000 from the issuance of Borrower's equity securities on term and conditions, and from investors, satisfactory to Bank. Bank acknowledges that the Extension Milestone has been achieved on or prior to the Closing Date.

"GAAP" means generally accepted accounting principles, consistently applied, as in effect from time to time in the United States.

"Indebtedness" means (a) all indebtedness for borrowed money or the deferred purchase price of property or services, including without limitation reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations, including but not limited to any sublimit contained herein.

"Insolvency Proceeding" means any proceeding commenced by or against any Person or entity under any provision of the United States Bankruptcy Code, as amended, or under any other bankruptcy or insolvency law, including assignments for the benefit of creditors, formal or informal moratoria, compositions, extension generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"Intellectual Property" means all of Borrower's right, title, and interest in and to the following:

(a) Copyrights, Trademarks and Patents;

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights which may be available to Borrower now or hereafter existing, created, acquired or held;

(d) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(e) All licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(f) All amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and

(g) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

"Inventory" means all present and future inventory in which Borrower has any interest.

"Investment" means any beneficial ownership of (including stock, partnership or limited liability company interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"IRC" means the Internal Revenue Code of 1986, as amended, and the regulations thereunder.

"Letter of Credit" means a commercial or standby letter of credit or similar undertaking issued by Bank (or any of its correspondent banks) at Borrower's request.

“Lien” means any mortgage, lien, deed of trust, charge, pledge, security interest or other encumbrance.

“Loan Documents” means, collectively, this Agreement, any note or notes executed by Borrower, and any other document, instrument or agreement entered into in connection with this Agreement, all as amended or extended from time to time.

“Material Adverse Effect” means a material adverse effect on (i) the operations, business or financial condition of Borrower and its Subsidiaries taken as a whole, (ii) the ability of Borrower to repay the Obligations or otherwise perform its obligations under the Loan Documents, or (iii) Borrower’s interest in, or the value, perfection or priority of Bank’s security interest in the Collateral.

“Negotiable Collateral” means all of Borrower’s present and future letters of credit of which it is a beneficiary, drafts, instruments (including promissory notes), securities, documents of title, and chattel paper, and Borrower’s Books relating to any of the foregoing.

“Obligations” means all debt, principal, interest, Bank Expenses, obligations in respect of Credit Card Services, and other amounts owed to Bank by Borrower pursuant to this Agreement or any other agreement, whether absolute or contingent, due or to become due, now existing or hereafter arising, including any interest that accrues after the commencement of an Insolvency Proceeding and including any debt, liability, or obligation owing from Borrower to others that Bank may have obtained by assignment or otherwise.

“Patents” means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

“Periodic Payments” means all installments or similar recurring payments that Borrower may now or hereafter become obligated to pay to Bank pursuant to the terms and provisions of any instrument, or agreement now or hereafter in existence between Borrower and Bank.

“Permitted Indebtedness” means:

(a) Indebtedness of Borrower in favor of Bank arising under this Agreement or any other Loan Document;

(b) Indebtedness existing on the Closing Date and disclosed in the Schedule;

(c) Indebtedness not to exceed $500,000 in the aggregate at any time secured by a lien described in clause (c) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed at the time it is incurred the lesser of the cost or fair market value of the property financed with such Indebtedness;

(d) Subordinated Debt;

(e) Indebtedness from one Borrower to any other Borrower;

(f) Indebtedness to trade creditors incurred in the ordinary course of business; and

(g) Extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

"Permitted Investment" means:

(a) Investments existing on the Closing Date disclosed in the Schedule;

(b) (i) Marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one year from the date of acquisition thereof, (ii) commercial paper maturing no more than one year from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor's Corporation or Moody's Investors Service, (iii) Bank's certificates of deposit maturing no more than one year from the date of investment therein, and (iv) Bank's money market accounts; (v) Investments in regular deposit or checking accounts held with Bank or as otherwise permitted by, and subject to the terms and conditions of, Section 6.6 of this Agreement; and (vi) Investments consistent with any investment policy adopted by Borrower's board of directors;

(c) Investments accepted in connection with Permitted Transfers;

(d) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in Subsidiaries not to exceed $500,000 in the aggregate in any fiscal year;

(e) Investments not to exceed $500,000 outstanding in the aggregate at any time consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plan agreements approved by Borrower's Board of Directors;

(f) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower's business;

(g) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business, provided that this subparagraph (g) shall not apply to Investments of Borrower in any Subsidiary;

(h) Joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments by Borrower do not exceed $500,000 in the aggregate in any fiscal year; and

(i) Investments permitted under Section 7.3.

"Permitted Liens" means the following:

(a) Any Liens existing on the Closing Date and disclosed in the Schedule (excluding Liens to be satisfied with the proceeds of the Credit Extensions) or arising under this Agreement, the other Loan Documents, or any other agreement in favor of Bank;

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings and for which Borrower maintains adequate reserves;

(c) Liens not to exceed $500,000 in the aggregate at any time (i) upon or in any Equipment (other than Equipment financed by a Credit Extension) acquired or held by Borrower or any of its Subsidiaries to secure the purchase price of such Equipment or indebtedness incurred solely for the purpose of financing the acquisition or lease of such Equipment, or (ii) existing on such Equipment at the time of its acquisition, in each case provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such Equipment;

(d) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (a) through (c) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase; and

(e) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Sections 8.4 (attachment) or8.8 (judgments).

"Permitted Transfer" means the conveyance, sale, lease, transfer or disposition by Borrower or any Subsidiary of:

(a) Inventory in the ordinary course of business;

(b) licenses and similar arrangements for the use of the property of Borrower or its Subsidiaries in the ordinary course of business;

(c) worn-out, surplus or obsolete Equipment not financed with the proceeds of Credit Extensions;

(d) grants of security interests and other Liens that constitute Permitted Liens; and

(e) other assets of Borrower or its Subsidiaries that do not in the aggregate exceed $250,000 during any fiscal year.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or governmental agency.

"Prime Rate" means the variable rate of interest, per annum, most recently announced by Bank, as its "prime rate," whether or not such announced rate is the lowest rate available from Bank.

“Responsible Officer” means each of the Chief Executive Officer, the Chief Operating Officer, the Chief Financial Officer, Vice President of Finance and the Controller of Borrower, as well as any other officer or employee identified as an Authorized Officer in the corporate resolution delivered by Borrower to Bank in connection with this Agreement.

“Revolving Line” means a Credit Extension of up to $50,000,000.

“Revolving Maturity Date” means May 15, 2020; provided, however, that if Borrower achieves the “Extension Milestone”, then “Revolving Maturity Date” shall instead mean May 15, 2022.

“Schedule” means the schedule of exceptions attached hereto and approved by Bank, if any.

“Shares” means (i) sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower in any Subsidiary of Borrower which is not an entity organized under the laws of the United States or territory thereof, and (ii) one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower in any Subsidiary of Borrower which is an entity organized under the laws of the United States or any territory thereof.

“SOS Reports” means the official reports from the Secretaries of State of each Collateral State, the state where Borrower’s chief executive office is located, the state of Borrower’s formation and other applicable federal, state or local government offices identifying all current security interests filed in the Collateral and Liens of record as of the date of such report.

“Subordinated Debt” means any debt incurred by Borrower that is subordinated in writing to the debt owing by Borrower to Bank on terms reasonably acceptable to Bank (and identified as being such by Borrower and Bank).

“Subsidiary” means any corporation, partnership or limited liability company or joint venture in which (i) any general partnership interest or (ii) more than 50% of the stock, limited liability company interest or joint venture of which by the terms thereof ordinary voting power to elect the Board of Directors, managers or trustees of the entity, at the time as of which any determination is being made, is owned by Borrower, either directly or through an Affiliate.

“Trademarks” means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

DEBTOR **PRECISION BIOSCIENCES, INC.**

SECURED PARTY: **PACIFIC WESTERN BANK**

EXHIBIT B

COLLATERAL DESCRIPTION ATTACHMENT TO LOAN AND SECURITY AGREEMENT

All personal property of Borrower (herein referred to as "Borrower" or "Debtor") whether presently existing or hereafter created or acquired, and wherever located, including, but not limited to:

(a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), financial assets, general intangibles (including patents, trademarks, copyrights, goodwill, payment intangibles, domain names and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records;

(b) any and all cash proceeds and/or noncash proceeds of any of the foregoing, including, without limitation, insurance proceeds, and all supporting obligations and the security therefor or for any right to payment. All terms above have the meanings given to them in the North Carolina Uniform Commercial Code, as amended or supplemented from time to time, including revised Division 9 of the Uniform Commercial Code-Secured Transactions.

Notwithstanding the foregoing, the Collateral shall not include any of the intellectual property, in any medium, of any kind or nature whatsoever, now or hereafter owned or acquired or received by Borrower, or in which Borrower now holds or hereafter acquires or receives any right or interest (collectively, the "Intellectual Property"); provided, however, that the Collateral shall include all accounts and general intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the foregoing (the "Rights to Payment").

Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of May 15, 2019, include the Intellectual Property to the extent and only to the extent necessary to permit perfection of Bank's security interest in the Rights to Payment, and further provided, however, that Bank's enforcement rights with respect to any security interest in the Intellectual Property shall be absolutely limited to the Rights to Payment only, and Bank shall have no recourse whatsoever with respect to the underlying Intellectual Property.

DEBTOR **ELO LIFE SYSTEMS, INC.**

SECURED PARTY: **PACIFIC WESTERN BANK**

EXHIBIT B-1

COLLATERAL DESCRIPTION ATTACHMENT TO LOAN AND SECURITY AGREEMENT

All personal property of Borrower (herein referred to as "Borrower" or "Debtor") whether presently existing or hereafter created or acquired, and wherever located, including, but not limited to:

(a) all accounts (including health-care-insurance receivables), chattel paper (including tangible and electronic chattel paper), deposit accounts, documents (including negotiable documents), equipment (including all accessions and additions thereto), financial assets, general intangibles (including patents, trademarks, copyrights, goodwill, payment intangibles, domain names and software), goods (including fixtures), instruments (including promissory notes), inventory (including all goods held for sale or lease or to be furnished under a contract of service, and including returns and repossessions), investment property (including securities and securities entitlements), letter of credit rights, money, and all of Debtor's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records;

(b) any and all cash proceeds and/or noncash proceeds of any of the foregoing, including, without limitation, insurance proceeds, and all supporting obligations and the security therefor or for any right to payment. All terms above have the meanings given to them in the North Carolina Uniform Commercial Code, as amended or supplemented from time to time, including revised Division 9 of the Uniform Commercial Code-Secured Transactions.

Notwithstanding the foregoing, the Collateral shall not include any of the intellectual property, in any medium, of any kind or nature whatsoever, now or hereafter owned or acquired or received by Borrower, or in which Borrower now holds or hereafter acquires or receives any right or interest (collectively, the "Intellectual Property"); provided, however, that the Collateral shall include all accounts and general intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the foregoing (the "Rights to Payment").

Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of May 15, 2019, include the Intellectual Property to the extent and only to the extent necessary to permit perfection of Bank's security interest in the Rights to Payment, and further provided, however, that Bank's enforcement rights with respect to any security interest in the Intellectual Property shall be absolutely limited to the Rights to Payment only, and Bank shall have no recourse whatsoever with respect to the underlying Intellectual Property.

EXHIBIT C

LOAN ADVANCE/PAYDOWN REQUEST FORM
[Please refer to New Borrower Kit]

EXHIBIT D

COMPLIANCE CERTIFICATE

[Please refer to New Borrower Kit]

SCHEDULE OF EXCEPTIONS

(omitted pursuant to SEC regulations)

Permitted Indebtedness (Exhibit A)
Permitted Investments (Exhibit A)
Prior Names (Section 5.5)
Litigation (Section 5.6)
Inbound Licenses (Section 5.12)

FIRST AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This First Amendment to Loan and Security Agreement (this "***Amendment***") is made and entered into as of September 18, 2019, by and among PACIFIC WESTERN BANK, a California state chartered bank ("***Bank***"), and PRECISION BIOSCIENCES, INC. and ELO LIFE SYSTEMS, INC. (individually and collectively, jointly and severally, "***Borrower***").

RECITALS

Borrower and Bank are parties to that certain Loan and Security Agreement dated as of May 15, 2019 (as amended from time to time, the "***Agreement***"). The parties desire to amend the Agreement in accordance with the terms of this Amendment.

NOW, THEREFORE, the parties agree as follows:

1) Section 6.6 of the Agreement is hereby amended and restated, as follows:

6.6 Primary Depository. At all times when the aggregate balance of Borrower's Cash at Bank and Bank's affiliates is less than the Deposit Account Threshold, Borrower shall maintain, and shall cause all of its Subsidiaries to maintain, all depository and operating accounts with Bank and all investment accounts with Bank or Bank's affiliates. At all times when the aggregate balance of Borrower's Cash at Bank and Bank's affiliates equals or exceeds the Deposit Account Threshold, Borrower and its Subsidiaries may maintain Cash balances that exceed the Deposit Account Threshold in depository, operating, and investments accounts outside of Bank or Bank's affiliates, so long as each such account outside of Bank is subject to a dulyexecuted account control agreement in favor of Bank, and in form and substance reasonably satisfactory to Bank. Notwithstanding the foregoing, Precision UK may maintain a bank account in the United Kingdom, with such account not subject to an account control agreement in favor of Bank, so long as the balance in such account does not exceed $150,000 (or its USD equivalent) at any time. Prior to Borrower maintaining any investment accounts with Bank's affiliates, Borrower, Bank, and any such affiliate shall have entered into a securities account control agreement with respect to any such investment accounts, in form and substance reasonably satisfactory to Bank.

2) A new Section 7.13 is hereby added to the Agreement, as follows:

7.13 UK Subsidiary. Permit Precision UK to maintain cash exceeding $150,000 or non- cash assets exceeding a book value of $50,000 at any time.

3) Bank's notice addresses in Article 10 of the Agreement are hereby amended and restated, as follows:

If to Bank: Pacific Western Bank
406 Blackwell Street, Suite 240
Durham, North Carolina 27701
Attn: Loan Operations Manager

FAX: (919) 314-3080
Email: loannotices@pacwest.com

with a copy to: Pacific Western Bank
131 Oliver Street, Suite 250
Boston, Massachusetts 02110 Attn: Scott Hansen
Email: shansen@pacwest.com

4) Subsection (d) of the defined term "Permitted Invesment" in Exhibit A to the Agreement is hereby amended and restated, as follows:

(d) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in Subsidiaries not to exceed $1,000,000 in the aggregate in any fiscal year;

5) The following defined term is hereby added to Exhibit A of the Agreement, as follows: "Precision UK" means Precision Biosciences UK Limited, a private limited company formed under the laws of England and Wales and a wholly owned Subsidiary of Borrower.

6) Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Each Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

7) Each Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct in all material respects as of the date of this Amendment (except that any representations and warranties that expressly refer to an earlier date shall be true and correct in all material respects as of such date, and except for representations and warranties that by their terms include a materiality qualification, which shall be true and correct in all respects).

8) This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

9) As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

a) this Amendment, duly executed by each Borrower;

Certain information marked as [***] has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential.

b) payment for all Bank Expenses incurred through the date of this Amendment, including Bank's expenses for the documentation of this Amendment and any UCC, good standing or intellectual property search or filing fees, which may be debited from any of Borrower's accounts; and

c) such other documents and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

PRECISION BIOSCIENCES, INC.

By: /s/ Abid Ansari
Name: Abid Ansari
Title: CFO

PACIFIC WESTERN BANK

By:
Name:
Title:

ELO LIFE SYSTEMS, INC.

By: /s/ Abid Ansari
Name: Abid Ansari
Title: CFO

[Signature Page to First Amendment to Loan and Security Agreement]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

PRECISION BIOSCIENCES, INC.

By: _____
Name: _____
Title: _____

PACIFIC WESTERN BANK

By: /s/ Joseph Holmes Dague
Name: Joseph Holmes Dague
Title: Senior Vice President

ARTICLE 1.**ELO LIFE SYSTEMS, INC.**

By: _____
Name: _____
Title: _____

[Signature Page to First Amendment to Loan and Security Agreement]

SECOND AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This Second Amendment to Loan and Security Agreement (this "***Amendment***") is made and entered into as of December 3, 2019, by and among PACIFIC WESTERN BANK, a California state chartered bank ("***Bank***"), and PRECISION BIOSCIENCES, INC. and ELO LIFE SYSTEMS, INC. (individually and collectively, jointly and severally, "***Borrower***").

RECITALS

Borrower and Bank are parties to that certain Loan and Security Agreement dated as of May 15, 2019 (as amended from time to time, the "***Agreement***"). The parties desire to amend the Agreement in accordance with the terms of this Amendment.

NOW, THEREFORE, the parties agree as follows:

1) Section 6.6 of the Agreement is hereby amended and restated, as follows:

6.6 Primary Depository. At all times when the aggregate balance of Borrower's Cash at Bank and Bank's affiliates is less than the Deposit Account Threshold, Borrower shall maintain, and shall cause all of its Subsidiaries to maintain, all depository and operating accounts with Bank and all investment accounts with Bank or Bank's affiliates. At all times when the aggregate balance of Borrower's Cash at Bank and Bank's affiliates equals or exceeds the Deposit Account Threshold, Borrower and its Subsidiaries may maintain Cash balances that exceed the Deposit Account Threshold in depository, operating, and investments accounts outside of Bank or Bank's affiliates, so long as each such account outside of Bank is subject to a duly-executed account control agreement in favor of Bank, and in form and substance reasonably satisfactory to Bank. Notwithstanding the foregoing, Precision UK may maintain a bank account in the United Kingdom, with such account not subject to an account control agreement in favor of Bank, so long as the balance in such account does not exceed £1,500,000 (or its US Dollar equivalent) at any time. Prior to Borrower maintaining any investment accounts with Bank's affiliates, Borrower, Bank, and any such affiliate shall have entered into a securities account control agreement with respect to any such investment accounts, in form and substance reasonably satisfactory to Bank.

2) Section 7.13 of the Agreement is hereby amended and restated, as follows:

7.13 UK Subsidiary. Permit Precision UK to maintain cash exceeding £1,500,000 or non-cash assets exceeding a book value of $50,000 at any time.

3) Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Each Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

4) Each Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct in all material respects as of the date of this Amendment (except that any representations and warranties that expressly refer to an earlier date shall be true and correct in all material respects as of such date, and except for representations and warranties that by their terms include a materiality qualification, which shall be true and correct in all respects).

5) This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

6) As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

   a) this Amendment, duly executed by each Borrower;

   b) payment for all Bank Expenses incurred through the date of this Amendment, including Bank's expenses for the documentation of this Amendment and any UCC, good standing or intellectual property search or filing fees, which may be debited from any of Borrower's accounts; and

   c) such other documents and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

PRECISION BIOSCIENCES, INC.

By: /s/Abid Ansari
Name: Abid Ansari
Title: CFO

PACIFIC WESTERN BANK

By: /s/Joseph Holmes Dague
Name: Joseph Holmes Dague
Title: Senior Vice President

ELO LIFE SYSTEMS, INC.

By: /s/Abid Ansari
Name: Abid Ansari
Title: CFO

[Signature Page to Second Amendment to Loan and Security Agreement]

THIRD AMENDMENT TO
LOAN AND SECURITY AGREEMENT

This Third Amendment to Loan and Security Agreement (this "***Amendment***") is entered into as of June 23, 2020, by and among PACIFIC WESTERN BANK, a California state chartered bank ("***Bank***"), and PRECISION BIOSCIENCES, INC. and ELO LIFE SYSTEMS, INC. (individually and collectively, jointly and severally, "***Borrower***").

RECITALS

Borrower and Bank are parties to that certain Loan and Security Agreement dated as of May 15, 2019 (as amended, restated, supplemented or otherwise modified from time to time, the "***Agreement***"). The parties desire to amend the Agreement in accordance with the terms of this Amendment, such amendment to become effective as of the Third Amendment Date.

NOW, THEREFORE, the parties agree as follows:

1) Amendments.

a) Section 2.1 (b) (i) of the Agreement is amended to read as follows:

(i) Amount. Subject to and upon the terms and conditions of this Agreement, Borrower may request Advances in an aggregate outstanding principal amount not to exceed the Revolving Line any time prior to the Revolving Maturity Date. Advances may be repaid and reborrowed at any time prior to the Revolving Maturity Date. On the Revolving Maturity Date, all Advances shall be immediately due and payable. Subject to Sections 2.5(c) and 2.5(f), Borrower may prepay any Advances without penalty or premium at any time.

b) Section 2.3 (a) (i) of the Agreement is amended to read as follows:

(i) Advances. Except as set forth in Section 2.3(b), the Advances shall bear interest, on the outstanding daily balance thereof, at a variable annual rate equal to the greater of (A) 2.75% above the Prime Rate, and (B) 6.00%.

c) Section 2.5 of the Agreement is amended to read as follows:

(a) Facility Fee. None.

(b) Bank Expenses. On the Closing Date, all Bank Expenses incurred through the Closing Date, and, after the Closing Date, all Bank Expenses, as and when they become due.

(c) Early Termination Fee. If this Agreement is terminated before the Revolving Maturity Date for any reason, including Bank's election to terminate following the occurrence of an Event of Default, on the date of such termination, a fee in an amount equal to Six Hundred Thousand Dollars ($600,000).

(d) Unused Fee. None.

(e) Success Fee. Upon the occurrence of a Success Fee Event, (i) a fee of $135,000 if paid on or before June 30, 2021, and (ii) a fee of $275,000 if paid after June 30, 2021 (the "Success Fee"). Borrower

shall deliver reasonable advance written notice to Bank of a Success Fee Event, and shall pay Bank the Success Fee within five (5) days upon receipt of proceeds upon the consummation of a Success Fee Event. This Section 2.5(e) shall survive termination of this Agreement.

(f) Final Payment Fee. On the soonest to occur of (i) the Revolving Maturity Date, (ii) the date that Borrower repays all Advances and elects to terminate the Revolving Line, and (iii) the date that the Advances become due or Bank elects to terminate this Agreement in connection with the occurrence of an Event of Default, a fee equal to one percent (1.00%) of the maximum principal amount of the Advances outstanding at any time.

d) Section 6.2 (a) (iii) of the Agreement is amended to read as follows:

(iii) an annual budget approved by Borrower's Board of Directors as soon as available, but no later than the earlier of (i) 90 days after the end of each fiscal year of (ii) 15 days following approval by Borrower's Board of Directors.

e) Section 6.6 of the Agreement is amended to read as follows:

6.6 Primary Depository. Within 60 days after the Third Amendment Date, Borrower shall maintain and shall cause of its Subsidiaries to maintain the lesser of (a) $100,000,000, or (b) substantially all cash (other than cash held in Excluded Accounts) in depositary and operating accounts with Bank, provided all cash held outside Bank shall be subject to an account control agreement in favor of Bank. Notwithstanding the foregoing, Precision UK may maintain a bank account in the United Kingdom, with such account not subject to an account control agreement in favor of Bank, so long as the balance in such account does not exceed £1,500,000 (or its US Dollar equivalent) at any time.

f) Section 6.7 of the Agreement is amended to read as follows:

6.7 Financial Covenants. Borrower shall at all times maintain the following covenant:

(a) Minimum Cash. At all times, an aggregate balance of unrestricted cash at Bank (excluding any amounts held in Excluded Accounts) equal to or greater than $10,000,000. Borrower acknowledges and agrees that any request by Borrower or any other Person to pay or otherwise transfer funds that would cause Borrower's balance of Cash at Bank to be less than the amount required pursuant to this Section 6.7(a) shall constitute an Event of Default under this Agreement.

g) Exhibit A to the Agreement is amended by amending or restating, or adding, in appropriate alphabetical order, as applicable, the following defined terms to read as follows:

"Credit Card Maturity Date" means June 23, 2022, provided that if Borrower achieves the Extension Milestone, then "Credit Card Maturity Date" shall instead mean June 23, 2023.

"Extension Milestone" means Borrower has delivered evidence acceptable to Bank that Borrower has received aggregate gross Cash proceeds of not less than $125,000,000 from the issuance of Borrower's equity securities and/or upfront Cash proceeds from strategic partnerships on terms and conditions reasonably satisfactory to Bank.

"Revolving Line" means a Credit Extension of up to $30,000,000.

"Revolving Maturity Date" means June 23, 2022, provided that if Borrower achieves the Extension Milestone, then "Revolving Maturity Date" shall instead mean June 23, 2023.

"Success Fee Event" is (a) any merger or consolidation of Borrower with or into another entity (except one in which the holders of equity of the Borrower immediately prior to such merger or consolidation continue to hold at least a majority of the voting power of the equity interests in the surviving entity), (b) any sale of all or substantially all of the assets of Borrower and its Subsidiaries taken as a whole (in one or more related and contemporaneous transactions), or (c) closing of one or more related and contemporaneous sales or issuances of Borrower's equity or Subordinated Debt securities and/or up-front cash proceeds from one or more strategic partnerships in which the aggregate gross cash proceeds to Borrower are at least $50,000,000.

"Third Amendment Date" means June 23, 2020.

h) Exhibit D to the Agreement is amended as set forth in Exhibit D attached hereto.

2) Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its terms. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement and the security interest as granted as of the Closing Date continues without novation. Unused Fees accruing before the Third Amendment Date are not refundable. The Early Termination Fee provided for in Section 2.5(c) in effect before the Third Amendment Date is superseded by the fee provided for in this Amendment in respect of Section 2.5(c).

3) Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct in all material respects as of the date of this Amendment (provided, that those representations and warranties expressly referring to another date are true and correct in all material respects as of such date, and provided further that any representation or warranty that contains a materiality qualification therein is true and correct in all respects). No Event of Default or failure of condition has occurred or exists, or would exist with notice or lapse of time or both under the Agreement or any other Loan Document. A true and correct copy of each of Borrower's certificate of incorporation and bylaws, as in effect as of the Third Amendment Date has been delivered to Bank.

4) This Amendment and any documents executed in connection herewith or pursuant hereto contain the entire agreement between the parties with respect to the subject matter hereof and supersede all prior agreements, understandings, offers and negotiations, oral or written, with respect thereto and no extrinsic evidence whatsoever may be introduced in any judicial or arbitration proceeding, if any, involving this Amendment; except that any financing statements or other agreements or instruments filed by Bank with respect to Borrower remain in full force and effect.

5) This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

6) The terms of Article 11 of the Agreement are incorporated by reference herein, *mutatis mutandis*.

7) As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance reasonably satisfactory to Bank, the following:

a) this Amendment, duly executed by Borrower and Bank;

b) an officer's certificate of Borrower with respect to incumbency and resolutions authorizing the execution and delivery of this Amendment;

c) payment of Bank Expenses, which may be debited from any of Borrower's deposit account maintained with Bank; and

d) such other documents and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[SIGNATURE PAGE FOLLOWS]

[SIGNATURE PAGE TO THIRD AMENDMENT TO LOAN AND SECURITY AGREEMENT]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

PRECISION BIOSCIENCES, INC.

By: /s/ Abid Ansari
Name: Abid Ansari
Title: CFO

ELO LIFE SYSTEMS, INC.

By: /s/ Fayaz Khazi
Name: Fayaz Khazi
Title: CFO

PACIFIC WESTERN BANK

By: /s/ Scott Hansen
Name: Scott Hansen
Title: EVP

EXHIBIT D

COMPLIANCE CERTIFICATE

[***]

SCHEDULE OF EXCEPTIONS

Permitted Indebtedness (Exhibit A) – [***]

Permitted Investments (Exhibit A) – [***]

Permitted Liens (Exhibit A) – [***]

Prior Names (Section 5.5) –

Elo Life Systems, Inc. was formerly known as Precision PlantSciences, Inc.

Litigation (Section 5.6) – [***]

Inbound Licenses (Section 5.12) – [***]

FOURTH AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This Fourth Amendment to Loan and Security Agreement (this "***Amendment***") is made and entered into as of December 3, 2020, by and among PACIFIC WESTERN BANK, a California state chartered bank ("***Bank***"), and PRECISION BIOSCIENCES, INC. and ELO LIFE SYSTEMS, INC. (individually and collectively, jointly and severally, "***Borrower***").

RECITALS

Borrower and Bank are parties to that certain Loan and Security Agreement dated as of May 15, 2019 (as amended from time to time, the "***Agreement***"). The parties desire to amend the Agreement in accordance with the terms of this Amendment.

NOW, THEREFORE, the parties agree as follows:

1) Bank hereby waives any and all of Borrower's violations of the Primary Depository covenant, as more particularly described in Section 6.6 of the Agreement (as such section was in effect immediately prior to the effectiveness of this Amendment), occurring on or before the date hereof, for maintaining cash in an account outside of Bank not subject to an account control agreement in favor of Bank.

2) Section 6.6 of the Agreement is hereby amended and restated, as follows:

6.6 Primary Depository. Borrower shall maintain and shall cause all of its Subsidiaries to maintain the lesser of (a) $100,000,000, or (b) substantially all cash (other than cash held in Excluded Accounts) in depository and operating accounts with Bank, provided all cash held outside Bank shall be subject to an account control agreement in favor of Bank. Notwithstanding the foregoing, (a) Precision UK may maintain a bank account in the United Kingdom, with such account not subject to an account control agreement in favor of Bank, so long as the balance in such account does not exceed £1,500,000 (or its US Dollar equivalent) at any time, and (b) ELO Australia may maintain a bank account with National Australia Bank, with such account not subject to an account control agreement in favor of Bank, so long as the balance in such account does not exceed $250,000 AUD (or its US Dollar equivalent) at any time.

3) The following defined term is hereby added to Exhibit A of the Agreement, as follows:

"ELO Australia" means ELO Life Systems Australia Pty LTD, a proprietary limited company formed under the laws of Australia and a wholly owned Subsidiary of ELO Life Systems, Inc.

4) Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Each Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

5) Each Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct in all material respects as of the date of this Amendment (except that any representations and warranties that expressly refer to an earlier date shall be true and correct in all material respects as of such date, and except for representations and warranties that by their terms include a materiality qualification, which shall be true and correct in all respects).

6) This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument.

7) As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

   a. this Amendment, duly executed by each Borrower;

   b. payment for all Bank Expenses incurred through the date of this Amendment, including Bank's expenses for the documentation of this Amendment and any UCC, good standing or intellectual property search or filing fees, which may be debited from any of Borrower's accounts; and

   c. such other documents and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

PRECISION BIOSCIENCES, INC.

By: /s/Abid Ansari
Name: Abid Ansari
Title: CFO

PACIFIC WESTERN BANK

By: /s/ Ashley N. Pittman
Name: Ashley N. Pittman
Title: SVP

ELO LIFE SYSTEMS, INC.

By: /s/ Fayaz Khazi
Name: Fayaz Khazi
Title: CFO

[Signature Page to Fourth Amendment to Loan and Security Agreement]

Exhibit 10.5

EXECUTION VERSION

Certain information marked as [***] has been excluded from this exhibit because it is both not material and is the type that the registrant treats as private or confidential.

DEVELOPMENT AND LICENSE AGREEMENT

between

ELI LILLY AND COMPANY

and

PRECISION BIOSCIENCES, INC.

DEVELOPMENT AND LICENSE AGREEMENT

This **Development and License Agreement** ("***Agreement***") is entered into as of November 19, 2020 (the "***Execution Date***") by and between **Precision BioSciences, Inc.**, a corporation organized and existing under the laws of Delaware, having an address at 302 East Pettigrew St., Suite A-100, Durham, North Carolina 27701, U.S.A. ("***Precision***"), and **Eli Lilly and Company**, a corporation organized and existing under the laws of Indiana, with its principal business office located at Lilly Corporate Center, Indianapolis, Indiana 46285, U.S.A. ("***Lilly***"). Lilly and Precision are each hereafter referred to individually as a "***Party***" and together as the "***Parties***."

Whereas, Precision is a biotechnology company that has developed a proprietary genome editing platform, the ARCUS Technology (as defined below), and controls certain intellectual property rights with respect to using the ARCUS Technology to create fully synthetic nucleases derived from homing endonucleases;

Whereas, Lilly is a pharmaceutical company engaged in the research, development, manufacturing, marketing and distribution of pharmaceutical products, including therapeutic products, for use in humans and animals;

Whereas, Precision and Lilly desire to collaborate to discover and develop certain *in vivo* gene editing products incorporating an ARCUS Nuclease (as defined below) designed, created, selected, developed or optimized by Precision for Lilly using the ARCUS Technology, focused on diseases resulting from mutations in the Lead Targets and Additional Targets (each as defined below);

Whereas, Lilly desires to obtain from Precision, and Precision desires to grant to Lilly, certain exclusive and non-exclusive license rights to develop, manufacture, and commercialize such products, subject to the terms and conditions of this Agreement; and

Whereas, in connection with the above and the Parties entering into this Agreement, Precision and Lilly are entering into that certain Stock Purchase Agreement (the "***Stock Purchase Agreement***"), pursuant to which Lilly is making an equity investment in Precision through an acquisition of common shares of Precision stock.

Now, Therefore, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1

DEFINITIONS

Capitalized terms used in this Agreement and the Exhibits hereto shall have the following meanings (or as defined elsewhere in this Agreement):

1.1 "***Acquirer***" has the meaning set forth in the definition of "Change of Control."

1.2 "***Active Component***" means a component that confers a therapeutic effect on a standalone basis, excluding, for clarity and without limitation, [***], and compounds that potentiate nucleases but which themselves do not confer a therapeutic effect on such basis.

1.3 "***Additional Target***" has the meaning set forth in Section 3.2.1.

1.4 "***Affiliate***" means, with respect to any Person, any entity that, at the relevant time (whether as of the Effective Date or thereafter), directly or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with such Person, for so long as such control exists. As used in this Section 1.4, "control" means: (a) to possess, directly or indirectly, the power to direct or cause the direction of the management or policies of an entity, whether through ownership of voting securities or by contract relating to voting rights or corporate governance; or (b) direct or indirect ownership of fifty percent (50%) (or such lesser percentage that is the maximum allowed to be owned by a foreign entity in a particular jurisdiction) or more of the voting share capital or other equity interest in such entity.

1.5 "***After-Acquired IP***" has the meaning set forth in Section 11.1.6.

1.6 "***Agreement***" has the meaning set forth in the Preamble.

1.7 "***Alliance Manager***" has the meaning set forth in Section 2.1.

1.8 [***].

1.9 "***Antitrust Laws***" has the meaning set forth in Section 10.1.

1.10 "***Applicable Laws***" means the applicable provisions of any and all federal, national, supranational, regional, state and local laws, treaties, statutes, rules, regulations, guidelines or requirements, administrative codes, guidance, ordinances, judgments, decrees, directives, injunctions, orders, or permits of or from any court, arbitrator, Regulatory Authority, Governmental Authority, taxing authority, national securities exchange or exchange listing organization having jurisdiction over or related to the relevant subject item that may be in effect from time to time during the Term.

1.11 "***ARCUS Nuclease***" means any fully synthetic nuclease derived from a homing endonuclease and made using the ARCUS Technology.

1.12 "***ARCUS Regulatory Matters***" has the meaning set forth in Section 5.5.3.

1.13 "***ARCUS Technology***" means Precision's proprietary genome editing platform known as ARCUS™, relating to the design, creation, selection, development, optimization and delivery of fully synthetic enzymes derived from homing endonucleases, including any modifications or improvements to such platform.

1.14 "***Background IP***" means Lilly Background IP or Precision Background IP, as applicable.

1.15 "***Bayh-Dole Act***" has the meaning set forth in Section 12.2.9.

1.16 "***Biosimilar Market Share***" has the meaning set forth in Section 9.4.4.

1.17 "***Biosimilar Product***" means, with respect to a Licensed Product, and on a Licensed Product-by-Licensed Product and country-by-country basis, any product (including a "generic product," "biogeneric," "follow-on biologic," "follow-on biological product," "follow-on protein product," "similar biological medicinal product," or "biosimilar product") approved by way of an abbreviated regulatory mechanism by the relevant Regulatory Authority in a country in reference to such Licensed Product, that is sold in the same country (or is commercially available in the same country via import from another country) as such Licensed Product by any Third Party that is not a Sublicensee of Lilly or its Affiliates and that did not purchase such product in a chain of distribution that included any of Lilly or any of its Affiliates or its Sublicensees and that (a) in the United States, is subject to a license by the FDA under Section 351(k) of the PHSA as a product that is "biosimilar" (as defined in Section 351(i)(2) of the PHSA) to, or "interchangeable" (as defined in Section 351(i)(3) of the PHSA) with, such Licensed Product, (b) in the EU, has been licensed as a similar biological medicinal product by the EMA pursuant to Directive 2001/83/EC, as may be amended, or any subsequent or superseding law, statute or regulation, or (c) in any country outside the United States and the EU, has received Regulatory Approval in an abbreviated licensure procedure by the applicable Regulatory Authority in such country as a product that is "interchangeable," "bioequivalent," "biosimilar" or other term of similar meaning, with respect to the Licensed Product and in reliance upon the prior Regulatory Approval (or data therein) of such Licensed Product, as is necessary to permit substitution of such product for the Licensed Product under Applicable Law in such country.

1.18 "***BLA***" means a Biologic License Application (as more fully described in U.S. 21 C.F.R. Part 601.20 or its successor regulation), as may be amended from time to time, or any analogous application or submission with any Regulatory Authority outside of the United States.

1.19 "***Business Day***" means any day, other than any Saturday, Sunday, or any day that banks are authorized or required to be closed in Durham, North Carolina or Indianapolis, Indiana.

1.20 [***].

1.21 "***Calendar Quarter***" means each respective period of three (3) consecutive months ending on March 31, June 30, September 30, and December 31 of any Calendar Year.

1.22 "***Calendar Year***" means each respective period of twelve (12) consecutive months commencing on January 1 and ending on December 31.

1.23 "***Cellectis Agreement***" has the meaning set forth in Section 7.6.1.

1.24 "***Cellectis Patents***" has the meaning set forth in Section 7.6.1.

1.25 "***Change of Control***" means, with respect to either Party: (i) the acquisition by a Third Party, in one transaction or a series of related transactions, of direct or indirect beneficial ownership of more than fifty percent (50%) of the outstanding voting equity securities of such Party (excluding, for clarity, an acquisition by a Third Party where the equity holders of such acquired Party or its parent immediately prior to such transaction hold a majority of the outstanding voting equity securities of the surviving entity or the parent of the surviving entity immediately following such transaction); (ii) a merger, reorganization or consolidation involving such Party as a result of which (A) a Third Party acquires direct or indirect beneficial ownership of more than fifty percent (50%) of the voting power of the surviving entity immediately after such merger, reorganization or consolidation and (B) the voting securities of such Party outstanding immediately prior to such merger, reorganization or consolidation, or any securities into which such voting securities have been converted or exchanged, cease to represent more than fifty percent (50%) of the combined voting power of the surviving entity or the parent of the surviving entity immediately following such merger, reorganization or consolidation; or (iii) a sale, exclusive license or other transfer of all or substantially all of the assets of such Party related to the transactions contemplated by this Agreement in one transaction or a series of related transactions to a Third Party. The acquiring or combining Third Party in any of (i), (ii) or (iii), and any of such Third Party's Affiliates (whether in existence as of or any time following the applicable transaction, but other than the acquired Party and its Affiliates as in existence prior to the applicable transaction or Affiliates it controls after the applicable transaction) are referred to collectively herein as the "***Acquirer***".

1.26 "***Change of Control Notice***" has the meaning set forth in Section 17.8.1.

1.27 "***Chimeric Antigen Receptor***" means a genetically engineered molecule, or a complex comprising a genetically-engineered molecule (including T cell receptors), that when present on the surface of human T cells, enables the T cells to recognize and bind to specific antigens that are present on the surface of cells.

1.28 "***Claim***" has the meaning set forth in Section 13.1.1.

1.29 "***Clinical Development***" means, with respect to a Licensed Product, any and all Development activities conducted for any indication following the Initiation of the first Phase I Clinical Trial with respect to such Licensed Product.

1.30 "***Clinical Development Expenses***" means with respect to a prospective Co-Funded Product or Co-Funded Product, as applicable, to the extent incurred by Lilly or its Affiliates during the Term and in accordance with this Agreement and the applicable Lilly Clinical Development Plan:

1.30.1 all costs associated with obtaining, maintaining and renewing Regulatory Filings and Regulatory Approvals pertaining to such prospective Co-Funded Product or Co-Funded Product (as applicable);

1.30.2 all internal expenses accrued in the performance of activities directly related to Clinical Development (including activities related to efforts to obtain

Regulatory Approval), charged on an FTE Rate basis (excluding managerial, secretarial, clerical and administrative activities), or out-of-pocket costs incurred by Lilly or its Affiliates in performing Clinical Development activities under the Lilly Clinical Development Plan [***];

1.30.3 to the extent not included in the price of the manufactured prospective Co-Funded Product or Co-Funded Product (as applicable), costs associated with the CMO for Clinical Development of such prospective Co-Funded Product or Co-Funded Product (as applicable), including stability testing and other CMC support costs;

1.30.4 all pre-commercialization CMO costs for such prospective Co-Funded Product or Co-Funded Product (as applicable) that are not clinical supply per-unit costs (including upfront costs, facility costs, reservation costs and termination costs), but excluding any such amounts reasonably attributable or allocable to commercial supply;

1.30.5 for any clinical supply of such prospective Co-Funded Product or Co-Funded Product (as applicable), the price of the manufactured prospective Co-Funded Product or Co-Funded Product (as applicable) associated with such clinical supply;

1.30.6 all costs for other materials (such as comparator drugs, ancillaries, non-IMP and placebo) obtained for use in Clinical Trials of or to the extent related to such prospective Co-Funded Product or Co-Funded Product (as applicable);

1.30.7 all costs incurred in connection with Prosecution and Maintenance of [***], in each case that Covers such prospective Co-Funded Product or Co-Funded Product (as applicable), in accordance with Section 11.2 prior to First Commercial Sale, and in each case not including [***]; and

1.30.8 amounts payable to a Third Party pursuant to any license agreement in consideration of any rights that are necessary or useful for the Clinical Development of such prospective Co-Funded Product or Co-Funded Product (as applicable) in the Territory, to the extent such amount accrues after the Effective Date and prior to the First Commercial Sale; provided, however, that in the instance such license covers multiple products, such amounts will be limited to the portion of such amounts allocated to such prospective Co-Funded Product or Co-Funded Product (as applicable) according to [***].

Clinical Development Expenses shall not include Lilly's costs to the extent [***].

1.31 "***Clinical Supply Agreement***" has the meaning set forth in Section 6.3.3.

1.32 "***Clinical Trial***" means a Phase I Clinical Trial, Phase II Clinical Trial or Phase III Clinical Trial, or any post-Regulatory Approval human clinical trial, as applicable.

1.33 "***CMC***" has the meaning set forth in Section 6.3.5.

1.34 "***CMO***" has the meaning set forth in Section 6.3.1.

1.35 "***Co-Funded Product***" has the meaning set forth in Section 5.3.1.

1.36 "***Co-Funding Option Exercise Notice***" has the meaning set forth in Section 5.3.2.

1.37 "***Co-Funding Option Interest Notice***" has the meaning set forth in Section 5.3.1.

1.38 "***Code***" has the meaning set forth in Section 15.8.

1.39 "***COGS***" means [***].

1.40 "***Collaboration IP***" means Lilly Collaboration IP or Precision Collaboration IP, as applicable.

1.41 "***Collaboration Targets***" means, individually or collectively, the Lead Targets, the Additional Targets, and, if applicable, any Replacement Targets. Collaboration Targets exclude any Unavailable Targets and any Independently Developed Targets (unless such Independently Developed Targets are named as Additional Targets pursuant to Section 3.4).

1.42 "***Combination Product***" has the meaning set forth in the definition of "Net Sales."

1.43 "***Commercial Milestone Event***" has the meaning set forth in Section 9.3.

1.44 "***Commercial Milestone Payment***" has the meaning set forth in Section 9.3.

1.45 "***Commercial Supply Agreement***" has the meaning set forth in Section 6.3.3.

1.46 "***Commercialization***" means any and all activities directed to the offering for sale and sale of a Licensed Product, or other product or therapy including: (a) activities directed to storing, marketing, promoting, detailing, distributing, importing, exporting, selling and offering to sell that Licensed Product, or other product or therapy; (b) conducting Clinical Trials after Marketing Authorization of a Licensed Product, or other product or therapy with respect to such Licensed Product, or other product or therapy; (c) interacting with Regulatory Authorities regarding the foregoing; and (d) seeking Regulatory Approvals (as applicable) for and registration of that Licensed Product, or other product or therapy (beyond seeking Marketing Authorization, which is addressed within "Development") in the Field in the Territory. When used as a verb, "to ***Commercialize***" and "***Commercializing***" means to engage in Commercialization and "***Commercialized***" has a corresponding meaning.

1.47 "***Commercially Reasonable Efforts***" of a Party means that level of efforts and resources commonly applied by such Party to carry out a particular task or obligation consistent with the general practice followed by such Party relating to other pharmaceutical compounds, products or therapies owned by it, or to which it has exclusive rights, which are of similar market potential at a similar stage in their development or product life, taking into account issues of safety and efficacy, product profile, the competitiveness of Third Party products in development and in the marketplace, supply chain management considerations, the proprietary position of the compound, product or therapy (including with respect to patent or regulatory exclusivity), the regulatory structure involved, the profitability of the applicable

compound, product or therapy (including pricing and reimbursement status achieved), and other relevant technical, commercial, legal, scientific, regulatory or medical factors.

1.48 "***Competing Program***" has the meaning set forth in Section 8.3.

1.49 "***Confidential Proprietary Information***" has the meaning set forth in Section 14.1.1.

1.50 "***Confidentiality Agreement***" means that certain Mutual Confidentiality Agreement entered into between the Parties as of December 13, 2018, as amended by the First Amendment to Mutual Confidentiality Agreement effective as of October 18, 2019.

1.51 "***Control***" or "***Controlled***" means, with respect to any Know-How, Patents, or other intellectual property rights, that a Party has the legal authority or right (whether by ownership, license, or otherwise, but without taking into account any rights granted by one Party to the other Party pursuant to this Agreement) to grant to the other Party a license, covenant not to sue, sublicense, access, or right to use (as applicable) under such Know-How, Patents, or other intellectual property rights, on the terms and conditions set forth herein, in each case without violating any obligations of the granting Party owed to a Third Party or breaching the terms of any agreement with a Third Party.

1.52 "***Cover***" means, with respect to a claim of a Patent and a relevant Licensed Product, that such claim would be infringed, absent a license, by the Research, Development, Manufacture, making, having made, use, keeping, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of such Licensed Product (considering claims of patent applications to be issued as then pending).

1.53 "***Development***" or "***Develop***" means any and all activities directed to the non-clinical and clinical drug development activities that are necessary or useful to obtain Marketing Authorization for a Licensed Product, or other product or therapy, including design and conduct of Clinical Trials and the preparation and filing of Regulatory Filings and all regulatory affairs related to the foregoing. When used as a verb, "***Developing***" means to engage in Development and "***Developed***" has a corresponding meaning. For clarity, "***Development***" shall not include any Commercialization activities.

1.54 "***Development Candidate***" has the meaning set forth in Section 4.5.

1.55 "***Development Milestone Event***" has the meaning set forth in Section 9.3.

1.56 "***Development Milestone Payment***" has the meaning set forth in Section 9.3.

1.57 "***Directed Against***" means, with respect to (a) a Licensed Product or other *in vivo* gene editing product or therapy and (b) a Target, that the compound contained in such Licensed Product or such other product or therapy is designed or developed to add to, subtract, or modify such Target in a patient's cells *in vivo* as its primary mechanism of action.

1.58 "***Disclosing Party***" has the meaning set forth in Section 14.1.2.

1.59 "***Dispute***" has the meaning set forth in Section 16.2.

1.60 "***Distributor***" means any Person appointed by (a) Lilly, (b) any of Lilly's Affiliates or (c) any of their respective Sublicensees that is not an Affiliate of (a) or (b), to distribute, market and sell the Licensed Products in one or more countries in the Territory, in circumstances where the Person purchases its requirements of the Licensed Products from Lilly or its Affiliates or its or their Sublicensees but has no right to conduct any Research, Development or Manufacturing activities with respect to a Licensed Product.

1.61 "***Divestiture***": means (a) with respect to a Party, the sale or transfer of all rights to a Competing Program by such Party to a Third Party without the retention or reservation of any rights, license or interest [***] by the selling entity or its Affiliates; or (b) with respect to an Acquirer of Precision, the sale or transfer of all rights to a Competing Program by such Acquirer to a Third Party without the retention or reservation of any rights, license or interest [***] by the selling entity or its Affiliates. [***].

1.62 "***DOJ***" has the meaning set forth in Section 10.1.

1.63 "***Dollar***" means a U.S. dollar, and "***$***" is to be interpreted accordingly.

1.64 "***Duke Agreement***" means the License Agreement entered into by Precision and Duke University ("***Duke***") on April 17, 2006, as amended by the Amendment, dated May 31, 2007 and as further amended by the Letter Agreements, dated December 10, 2007, February 13, 2009, January 17, 2012, December 6, 2013, December 13, 2013 and February 4, 2014, and as further amended from time to time.

1.65 "***Duke IP***" means all Patents and Know-How licensed to Precision under the Duke Agreement that constitute Precision Background IP. The patent numbers and patent application numbers of the Patents that are included within the Duke IP as of the Execution Date are set forth in Schedule 1.65.

1.66 "***Effective Date***" has the meaning set forth in Section 10.1.

1.67 "***Eli Lilly and Company Good Research Practices***" has the meaning set forth in Section 4.8.

1.68 "***EMA***" means the European Medicines Agency (or the competent UK authority) or any successor agency thereto.

1.69 "***Enabling Technology***" means any intellectual property right owned or controlled by any Third Party that is necessary or reasonably useful for, or would be infringed by, the Research, Development, Manufacture or Commercialization of a Licensed Product.

1.70 "***Escrow Agent***" has the meaning set forth in Section 3.8.

1.71 "***Excluded Technologies***" means [***].

1.72 "***Execution Date***" has the meaning set forth in the preamble to this Agreement.

1.73 "***Executive Officers***" means (a) with respect to Precision, [***], and (b) with respect to Lilly, [***]; or any other person that such person in the foregoing (a) or (b) designates from time to time.

1.74 "***Existing In-License Agreements***" means the Duke Agreement and the Cellectis Agreement.

1.75 "***Existing Patents***" has the meaning set forth in Section 12.2.4.

1.76 "***Extended Target Nomination Period***" has the meaning set forth in Section 3.2.1.

1.77 "***Extended Target Nomination Period Fee***" has the meaning set forth in Section 3.2.1.

1.78 "***FDA***" means the United States Food and Drug Administration or any successor agency thereto.

1.79 "***Field***" means the diagnosis, prevention and treatment of any and all diseases by *in vivo* gene editing Directed Against any Lead Target or any Additional Target.

1.80 "***Firewalls***" means [***].

1.81 "***Firewall Event***" has the meaning set forth in Section 17.8.7.

1.82 "***Firewall Period***" means [***].

1.83 "***First Clinical Product***" has the meaning set forth in Section 6.3.1(b).

1.84 "***First Commercial Sale***" means the first sale of a Licensed Product by Lilly (or its Affiliates or its or their Sublicensees) to a Third Party for end use or consumption of such Licensed Product in a given country after Regulatory Approval required to market and sell the Licensed Product has been granted with respect to such Licensed Product in such country in which such Licensed Product is sold.

1.85 "***FTC***" has the meaning set forth in Section 10.1.

1.86 "***FTE***" means the equivalent of a full-time Precision employee's work performing activities under a Research Plan, which is at least [***]. If any such individual works partially on work under a Research Plan for a Program and partially on other work in a Calendar Quarter, then the "FTE" to be attributed to such individual's work hereunder shall be calculated based upon the percentage of such individual's total work time in such Calendar Quarter that such individual spent working under a Research Plan for such Program based on [***], applied consistently throughout the Calendar Year. [***]. For clarity, no individual person can ever constitute more than a single FTE.

1.87 "***FTE Rate***" means [***].

1.88 **"*GLP Toxicology Study*"** means, with respect to a Licensed Product[***].

1.89 "***Good Clinical Practices***" or "***cGCP***" means all applicable current Good Clinical Practice standards for the design, conduct, performance, monitoring, auditing, recording, analysis and reporting of Clinical Trials, including, as applicable: (a) as set forth in the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use ("***ICH***") E6 and any other guidelines for good clinical practice for trials on medicinal products in the Territory; (b) the Declaration of Helsinki (2004) as last amended at the 52nd World Medical Association in October 2000 and any further amendments or clarifications thereto; (c) U.S. Code of Federal Regulations Title 21, Parts 50, 54, 56, 312 and 314, as may be amended from time to time; and (d) the equivalent Applicable Laws in any relevant country, each as may be amended and applicable from time to time, and in each case ((a)-(d)), that provide for, among other things, assurance that the clinical data and reported results are credible and accurate and protect the rights, integrity, and confidentiality of trial subjects.

1.90 "***Good Laboratory Practices***" or "***GLPs***" means all applicable Good Laboratory Practice standards, including, as applicable: (a) as set forth in the then-current good laboratory practice standards promulgated or endorsed by the FDA as defined in 21 C.F.R. Part 58; and (b) the equivalent Applicable Laws in any relevant country, each as may be amended and applicable from time to time.

1.91 "***Good Manufacturing Practices***" or "***cGMPs***" means all applicable current Good Manufacturing Practices including, as applicable: (a) the principles detailed in the US Current Good Manufacturing Practices, 21 C.F.R. Parts 4, 210, 211, 601, 610 and 820; (b) European Directive 2003/94/EC and Eudralex 4; (c) the principles detailed in the WHO TRS 986 Annex 2, TRS 961 Annex 6, TRS 957 Annex 2, and TRS 999 Annex 2; (d) ICH Q7 guidelines; and (e) the equivalent Applicable Laws in any relevant country, each as may be amended and applicable from time to time.

1.92 "***Good Research Practices***" or "***GRP***" means research practices consistent with: (a) the research quality standards defining how Lilly's research laboratories conduct good science for non-regulated work as set forth in Exhibit 4.8 Part A of this Agreement; and (b) the Research Quality Association (RQA), 2014 Quality in Research Guidelines for Working in Non-Regulated Research, each as may be amended and applicable from time to time.

1.93 "***Government Official***" has the meaning set forth in Section 12.5.6.

1.94 "***Governmental Authority***" means any national, international, federal, state, provincial or local government, or political subdivision thereof, or any multinational organization or any authority, agency or commission entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power, and any court or tribunal (or any department, bureau or division thereof, or any governmental arbitrator or arbitral body).

1.95 "***HSR Act***" has the meaning set forth in Section 10.1.

1.96 "***HSR Clearance Date***" has the meaning set forth in Section 10.1.

1.97 [***].

1.98 "***IND***" means an investigational new drug application filed with the FDA or any similar application filed with a Regulatory Authority in a country outside the U.S. required to commence Clinical Trials of a pharmaceutical product.

1.99 "***IND Enabled Data Package***" means, on a Collaboration Target-by-Collaboration Target basis, the package of data generated pursuant to the applicable Research Plan, which Lilly may evaluate against the Success Criteria to determine whether any Development Candidate Directed Against such Collaboration Target should be Clinically Developed as a Licensed Product, and which shall consist of, at minimum, the categories of data set forth in the Initial Research Plan(s).

1.100 "***Indemnitee***" has the meaning set forth in Section 13.1.3.

1.101 "***Indemnitor***" has the meaning set forth in Section 13.1.3.

1.102 "***Independently Developed Target***" has the meaning set forth in Section 3.4.

1.103 "***Infringement***" has the meaning set forth in Section 11.3.1.

1.104 "***Initial Research Plan***" has the meaning set forth in Section 4.4.1.

1.105 "***Initial Target Nomination Period***" has the meaning set forth in Section 3.2.1.

1.106 "***Initiation***" means (a) with respect to a Clinical Trial, the first dosing of the first human subject in such Clinical Trial or (b) with respect to a GLP Toxicology Study, the first dosing of the first animal in such GLP Toxicology Study.

1.107 "***Internal Compliance Codes***" has the meaning set forth in Section 12.5.4.

1.108 "***Inventions***" means all Know-How and inventions, whether or not patentable, that are discovered, created, conceived or reduced to practice, in each case, by or on behalf of a Party or any of its Affiliates (whether solely or jointly by the Parties) in the course of performing activities under this Agreement, in either case, including all rights, title and interest in and to the intellectual property rights therein.

1.109 "***Joint IP***" has the meaning set forth in Section 11.1.2.

1.110 "***Joint Patents***" means any Patent constituting or claiming any Joint IP.

1.111 "***JSC***" has the meaning set forth in Section 2.3.

1.112 "***JSC Co-Chairpersons***" has the meaning set forth in Section 2.3.

1.113 "***Know-How***" means any proprietary scientific or technical information, inventions, discoveries, results and data of any type whatsoever, in any tangible or intangible form, including inventions, discoveries, databases, safety information, practices, methods,

instructions, techniques, processes, drawings, documentation, specifications, formulations, formulae, knowledge, know-how, trade secrets, materials, skill, experience, test data and other information and technology applicable to formulations, compositions or products or to their manufacture, development, registration, use, marketing or sale or to methods of assaying or testing them, including pharmacological, pharmaceutical, medicinal chemistry, biological, chemical, biochemical, toxicological and clinical test data, physical and analytical, safety, quality control data, manufacturing, and stability data, studies and procedures, and manufacturing process and development information, results and data.

1.114 "***Knowledge***" means the actual knowledge of each of Precision's Chief Executive Officer, Chief Scientific Officer, Chief Financial Officer, General Counsel, Vice President of Business Development and Senior Director of Intellectual Property, in each case, after due inquiry.

1.115 "***Lead Targets***" has the meaning set forth in Section 3.1.

1.116 "***Licensed ARCUS Nuclease***" means, for each Collaboration Target, the ARCUS Nuclease designed, created, selected, developed or optimized by Precision for Lilly using the ARCUS Technology.

1.117 "***Licensed Product***" means any *in vivo* gene editing product incorporating a Licensed ARCUS Nuclease, and which product is Directed Against a Lead Target or an Additional Target. Licensed Products do not include any products that are engineered *ex vivo* and do not involve *in vivo* gene editing.

1.118 "***Licensed Product Patents***" means [***].

1.119 "***Licensed Product Trademarks***" has the meaning set forth in Section 11.7.

1.120 "***Lilly***" has the meaning set forth in the Preamble.

1.121 "***Lilly Background IP***" means any and all Patent rights and Know-How that Lilly or any of its Affiliates Controls as of the Effective Date, or discovers, creates or acquires outside the scope of the Research Program; in each case, that is necessary or reasonably useful for the Research, Development, Manufacture, making, having made, use, keeping, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of a Licensed Product.

1.122 "***Lilly Clinical Development Plan***" has the meaning set forth in Section 5.3.2.

1.123 "***Lilly Collaboration IP***" means, individually or collectively, Lilly Sole IP and Lilly's share in Joint IP.

1.124 [***].

1.125 [***].

1.126 "***Lilly Indemnitee***" has the meaning set forth in Section 13.1.1.

1.127 "***Lilly Patent***" means any Patent constituting or claiming any Lilly Background IP or Lilly Sole IP.

1.128 "***Lilly Principles for Animal Care and Use for Third Party Organizations***" has the meaning set forth in Section 4.8.

1.129 "***Lilly Sole IP***" has the meaning set forth in Section 11.1.2.

1.130 "***Losses***" has the meaning set forth in Section 13.1.1.

1.131 "***Major Foreign Markets***" means [***].

1.132 "***Manufacture***" and "***Manufacturing***" means any and all activities related to the production, manufacture, formulation, finishing, packaging, labeling, shipping and holding of any Licensed Product, or other product or therapy, or any component, intermediary or precursor thereof (including, for clarity, [***], expression vectors, cell lines, culture media and feeds), and including process development, process qualification and validation, scale-up, pre-clinical, clinical and commercial manufacture, characterization, quality assurance and quality control (including testing).

1.133 "***Manufacturing Technology Transfer***" has the meaning set forth in Section 6.3.2(a).

1.134 "***Marketing Authorization***" means, collectively, all Regulatory Approvals (including any Pricing and Reimbursement Approval or access approvals, if applicable) from the relevant Regulatory Authority required by such Regulatory Authority in order to initiate marketing and selling a Licensed Product in any country or jurisdiction.

1.135 "***Materials Transfer Record***" has the meaning set forth in Section 4.10.

1.136 "***Milestone Events***" has the meaning set forth in Section 9.3.

1.137 "***Milestone Payments***" has the meaning set forth in Section 9.3.

1.138 "***Net Sales***" means[***].

The foregoing amounts shall be determined from the books and records of Lilly or applicable Sublicensees, maintained in accordance with U.S. GAAP or, in the case of Sublicensees, such similar accounting principles, consistently applied. Lilly further agrees in determining such amounts, it will use Lilly's then current standard procedures and methodology, including the exchange rate methodology described in Section 9.6 or, in the case of Sublicensees, such similar methodology, consistently applied.

In the event that the Licensed Product is sold as part of a Combination Product (where "***Combination Product***" means any pharmaceutical product which comprises the Licensed Product and one or more other Active Components that do not constitute a Licensed

ARCUS Nuclease, whether co-formulated, co-packaged or otherwise sold together for one price), the Net Sales of the Licensed Product, for the purposes of determining royalty payments, shall be determined by [***].

In the event that [***] the Licensed Product can be determined but [***] the other Active Components cannot be determined, Net Sales for purposes of determining royalty payments shall be calculated by [***].

In the event that [***] the other Active Components can be determined but [***] the Licensed Product cannot be determined, Net Sales for purposes of determining royalty payments shall be calculated by [***].

In the event that [***] both the Licensed Product and the other Active Components in the Combination Product cannot be determined, the Net Sales of the Licensed Product shall be deemed to be [***].

[***] shall be calculated once each Calendar Year and such price shall be used during all applicable royalty-reporting periods for the entire following Calendar Year. When determining [***] shall be calculated by [***].

1.139 "***Nomination Request***" has the meaning set forth in Section 3.2.1.

1.140 [***].

1.141 "***Party***" and "***Parties***" has the meaning set forth in the Preamble.

1.142 "***Party-Specific Regulations***" has the meaning set forth in Section 12.5.3.

1.143 "***Patent Working Group***" has the meaning set forth in Section 2.4.

1.144 "***Patents***" mean: (a) pending patent applications, issued patents, utility models and designs; (b) reissues, substitutions, confirmations, registrations, validations, re-examinations, additions, continuations, continued prosecution applications, continuations-in-part, or divisions of or to any of the foregoing; and (c) extensions, renewals or restorations of any of the foregoing by existing or future extension, renewal or restoration mechanisms, including supplementary protection certificates or the equivalent thereof.

1.145 "***Payment***" has the meaning set forth in Section 9.9.2.

1.146 "***PC POC Study***" has the meaning set forth in Section 3.4.

1.147 "***Person***" means any corporation, limited or general partnership, limited liability company, joint venture, trust, unincorporated association, governmental body, authority, bureau or agency, any other entity or body, or an individual.

1.148 "***Phase I Clinical Trial***" means a clinical trial of a product generally consistent with 21 C.F.R. § 312.21(a) (or the non-United States equivalent thereof).

1.149 "***Phase II Clinical Trial***" means a clinical trial of a product generally consistent with 21 C.F.R. § 312.21(b) (or the non-United States equivalent thereof). [***].

1.150 "***Phase III Clinical Trial***" means a clinical trial of a product generally consistent with 21 C.F.R. § 312.21(c) (or the non-United States equivalent thereof). [***].

1.151 "***PHSA***" means the United States Public Health Service Act, as may be amended, or any subsequent or superseding law, statute or regulation.

1.152 "***Platform-Enabling IP***" has the meaning set forth in Section 11.1.6.

1.153 "***Precision***" has the meaning set forth in the Preamble.

1.154 "***Precision Background IP***" means any and all Patent rights and Know-How Controlled by Precision or its Affiliates: (a) as of the Effective Date; or (b) subject to Section 11.1.6(b), that Precision or any of its Affiliates discovers, creates, conceives or reduces to practice or acquires outside the scope of the Research Program after the Effective Date, in each case (a) and (b), that (i) is necessary or reasonably useful for the Research, Development, making, having made, use, keeping, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of a Licensed Product or (ii) Covers a Licensed Product. [***].

1.155 "***Precision Background Platform IP***" means any and all Precision Background IP that is not Precision Background Product IP, including the ARCUS Technology.

1.156 "***Precision Background Product IP***" means any and all Precision Background IP that Covers (or in the case of Know-How, is directed to) a Licensed Product as a composition of matter, a method of making a Licensed Product, or a method of using a Licensed Product.

1.157 "***Precision Collaboration IP***" means, individually or collectively, Precision Sole IP and Precision's share in Joint IP.

1.158 "***Precision Collaboration Platform IP***" means any and all Precision Collaboration IP that is not Precision Collaboration Product IP.

1.159 "***Precision Collaboration Product IP***" means Precision Collaboration IP that Covers (or in the case of Know-How, is directed to) a Licensed Product as a composition of matter, a method of making a Licensed Product, or a method of using a Licensed Product.

1.160 "***Precision FTE Costs***" has the meaning set forth in Section 4.7.1.

1.161 "***Precision Indemnitee***" has the meaning set forth in Section 13.1.2.

1.162 "***Precision Materials***" has the meaning set forth in Section 4.11.

1.163 "***Precision Patent***" means any Patent included in the Precision Technology.

1.164 "***Precision Platform IP***" means, individually or collectively, the Precision Background Platform IP and the Precision Collaboration Platform IP.

1.165 "***Precision Product IP***" means, individually or collectively, the Precision Background Product IP and the Precision Collaboration Product IP.

1.166 "***Precision Sole IP***" has the meaning set forth in Section 11.1.2.

1.167 "***Precision Technology***" means, individually or collectively, the Precision Background IP and the Precision Collaboration IP.

1.168 "***Pre-Clinical Development***" means, with respect to a Licensed Product, any and all Development activities conducted prior to the Initiation of the first Clinical Trial with respect to such Licensed Product; including, with respect to Precision, selecting, developing and optimizing the ARCUS Nucleases for the Lead Targets and Additional Targets (if any) to support pre-clinical *in vitro* and *in vivo* evaluation, candidate selection, Regulatory Filings, and potential Clinical Development of the Licensed Product by Lilly.

1.169 "***Pricing and Reimbursement Approval***" means, with respect to a Licensed Product, the approval, agreement, determination or decision of any Regulatory Authority establishing the price or level of reimbursement for such Licensed Product, as required in a given country or jurisdiction prior to sale of such Licensed Product in such country or jurisdiction.

1.170 "***Program***" means, on a Collaboration Target-by-Collaboration Target basis, any and all Research, Development, Manufacturing, and Commercialization activities conducted under this Agreement with respect to any Licensed Products that are Directed Against such Collaboration Target.

1.171 "***Project Manager***" has the meaning set forth in Section 2.2.

1.172 "***Proposed Replacement Target***" has the meaning set forth in Section 3.3.1.

1.173 "***Prosecute and Maintain***" or "***Prosecution and Maintenance***" with respect to a particular Patent, means all activities associated with the preparation, filing, prosecution and maintenance of such Patent, together with the conduct of interferences, derivation proceedings, *inter partes* review and post-grant review, the defense of oppositions and other similar proceedings with respect to that Patent, including any activities associated with claims, including as a counterclaim or declaratory judgment action, of unpatentability, invalidity or unenforceability of such Patent that are brought by a Third Party in connection with an Infringement under Section 11.3.

1.174 "***Prosecuting Party***" has the meaning set forth in Section 11.2.3.

1.175 "***Qualifying Non-Royalty Payments***" has the meaning set forth in Section 9.4.5.

1.176 "***Quality***" has the meaning set forth in Section 6.3.4.

1.177 "***Quality Agreement***" has the meaning set forth in Section 6.3.4.

1.178 "***Receiving Party***" has the meaning set forth in Section 14.1.2.

1.179 "***Registration Trial***" means [***]. A Registration Trial may require only a portion of, but not necessarily the entirety of, [***].

1.180 "***Regulatory Approvals***" means, collectively, any and all approvals (including supplements, amendments, pre- and post-approvals, Pricing and Reimbursement Approvals), licenses, registrations, permits, notifications, and authorizations (including marketing and labeling authorizations) or waivers of any Regulatory Authority that are necessary for the testing, Research, Development, registration, Manufacture (including formulation), use, storage, import, export, transport, promotion, marketing, distribution, offer for sale, sale or other Commercialization of a pharmaceutical product (including any Licensed Product) in any country or jurisdiction, including Pricing and Reimbursement Approval, as applicable.

1.181 "***Regulatory Authority***" means any Governmental Authority that has responsibility in its applicable jurisdiction over the testing, Research, Development, registration, Manufacture (including formulation), use, storage, import, export, transport, promotion, marketing, distribution, offer for sale, sale or other Commercialization of pharmaceutical products (including any Licensed Product) in any country or jurisdiction. For countries or jurisdictions where governmental approval is required for pricing or reimbursement for a pharmaceutical product (including any Licensed Product) to be reimbursed by national health insurance (or its local equivalent), Regulatory Authority includes any Governmental Authority whose review or approval of pricing or reimbursement of such product is required.

1.182 "***Regulatory Documentation***" has the meaning set forth in Section 12.2.10.

1.183 "***Regulatory Filings***" means, collectively, any and all applications, filings, submissions, approvals (including supplements, amendments, pre- and post-approvals, pricing and reimbursement approvals), licenses, registrations, permits, notifications, and authorizations (including marketing and labeling authorizations), non-clinical and clinical study authorization applications or notifications (including all supporting files, writings, data, studies and reports) or waivers with respect to the testing, Research, Development, registration, Manufacture (including formulation), use, storage, import, export, transport, promotion, marketing, distribution, offer for sale, sale or other Commercialization of a Product made to or received from any Regulatory Authority or research ethics committee in a given country or jurisdiction, including INDs and BLAs.

1.184 "***Replacement Fee***" has the meaning set forth in Section 3.3.2.

1.185 "***Replacement Request***" has the meaning set forth in Section 3.3.1.

1.186 "***Replacement Target***" has the meaning set forth in Section 3.3.

1.187 "***Research***" means, with respect to a Collaboration Target or Licensed Product, or other product or therapy, any and all activities directed to the discovery, identification, screening, testing, assessment and optimization of Collaboration Targets or Licensed Products, or other product or therapy, including, with respect to Precision, such activities directed to the discovery of compounds Directed Against Collaboration Targets, including designing and creating ARCUS Nucleases Directed Against Collaboration Targets.

1.188 [***].

1.189 "***Research Plan***" has the meaning set forth in Section 4.4.

1.190 "***Research Program***" has the meaning set forth in Section 4.1.

1.191 "***Research Term***" has the meaning set forth in Section 4.3.1.

1.192 "***Research Term Commencement Date***" has the meaning set forth in Section 4.3.1.

1.193 "***Reserved Target Period***" has the meaning set forth in Section 3.5.

1.194 "***Reserved Targets***" means the specified Target responsible for each of the following diseases: [***].

1.195 "***Residuals***" has the meaning set forth in Section 14.1.5.

1.196 "***Reversion Option***" has the meaning set forth in Section 15.5.3(a).

1.197 "***Royalty***" has the meaning set forth in Section 9.4.2.

1.198 "***Royalty Term***" has the meaning set forth in Section 9.4.1.

1.199 [***].

1.200 [***].

1.201 "***[***] ARCUS Nuclease***" means the ARCUS Nuclease having the sequence set forth on Exhibit 1.201 [***].

1.202 "***Stock Purchase Agreement***" has the meaning set forth in the Preamble.

1.203 "***Sublicensee***" means a Third Party that is granted a license or sublicense to Research, Develop, Manufacture, make, have made, use, keep, import, export, offer for sale, sell, or Commercialize, or otherwise exploit Licensed Products in the Field in the Territory, beyond the mere right to purchase Licensed Products from Lilly and its Affiliates, and excludes Lilly's Distributors.

1.204 "***Success Criteria***" means the criteria, as set forth in each Research Plan, to be applied by Lilly to evaluate the data contained within the IND Enabled Data Package to determine whether the Development Candidate Directed Against such Collaboration Target should be Clinically Developed as a Licensed Product.

1.205 "***Supply Agreements***" means, collectively, the Clinical Supply Agreement and the Commercial Supply Agreement.

1.206 "***Target***" means a human gene, genetic variations or mutations in which cause or contribute to a human disease, wherein a therapeutic effect with respect to such disease may be achieved by delivery of an *in vivo* gene editing product intended to permanently add to, subtract or modify such gene in a patient's cells *in vivo*, and wherein[***]. Notwithstanding the foregoing, "Target" does not include [***] any human gene that may be added to, subtracted or modified in order to create engineered human T cells with Chimeric Antigen Receptor(s), whether *in vivo* or *ex vivo*, that are clinically relevant to oncology].

1.207 "***Target-Enabling IP***" has the meaning set forth in Section 11.1.6.

1.208 "***Target Nomination Fee***" has the meaning set forth in Section 3.2.2.

1.209 "***Target Nomination Period***" means the Initial Target Nomination Period, and if extended pursuant to Section 3.2.1, the Extended Target Nomination Period.

1.210 "***Technology Transfer Plan***" has the meaning set forth in Section 6.3.2(b).

1.211 "***Term***" has the meaning set forth in Section 15.1.

1.212 "***Terminated Product***" has the meaning set forth in Section 15.5.

1.213 "***Territory***" means worldwide.

1.214 "***Third Party***" means any Person other than Lilly or Precision (or their respective Affiliates).

1.215 "***U.S.***" means the United States of America and its territories and possessions.

1.216 "***Unavailable Target***" means a Target that, at the time of Lilly's delivery of a Nomination Request pursuant to Section 3.2.1 or Replacement Request pursuant to Section 3.3.1, if applicable, is [***]. "Unavailable Targets" shall also include (i) any Lead Target or Additional Target which is replaced by a Replacement Target, upon such replacement by Lilly pursuant to Section 3.3.1, (ii) Independently Developed Targets which Lilly does not elect to include as an Additional Target or Replacement Target pursuant to Section 3.4 prior to the expiration of the IDT Nomination Period for such Independently Developed Target, (iii) all Independently Developed Targets following the expiration of the Target Nomination Period or, if applicable, the Extended Target Nomination Period or once

Lilly has named three (3) Additional Targets (whichever occurs first), and (iv) the Targets listed on Exhibit 3.4.

1.217 "***Unavailable Target Information***" has the meaning set forth in Section 3.8.

1.218 "***Valid Claim***" means a claim that Covers (i) [***], (ii) [***] or (iii) [***], in each case (i) - (iii) contained in (a) an issued and unexpired Patent that has not been revoked or held unenforceable, unpatentable or invalid by a decision of a court or other governmental agency of competent jurisdiction that is not appealable or has not been appealed within the time allowed for appeal; or (b) a pending patent application that has not been cancelled, withdrawn or abandoned or finally rejected by an administrative agency action from which no appeal can be taken and that has been pending for no longer than [***].

1.219 "***Working Group***" has the meaning set forth in Section 2.4.

ARTICLE 2

GOVERNANCE AND JOINT STEERING COMMITTEE

2.1 **Alliance Managers**. Within [***] following the Effective Date, each Party shall appoint one (1) employee to act as the Alliance Manager for such Party (each, an "***Alliance Manager***"). Without limiting the responsibilities and authorities of the Project Managers and the JSC (as expressly set forth herein), the Alliance Managers shall each be the primary point of contact for the Parties regarding the collaboration and related activities contemplated by this Agreement and shall help facilitate all such activities hereunder. For avoidance of doubt, the individual appointed by a Party to act as an Alliance Manager may, but need not, be the same individual appointed by such Party as a Project Manager, but an Alliance Manager may not be appointed to serve as a JSC member simultaneously. Either Party, upon prior notice to the other Party, may change its Alliance Manager.

2.2 **Project Managers**. Lilly and Precision shall each assign one (1) employee to serve as the primary point of contact between the Parties with respect to each Collaboration Target being Researched and Developed under the Programs (each, a "***Project Manager***"). The Project Managers shall regularly communicate with each other to address Program-related issues, needs and updates and facilitate communications and organization of Working Groups associated with the Research Plan. Either Party, upon reasonable prior notice to the other Party, may change its Project Manager. For clarity, the same employee may, but need not, be the Project Manager for multiple Collaboration Targets.

2.3 **Joint Steering Committee**. Within [***] after the Effective Date, the Parties shall establish a cross-functional, joint steering committee (the "***JSC***") composed of up to three (3) senior representatives from each Party (provided each Party has an equal number of representatives) that will oversee and manage the collaboration between the Parties with respect to each Program. The JSC may, from time to time, establish subcommittees and Working Groups as it deems necessary to further the purposes of this Agreement. Each Party shall appoint its respective representatives to the JSC from time to time, and may change its representatives, in its sole discretion, effective upon reasonable prior notice to the other Party designating such change.

The representatives from each Party shall have appropriate technical credentials, experience and knowledge pertaining to and ongoing familiarity with the Research and Development of the applicable Programs. Each Party shall designate one (1) of its representatives on the JSC to serve as JSC co-chairpersons ("***JSC Co-Chairpersons***"), who will be jointly responsible for calling meetings of the JSC, circulating agendas and performing administrative tasks required to assure efficient operation of the JSC but shall not have any extra or additional votes or authority. The JSC Co-Chairpersons or their designees shall alternate responsibility for circulating agendas at least [***] prior to each meeting and distributing minutes of the meetings pursuant to Section 2.6.

2.4 **Working Groups**. The Parties may establish working groups consisting of members from both Precision and Lilly (each, a "***Working Group***") to oversee aspects of the activities of each Program. From time to time, the Parties may establish additional Working Groups as needed to oversee particular activities and/or projects. Each Working Group shall undertake the activities specified under this Agreement for such Working Group or otherwise delegated to it by the JSC. During the process of establishing each Working Group, such Working Group and the JSC shall agree regarding which matters such Working Group will resolve on its own and which matters such Working Group will advise the JSC and/or the Project Managers regarding (and with respect to which such advice-specific matters the JSC will resolve). The Parties shall, at a minimum, establish a Working Group to oversee the strategy for Prosecution and Maintenance of Patents as described in Section 11.2 (the "***Patent Working Group***").

2.5 **Function and Powers of the JSC**. The JSC will:

(a) prepare, discuss, and approve initial Research Plans for each Program and prepare, review, discuss, and approve any amendments that may be necessary or desired to the Research Plans;

(b) oversee the implementation of the Research Plans, including the activities, timing and deliverables thereunder, and coordination of such activities and timing across Research Programs;

(c) discuss the progress of the Research, Pre-Clinical Development, and the Programs generally, the validation and development of the Collaboration Targets and the selection, validation and development of the Licensed Products;

(d) provide a forum for the Parties to share and discuss information relating to the (i) Research and validation of the Collaboration Targets (including Replacement Targets), (ii) Research and Pre-Clinical Development of the Licensed Products, including the results of the activities being carried out under the Research Plans, (iii) manufacturing and CMC development activities being carried out under the Supply Agreements, and (iv) Clinical Development of any Co-Funded Product under this Agreement pursuant to 5.3;

(e) address issues arising in the performance of the Research Plans;

(f) direct and oversee any operating Working Groups on all significant issues, and resolve disputed matters that may arise at the Working Groups;

(g) facilitate the exchange of Know-How or materials (pursuant to Section 4.10, Section 4.11 or Section 5.1, as applicable) as required hereunder;

(h) following Precision's delivery of a Co-Funding Option Interest Notice in accordance with Section 5.3.1, facilitate Lilly's provision of information to Precision in response to questions from Precision relating to the Lilly Clinical Development Plan and facilitate Lilly's provision to Precision of written copies of any updates or amendments to the Lilly Clinical Development Plan; and

(i) perform any and all tasks and responsibilities that are expressly attributed to the JSC under this Agreement or as otherwise agreed by the Parties in writing.

2.6 **Meetings**. The JSC will meet at least once per Calendar Quarter for so long as the JSC remains in effect. The JSC may conduct such meetings by telephone, videoconference, or in person. Each Party may call special meetings of the JSC with at least [***] prior written notice, or a shorter time period in exigent circumstances, to resolve particular matters requested by such Party that are within the purview of the JSC. Meetings of the JSC are effective only if at least one (1) representative of each Party participates in such meeting. Each Alliance Manager shall be permitted to attend meetings of the JSC, and any Working Group, as a non-voting observer. Each Party may invite a reasonable number of other participants, in addition to its representatives, to attend JSC meetings in a non-voting capacity; provided that if either Party intends to have any Third Party (including any consultant) attend such a meeting, such Party shall provide prior written notice to the other Party. Such Party shall ensure that such Third Party is bound by confidentiality and non-use obligations consistent with the terms of this Agreement. Each Party is responsible for its own expenses incurred in connection with participating in and attending all such meetings. The JSC Co-Chairpersons or their designees shall keep minutes of each JSC meeting that record in writing all decisions made, action items assigned or completed and other appropriate matters. The JSC Co-Chairpersons or their designees shall send meeting minutes to all members of the JSC promptly after a meeting for review. Each JSC member shall have [***] from receipt in which to comment on and to approve the minutes (such approval not to be unreasonably withheld, conditioned or delayed). If a JSC member, within such time period, does not notify the JSC Co-Chairpersons or their designees that s/he does not approve of the minutes, the minutes shall be deemed to have been approved by such member. The Parties acknowledge and agree that, notwithstanding the requirements of this Section 2.6 for the JSC to meet once per Calendar Quarter, the Parties shall communicate and meet (as appropriate, including via the Project Managers) on a more informal basis as needed to discuss the progress of the Programs.

2.7 **Decisions**. The JSC will endeavor to make decisions by consensus, with the representatives of each Party having, collectively, one (1) vote on behalf of that Party. If the JSC cannot reach consensus or a dispute arises that cannot be resolved within the JSC, either Party may refer such dispute to the Executive Officers for resolution. If consensus cannot be reached with respect to a decision within [***] after attempted resolution by the Executive Officers, then (a) Precision has the final decision-making authority with respect to [***], and (b) Lilly has the final decision-making authority with respect to [***]. Further, Precision shall have the right, in coordination with the Project Managers, to make day-to-day decisions on the implementation of the Research Plan by or on behalf of Precision, provided such implementation is consistent with the Research Plan and Lilly does not reasonably object to such implementation.

2.8 **Authority**. The Alliance Managers, Project Managers, JSC, JSC Co-Chairpersons, and each Working Group have only the powers assigned expressly to them in this Article 2 and elsewhere in this Agreement (or in the case of Working Groups, as expressly assigned to them by the JSC). Each Party retains the rights, powers, and discretion granted to it under this Agreement and neither Party may delegate or vest such rights, powers, or discretion in the Alliance Manager, a Project Manager, the JSC, the JSC Co-Chairpersons, or any Working Group, unless expressly provided for in this Agreement or the Parties expressly so agree in writing. The JSC shall not have the power to amend, waive or modify any term of this Agreement, and no decision of the JSC shall be in contravention of any terms and conditions of this Agreement. It is understood and agreed that issues to be formally decided by the JSC are limited to those specific issues that are expressly provided in this Agreement to be decided by the JSC.

2.9 **Discontinuation of JSC**. The JSC will automatically disband on the date which is [***] after the First Commercial Sale of the final Licensed Product. Once disbanded, all approval rights of the JSC, or final decision-making authority granted to a Party pursuant to this Agreement, shall become approval rights of the corresponding Party (i.e., mutual agreement by the Parties or final decision-making authority by a Party). Notwithstanding the foregoing, neither the end of the Research Term nor the disbandment of the JSC pursuant to this Section 2.9 or Section 17.8.3(a)(iii) shall affect the existence of the Patent Working Group, which shall continue to meet during the Term, and the terms of Article 2 shall continue to apply to the Patent Working Group; provided that, notwithstanding the terms of Section 2.7, following disbandment of the JSC, any disputes of the Patent Working Group shall be directly referred to the Executive Officers for resolution, and if consensus cannot be reached with respect to a decision within [***] after attempted resolution by the Executive Officers, then Precision shall have final decision-making authority with respect to such dispute if it pertains to Precision Background IP or Precision Sole IP (in each case, except as otherwise set forth in Section 11.2.2(c)), and Lilly shall have final decision-making authority with respect to all other such disputes.

ARTICLE 3

COLLABORATION TARGETS

3.1 **Lead Targets**. As of the Effective Date, the Collaboration Targets consist only of the specified Target responsible for each of the following diseases: (a) DMD with respect to gene mutations associated with Duchenne Muscular Dystrophy, [***] (such Targets, the "***Lead Targets***"), but Lilly may add or replace Targets, subject to and in accordance with this Article 3.

3.2 **Additional Targets**.

3.2.1 **Additional Target Nomination**. During the period beginning on the Effective Date and ending on the fourth (4th) anniversary of the Effective Date (the "***Initial Target Nomination Period***"), or ending on the sixth (6th) anniversary of the Effective Date if Lilly has extended such period to include the Extended Target Nomination Period as set forth below in this Section 3.2.1, Lilly shall have the right, subject to the terms and conditions of this Agreement, to name up to three (3) additional

Targets to be included as Collaboration Targets under this Agreement in accordance with this Section 3.2.1 ("***Additional Targets***"). Lilly may exercise such right in its sole discretion at any time during the Initial Target Nomination Period by providing written notice to Precision, through the JSC, specifying the identity of the Target that Lilly desires to include as an Additional Target under this Agreement (a "***Nomination Request***"), provided that if such Target is an Unavailable Target at the time Precision receives such Nomination Request, then Precision shall within [***] of receipt (the "***Unavailability Notice Period***") of the Nomination Request provide written notice to Lilly that such Target is an Unavailable Target, and such Nomination Request shall have no further effect. If the Target specified in such Nomination Request is not an Unavailable Target, then such Target shall be deemed an Additional Target upon receipt of such Nomination Request by Precision. Lilly shall have the right, in its sole discretion, to extend the period during which it may name Additional Targets to include the period beginning on the fourth (4th) anniversary of the Effective Date and ending on the sixth (6th) anniversary of the Effective Date (the "***Extended Target Nomination Period***") by notifying Precision of such decision to extend and paying Precision a one-time fee of [***] (the "***Extended Target Nomination Period Fee***") prior to the end of the Initial Target Nomination Period. Any Additional Target added pursuant to this Section 3.2 shall be deemed a Collaboration Target for purposes of this Agreement, except if replaced pursuant to Section 3.3.

3.2.2 **Target Nomination Fee**. As consideration for adding a Target as an Additional Target, Lilly shall pay to Precision a one-time fee (the "***Target Nomination Fee***") of [***] within [***] following the date on which the Unavailability Notice Period expires following Lilly's delivery to Precision of the Nomination Request that resulted in such Target becoming an Additional Target; provided, that if [***]. Lilly shall pay the applicable Target Nomination Fee for each Target that Lilly selects to be included as an Additional Target.

3.3 **Replacement Targets**.

3.3.1 **Target Replacement**. On a Collaboration Target-by-Collaboration Target basis, during the period beginning on the Effective Date and ending on the earlier of (a) [***] following Lilly's receipt of the IND Enabled Data Package for the Licensed Product Directed Against such Collaboration Target in accordance with the applicable Research Plan and (b) the [***] of the expiration of the Target Nomination Period (or, if applicable, the Extended Target Nomination Period), Lilly shall have the right, subject to the terms and conditions of this Agreement, to replace up to two (2) Collaboration Targets (whether Lead Targets or Additional Targets) with a replacement Target (each, a "***Replacement Target***") if Lilly determines in good faith, either [***]; provided, that Unavailable Targets shall not be eligible to be selected by Lilly as Replacement Targets. Lilly may exercise such right in its sole discretion by providing written notice to Precision, through the JSC, specifying the identity of the Target that Lilly desires to include as a Collaboration Target under this Agreement (the "***Proposed Replacement Target***") (which, for avoidance of doubt, may include an Independently Developed Target, subject to Section 3.4) as well as the Collaboration Target to be replaced (a "***Replacement Request***"). If the Proposed Replacement Target is an Unavailable Target at the time Precision receives such Replacement Request, then

Precision shall within [***] of receipt of the Replacement Request (the "***Replacement Availability Notice Period***") provide written notice to Lilly that the Proposed Replacement Target is an Unavailable Target, and such Replacement Request shall have no further effect. If the Proposed Replacement Target specified in such Replacement Request is not an Unavailable Target, then the replaced Collaboration Target will be deemed an Unavailable Target and not a Collaboration Target, and the Proposed Replacement Target will be deemed a Collaboration Target, upon receipt of such Replacement Request by Precision. For avoidance of doubt, a Replacement Target that replaces a Collaboration Target may itself be eligible to be replaced by a Replacement Target in accordance with this Section 3.3.1, provided Lilly has not already exhausted its two (2) replacements.

3.3.2 **Replacement Fee**. As consideration for adding a Target as a Replacement Target, Lilly shall pay to Precision a one-time fee (the "***Replacement Fee***") of [***] within [***] following expiration of the Replacement Availability Notice Period following Lilly's delivery to Precision of the Replacement Request that resulted in such Target becoming a Replacement Target; provided, that if [***], provided further, that if [***]. Lilly shall pay the applicable Replacement Fee for each Target that Lilly selects to be included as a Replacement Target.

3.4 **Precision Independently Developed Targets**. During the Target Nomination Period and continuing through the Extended Target Nomination Period, if applicable, and provided Lilly has not already named three (3) Additional Targets, if Precision initiates internal pre-clinical development (i.e., initiates any studies *in vivo*) of an *in vivo* gene editing product Directed Against a Target other than a Collaboration Target or Unavailable Target (an "***Independently Developed Target***"), Precision shall promptly notify Lilly, via the JSC, upon initiation of such work on the Independently Developed Target. Precision shall thereafter [***] for a period of [***]. If Lilly does not elect to deliver a Nomination Request pursuant to Section 3.2.1 or Replacement Request pursuant to Section 3.3.1 (if applicable) specifying the Independently Developed Target as an Additional Target or Replacement Target prior to [***], [***]. Following such notification, and provided that such Independently Developed Target has not become an Unavailable Target, Precision shall provide Lilly, via the JSC, periodic status updates, including summarizing preclinical research results regarding such *in vivo* gene-editing product Directed Against such Independently Developed Target through the first small animal proof-of-concept study (or the first large animal proof-of-concept study, if initiated without prior small animal proof-of-concept) (a "***PC POC Study***"), which updates shall be reasonably sufficient (subject to available information) to enable Lilly to determine whether to include the Independently Developed Target as an Additional Target or Replacement Target. Subject to the terms and conditions of this Agreement, at any time prior to the date that is [***] following the date on which the results of the PC POC Study are delivered to Lilly (the "***IDT Nomination Period***"), Lilly may, in its sole discretion, elect to deliver a Nomination Request pursuant to Section 3.2.1 or Replacement Request pursuant to Section 3.3.1 (if applicable) specifying the Independently Developed Target as an Additional Target or Replacement Target. If the Independently Developed Target becomes an Additional Target pursuant to Section 3.2.1 or Replacement Target pursuant to Section 3.3.1, if applicable, then such Target shall be deemed a Collaboration Target and not an Independently Developed Target, and Lilly shall pay the applicable Target Nomination Fee pursuant to Section 3.2.2 or Replacement Fee pursuant to Section 3.3.2. If such Independently Developed Target does not become an Additional Target or

Replacement Target prior to the expiration of the IDT Nomination Period, then upon such expiration, Lilly shall have no further rights to such Independently Developed Target and such Independently Developed Target will be deemed an Unavailable Target. Upon the expiration of the Target Nomination Period (or, if applicable, the Extended Target Nomination Period) or once Lilly has named three (3) Additional Targets (whichever occurs first), Precision's obligations under this Section 3.4 with respect to any Independently Developed Targets shall cease to apply, and all then-existing Independently Developed Targets and any Independently Developed Targets for which Precision thereafter initiates internal pre-clinical development will be deemed Unavailable Targets and not eligible to be named as Replacement Targets. As of the Execution Date, Targets (for avoidance of doubt, other than the Lead Targets and Reserved Targets) with respect to which Precision has already completed a PC POC Study are listed on Exhibit 3.4 attached hereto, and are additionally deemed Unavailable Targets [***].

3.5 **Reserved Targets**. During the period beginning on the Effective Date and ending on (a) the earliest to occur of [***] in the case of [***], and (b) on the [***], in the case of [***] (each period, with respect to the applicable Reserved Target, the "***Reserved Target Period***"), Lilly may name a Reserved Target as an Additional Target or Replacement Target, if applicable. During the applicable Reserved Target Period: (x) Precision will provide quarterly updates to Lilly regarding Precision's development efforts (if any) with respect to each Reserved Target, including updates on clinical trials of compounds directed to such Reserved Targets as data from such trials becomes available; and (y) the Reserved Target shall not be considered an Unavailable Target. If a Reserved Target is not named by Lilly as an Additional Target or Replacement Target during the applicable Reserved Target Period, then from and after the expiration of such Reserved Target Period, such Reserved Target will be deemed an Unavailable Target and not a Reserved Target. Notwithstanding the foregoing, in the case of [***], if the Reserved Target Period expires on the [***] of the Effective Date pursuant to Section 3.5(a)(i), [***] shall cease to be a Reserved Target upon expiration of the Reserved Target Period but shall not be deemed to be an Unavailable Target as a result of such expiration.

3.6 [***].

3.7 [***].

3.8 **Unavailable Targets**. Promptly following the Effective Date, the Parties shall agree upon an independent Third Party to serve as an escrow agent for purposes of this Section 3.8 (the "***Escrow Agent***"). Following agreement on the Escrow Agent, if any Target becomes or has become an Unavailable Target after the Effective Date, Precision shall submit a complete and accurate list of Unavailable Targets along with a copy of the applicable agreement, term sheet, or letter of intent related to each of such Unavailable Targets, which copies may be submitted in redacted form (the "***Unavailable Target Information***"), to the Escrow Agent, and shall provide the Escrow Agent with updated Unavailable Target Information promptly upon any Target becoming an Unavailable Target or losing its status as an Unavailable Target. Unavailable Target Information shall be held by the Escrow Agent in confidence. If Lilly delivers a Nomination Request pursuant to Section 3.2.1 or Replacement Request pursuant to Section 3.3.1 that specifies an Unavailable Target, then by written notice to Precision and to the Escrow Agent, Lilly may require the Escrow Agent to confirm to Lilly that such Target is an Unavailable Target. In response to a particular Nomination Request or Replacement Request, the Escrow

Agent shall not provide to Lilly the identity of any other Target that appears on the list of Unavailable Targets or any details regarding any agreement (draft of otherwise), term sheet or letter of intent related to any Unavailable Target, other than such confirmation.

3.9 **Reservation of Rights**. Precision will be free to grant rights for any Target that is not a Lead Target, Additional Target or Reserved Target (including any Independently Developed Target [***] or Unavailable Target) to any Third Party at any time.

ARTICLE 4

RESEARCH AND PRE-CLINICAL DEVELOPMENT

4.1 **Overview and Responsibilities**. Precision and Lilly will collaborate in a Research and Pre-Clinical Development program (the "***Research Program***") with the goal of Researching and Pre-Clinically Developing Licensed Products based on Precision's ARCUS Technology, focusing on diseases resulting from genetic variations or mutations in the Collaboration Targets. During the Research Term, Precision will lead and be primarily responsible for all Research and Pre-Clinical Development for all Licensed Products associated with Collaboration Targets, as specifically set forth in the applicable Research Plans, including that Precision will (a) design, create, select, develop and optimize an ARCUS Nuclease for each Collaboration Target to support pre-clinical *in vitro* and *in vivo* evaluation, candidate selection, Regulatory Filings, and potential Clinical Development by Lilly of the Licensed Product for such Collaboration Target, and (b) generate an IND Enabled Data Package to enable Lilly to, at its sole election and discretion, determine whether to proceed to Clinical Development for the applicable Licensed Product pursuant to Section 4.5. All such Research and Pre-Clinical Development shall be at Precision's sole cost and expense, except that Lilly will fund the cost of certain Precision FTEs, as further set forth in Section 4.7 below. For the avoidance of doubt, Lilly will be responsible at its sole cost and expense for all cGMP CMC development, as further set forth in Section 6.3.5.

4.2 **Diligence Efforts**. Each Party shall use Commercially Reasonable Efforts to execute and to perform, or cause to be performed, in a good scientific manner and in compliance with Applicable Law, the Research and Pre-Clinical Development activities assigned to it in each Research Plan.

4.3 **Research Term**.

4.3.1 The Research Program shall be conducted, on a Collaboration Target-by-Collaboration Target basis, for a period commencing on the Effective Date (with respect to Lead Targets) or the date on which Lilly names the applicable Additional Target or Replacement Target as Collaboration Targets in accordance with Article 3 (with respect to Additional Targets and Replacement Targets) (the "***Research Term Commencement Date***"), and, except as set forth in the first sentence of Section 4.3.2, continuing until Precision's delivery of an IND Enabled Data Package for the Licensed Product with respect to such Collaboration Target in accordance with Section 4.5 (each, the "***Research Term***").

4.3.2 If, at any point more than [***] following initiation of activities under the applicable Research Plan for a particular Collaboration Target, [***].

4.4 **Research Plans**.

4.4.1 **Content**. The Parties shall conduct the Research Program for each Collaboration Target pursuant to a comprehensive written research plan (each, a "***Research Plan***") that sets forth, for each Research Program: (a) the objective of the applicable Research Plan and the Research and Pre-Clinical Development activities to be conducted by each of the Parties, and the allocation of activities between the Parties (to the extent Lilly agrees to conduct such activities); (b) the expected resources to be allocated to and the anticipated number of FTEs to be dedicated to performing such Research and Pre-Clinical Development, including the number of FTEs for which Lilly will provide funding pursuant to Section 4.7.1; (c) the anticipated timeline and milestones of such activities; (d) the categories of data specifically required to be included in the IND Enabled Data Package and the process for preparation and provision to Lilly of the IND Enabled Data Package; (e) the Success Criteria that Lilly will apply to the data in the IND Enabled Data Package to make its determination as to whether the Development Candidate Directed Against such Collaboration Target should be Clinically Developed as a Licensed Product; and (f) upon selection, the identity of the ARCUS Nuclease that is the subject of the Research Program for such Collaboration Target. The Research Plan(s) for the Lead Targets are attached hereto as Exhibit 4.4.1 (the "***Initial Research Plan(s)***"). The Research Plan(s) for Additional Targets and any Replacement Targets shall be drafted by Precision within [***] following Lilly's delivery to Precision of (i) a Nomination Request pursuant to Section 3.2.1 with respect to an Additional Target or (ii) a Replacement Request pursuant to Section 3.3.1 with respect to a Replacement Target, as applicable, and shall substantially follow, in form and substance, the form of the Initial Research Plans, except to the extent the Parties agree to any deviations from such form with respect to any particular Additional Target or Replacement Target. The JSC shall approve such Research Plan within [***] of submission of such Research Plan to the JSC.

4.4.2 **Approval and Amendments**. The JSC shall regularly review the Research Plans (including the coordination of the activities across Research Programs and to account for the number of active Research Plans at any given time) and the progress of activities being conducted under the Research Plans, in no event less frequently than once each Calendar Year. Either Party may propose amendments to the Research Plan for a particular Research Program from time to time as appropriate, to take into account completion, commencement, or cessation of activities contemplated in the then-current Research Plan for such Research Program or any newly available information related to such Research Program. Such amendments shall be effective upon JSC approval and subject to the decision making in accordance with Section 2.7, provided that any amendment to the requirements for an IND Enabled Data Package shall be subject to mutual agreement of the Parties. The Parties shall update the Research Plans as appropriate to account for the change in activities thereunder as a result of any amendment to such requirements for the IND Enabled Data Package.

4.5 **IND Enabled Data Package and Selection of Clinical Development Candidate**. For each Collaboration Target, Precision shall use Commercially Reasonable Efforts during the applicable Research Term to deliver an IND Enabled Data Package for the applicable Licensed Product to Lilly (such Licensed Product, a "***Development Candidate***") in accordance with the applicable Research Plan. Notwithstanding anything to the contrary in this Agreement, Precision's obligations under the Research Plan and obligations to deliver an IND Enabled Data Package shall not be construed as an obligation to achieve any Success Criteria or a guarantee that any Research or Pre-Clinical Development efforts will be successful. Lilly shall have [***] from Lilly's receipt of the IND Enabled Data Package to review the IND Enabled Data Package and either (a) confirm the compliance of such IND Enabled Data Package with the requirements of the applicable Research Plan or (b) identify any required data that Precision has failed to provide, in which case Precision will complete the Research and Development activities in the Research Plan with respect to the Development Candidate in order to provide such required data and such [***] period shall be tolled for the duration of such activities. Precision shall have no obligation to perform any additional Research or Development activities not specifically set forth in the Research Plan unless such additional Research or Development activities, as applicable, are mutually agreed upon by the Parties. Within [***] following Lilly's receipt of the IND Enabled Data Package (as such period may be tolled pursuant to clause (b) above in order for Precision to complete the required Research and Development activities in accordance with the applicable Research Plan), Lilly shall notify Precision of Lilly's determination as to whether Lilly will elect to pursue Clinical Development with respect to such Development Candidate. If Lilly elects to pursue Clinical Development with respect to such Development Candidate, then the provisions of Article 5 shall apply with respect to such Development Candidate. If Lilly elects not to advance such Development Candidate to Clinical Development, or fails to provide notice that it elects to pursue such Clinical Development within such [***] period, subject to any tolled duration, then the applicable Collaboration Target will cease to be a Collaboration Target and the relevant Licensed Product will be deemed a Terminated Product, and all rights in such Terminated Product shall revert to Precision in accordance with Section 15.5.3.

4.6 **Records; Reports**.

4.6.1 **Records**. Precision (and Lilly, to the extent any Research or Pre-Clinical Development activity is assigned to Lilly under a Research Plan) shall maintain, or cause to be maintained[***] complete and accurate records of its Research and Pre-Clinical Development data and results for each Program in sufficient detail and in a good scientific manner appropriate for scientific, patent, and regulatory purposes, which records will reasonably reflect all work performed by or on behalf of such Party under the Research Plan for each Research Program. Lilly may request a copy of any such records of Precision, except that Precision may redact any portion of such records that Precision reasonably determines to constitute Confidential Proprietary Information that is not licensed to Lilly hereunder, or to which Lilly does not otherwise have a right hereunder.

4.6.2 **Reports and Data Package**. Precision (and Lilly, to the extent any Research or Pre-Clinical Development activity is assigned to Lilly under a Research Plan) shall regularly report to the other Party through the JSC (or its designated Working Group) its results in conducting Research and Pre-Clinical Development under the Research Plan for each Research Program. For each Research Program, Precision shall provide the JSC

with: (a) the deliverables set forth in the Research Plan for such Research Program in accordance with such Research Plan, including a written report summarizing the data and information generated under each Research Program, within [***] after the completion of Precision's Research and Pre-Clinical Development for such Program; and (b) on a [***] basis during the applicable Research Term, all data and results generated by or on behalf of Precision in performance of the Research and Pre-Clinical Development for such Research Program under this Agreement. In no event will Precision be required to provide Lilly or the JSC any data, results, or information outside the scope of the Research Plan.

4.7 **Research Program Funding.**

4.7.1 **Precision Research Costs**. All Research and Pre-Clinical Development conducted by Precision shall be at Precision's sole cost and expense, except that Lilly will fund the designated number of Precision FTEs set forth in Table 4.7.1 below at the FTE Rate (the "***Precision FTE Costs***"). Lilly shall provide such funding for each year of the applicable Research Term for such Research Program at the designated number of Precision FTEs for such year specified in Table 4.7.1 below, provided that [***]. Lilly shall bear its own internal costs and out-of-pocket expenses with respect to any Research or Pre-Clinical Development that Lilly conducts for each Program.

Table 4.7.1

For all three Lead Targets collectively:	**Yr1**	**Yr2**	**Yr3**	**Yr4**
Precision FTEs funded by Lilly	[***]	[***]	[***]	[***]

For each Additional Target or Replacement Target:	**Yr1**	**Yr2**	**Yr3**	**Yr4**
Precision FTEs funded by Lilly	[***]	[***]	[***]	[***]

4.7.2 **Precision FTE Funding Procedure**. Precision shall invoice Lilly for Precision FTE Costs for each Research Program pursuant to Section 4.7.1 on a quarterly basis within [***] following the end of the applicable Calendar Quarter. Lilly shall pay the amounts payable under any such invoice within [***] following receipt of such invoice by Lilly.

4.8 **Certain Standards Applicable to Work**. All Research and Pre-Clinical Development conducted by either Party for non-regulated work under this Agreement will be conducted in accordance with the Research Plans, Eli Lilly and Company Good Research Practices, Lilly Principles for Animal Care and Use for Third Party Organizations and all Applicable Laws, including those regarding data privacy and data security. For purposes of this Agreement, "***Eli Lilly and Company Good Research Practices***" means the compiled set of shared research quality standards defining how Lilly's research laboratories conduct good science for non-regulated work as set forth in Exhibit 4.8 Part A. For purposes of this Agreement, "***Lilly Principles for Animal Care and Use for Third Party Organizations***" means the guidelines relating to animal care and use for research done on behalf of Lilly as set forth in Exhibit 4.8 Part B. If Lilly reasonably requests, Precision will complete a self-assessment examination form based on such quality standards. If it has not done so prior to the Effective Date, a duly authorized representative of Lilly may make an on-site visit to Precision for the

purpose of conducting a quality assessment or quality audit for non-regulated work. Additionally, Lilly may conduct compliance audits of Precision and/or Precision's Affiliates and Third Party subcontractors engaged in work related to this agreement, during normal business hours, no more than once annually, except in the case of audits for cause to ensure compliance with applicable cGCP, GLP, GRP or cGMP requirements or as otherwise set forth in Section 6.3, provided Lilly has requested such audit with written notice of at least [***] and such audit does not unreasonably interfere with Precision's or its Affiliates' or Third Party subcontractors' operations. Lilly's representative performing such audit shall keep confidential any information obtained during such inspection. All such audits shall be done at Lilly's cost and expense and in accordance with Article 14.

4.9 **Subcontracting**. Each Party may engage its Affiliates or Third Party subcontractors (including contract research organizations and contract manufacturing organizations) to perform such portions of its research obligations under the Research Program that it customarily engages for its other similar research activities. The activities of any such Third Party subcontractors will be considered activities of such subcontracting Party under this Agreement. The subcontracting Party shall ensure compliance by such Third Party subcontractors with the terms of this Agreement, including any applicable Research Plans. The subcontracting Party shall ensure, prior to engaging any Third Party subcontractor, that such Third Party subcontractor is subject to written agreements containing terms and conditions that: (a) protect the rights of the Parties under this Agreement, including by imposing obligations of confidentiality on each such Third Party subcontractor that are no less than the obligations of confidentiality on each Party under this Agreement and obligations consistent with the intellectual property provisions of Article 11; (b) do not under any circumstance impose any payment obligations or liability on the non-subcontracting Party; and (c) are otherwise consistent with the terms of this Agreement.

4.10 **Lilly Materials**. In the event that it is necessary to execute the Research Plan, Lilly may need to transfer certain Lilly materials to Precision that are not otherwise delivered under a supply or other separate agreement between the Parties or their Affiliates. In each such case, the Parties will mutually agree on the terms of such material transfer, which in any case shall be subject to the terms of Article 11 of this Agreement. Any such materials provided to Precision shall be accompanied by a materials transfer record substantially in the form of Exhibit 4.10 (each a "***Materials Transfer Record***"). In the event of such transfer, unless otherwise mutually agreed, Lilly shall be responsible for obtaining all necessary approvals and/or filings as required under Applicable Laws for the exportation of any such materials to Precision and Precision shall be responsible for obtaining all necessary approvals and/or filings as required under Applicable Laws for their importation and use by Precision**.**

4.11 **Precision Materials**. In order to execute the Research Plan, Precision may need to transfer certain materials to Lilly that are not otherwise delivered under a supply or other separate agreement between the Parties or their Affiliates ("***Precision Materials***"). These Precision Materials will be used by Lilly only for Development work pursuant to this Agreement. Unless otherwise mutually agreed, Precision shall be responsible for obtaining all necessary approvals and/or filings as required under Applicable Laws for the exportation of Precision Materials to Lilly and Lilly shall be responsible for obtaining all necessary approvals and/or filings as required under Applicable Laws for their importation and use by Lilly. All

Precision Materials will at all times remain the property of Precision and will be held confidential in respect to Third Parties and will not be transferred to a Third Party (other than a Sublicensee or a subcontractor engaged in accordance with Section 4.9) without prior written permission of Precision. Upon the termination of this Agreement, Lilly will, at Precision's sole discretion and Lilly's cost, either (a) dispose of any residual Precision Materials not consumed by Lilly in the performance of this Agreement in accordance with Applicable Laws, or (b) upon request, return such Precision Materials to Precision. Any such materials provided to Lilly by Precision shall be accompanied by a Materials Transfer Record.

ARTICLE 5

CLINICAL DEVELOPMENT AND REGULATORY MATTERS

5.1 **Clinical Development Responsibilities**. Lilly shall lead, and have sole responsibility and control for, the Clinical Development of all Licensed Products, including the determination of whether to file an IND with respect to any Licensed Product and for preparation and submission of the IND filing for each Licensed Product. Subject to the terms of this Agreement, all decisions concerning the Clinical Development of Licensed Products, including the clinical and regulatory strategy of Licensed Products covered under this Agreement, shall be within the sole discretion of Lilly. Except if Precision exercises its option to co-fund Clinical Development of a Licensed Product pursuant to Section 5.3 below (in which case Section 5.3 shall apply), Lilly shall be solely responsible (as between the Parties) for all costs and expenses of Clinical Development. Upon request of either Party, the Parties shall negotiate and agree on any additional agreements necessary for the Clinical Development of Licensed Products. Following the Effective Date, and until the date which is [***], Precision shall, on a Calendar Quarterly basis, share with Lilly, through the JSC, [***].

5.2 **Diligence Efforts**. Lilly shall use Commercially Reasonable Efforts to Clinically Develop each Licensed Product [***], in accordance with a commercially reasonable development plan prepared by Lilly. However, if Lilly elects, in its sole discretion, to cease Clinical Development of a Licensed Product [***], then the applicable Collaboration Target for such Licensed Product will cease to be a Collaboration Target and the Licensed Product will be deemed a Terminated Product, and all rights in such Terminated Product shall revert to Precision in accordance with Section 15.5.3.

5.3 **Precision Option to Co-Fund Clinical Development**.

5.3.1 Provided that two (2) Licensed Products have advanced to submission of an IND filing, Precision shall have a one-time option, exercisable at any time prior to the anticipated date of submission of an IND filing for a subsequent Licensed Product (such date as set forth in the applicable Research Plan), to elect to co-fund the Clinical Development of a single such subsequent Licensed Product with Lilly. Precision may indicate its interest to exercise such option by providing Lilly with [***] written notice (the "***Co-Funding Option Interest Notice***" with respect to such Licensed Product) in advance of the anticipated IND filing; provided, however, if Lilly has not yet elected to pursue Clinical Development with respect to such Licensed Product by such date, Precision may indicate such interest by providing a Co-Funding Option Interest Notice

within [***] of Lilly's election. Upon delivery of the Co-Funding Option Interest Notice, the applicable Licensed Product shall, in addition to its status as a Licensed Product, be deemed a prospective "***Co-Funded Product***".

5.3.2 Within [***] of receipt of the Co-Funding Option Interest Notice with respect to a prospective Co-Funded Product, Lilly shall provide Precision with a copy of Lilly's then-current, internal plan for Clinical Development (the "***Lilly Clinical Development Plan***") therefor. The Lilly Clinical Development Plan shall include, at a minimum, Lilly's good faith then-current estimates of Clinical Development Expenses and timeline for the conduct of the Clinical Development activities contemplated by such Lilly Clinical Development Plan for such Co-Funded Product, broken down on a Calendar Quarterly basis. Lilly, through the JSC, shall timely answer any of Precision's reasonable questions relating to such Lilly Clinical Development Plan and shall make available to the JSC, on a Calendar Quarterly basis, a copy of the Lilly Clinical Development Plan, and any updates or amendments thereto, and anticipated Clinical Development Expenses to be incurred in the upcoming Calendar Quarters. Within [***] of receipt of such Lilly Clinical Development Plan, Precision may elect to confirm its interest in co-funding the prospective Co-Funded Product by delivering a written "***Co-Funding Option Exercise Notice***", at which time Precision's co-funding right shall be deemed fully exercised and such Co-Funded Product shall become subject to the remaining terms of this Section 5.3 and any other related terms agreed to between the Parties with respect to such Co-Funded Product. If Precision does not deliver a Co-Funding Option Exercise Notice within such [***] period, such Licensed Product shall cease to be considered a prospective Co-Funded Product and Precision shall have no further rights under this Section 5.3 with respect to such Licensed Product. For clarity, Precision may only exercise the foregoing right to co-fund a Licensed Product one time, regardless of any later termination of Precision's co-funding commitment under Section 5.3.6, with respect to only one (1) Licensed Product, and such option to co-fund Clinical Development shall not apply to the first two (2) Licensed Products to advance to submission of an IND filing.

5.3.3 Notwithstanding any co-funding by Precision, Lilly will at all times continue to have sole control and responsibility for the Clinical Development of any Co-Funded Product.

5.3.4 If Precision so elects to co-fund the Clinical Development of a Co-Funded Product (as provided above), then following the full exercise of such right, (i) the Parties will share Clinical Development Expenses incurred thereafter for such Co-Funded Product, with Precision being responsible for [***] of such Clinical Development Expenses and Lilly being responsible for [***] of such Clinical Development Expenses; and (ii) thereafter the royalties owed by Lilly to Precision for such Co-Funded Product will be automatically increased by [***] for each Royalty tier. Lilly shall invoice Precision for reimbursement of Precision's co-funding share on a quarterly basis in arrears, within [***] following the end of the Calendar Quarter in which the relevant expenses were incurred. Precision shall then have [***] after its receipt of such invoice to review such invoice and raise any disputed amounts to Lilly. If Precision does not dispute any amounts payable under an applicable invoice during such period, then Precision shall pay

the amounts payable under any such invoice in arrears and within [***] following such [***] review period (i.e., [***] after its receipt of such invoice).

5.3.5 For the duration of Precision's co-funding commitment, and for a period of [***] thereafter, Lilly shall maintain, and shall cause its Affiliates to maintain, complete and accurate records regarding the co-funded Clinical Development Expenses invoiced by Lilly. Precision shall have the right to have a "Big 4" accounting firm (i.e., KPMG, PwC, Deloitte or Ernst & Young), designated by Lilly and approved by Precision, such approval not to be unreasonably withheld, inspect Lilly's records for the purpose of determining the accuracy of such expenses in accordance with Section 9.7 applied *mutatis mutandis* (subject to appropriate changes related to the subject matter of the audit).

5.3.6 Precision may terminate its co-funding commitment for a Co-Funded Product upon delivery of written notice to Lilly, specifying in such notice that Precision is terminating its co-funding commitment, with such termination being effective as of midnight New York, NY time on the last day of the Calendar Quarter following the [***] of the date on which such written notice was received by Lilly in accordance with Section 17.4; provided, that (i) Precision shall not be released of its obligation to share Clinical Development Expenses associated with any Clinical Trials with respect to which [***], and (ii) effective immediately upon Precision's provision of such notice to Lilly, [***]. Upon the effective date of termination of Precision's co-funding commitment, the applicable Co-Funded Product shall cease to be a Co-Funded Product and the adjusted royalties set forth in Section 5.3.4 will no longer apply.

5.4 **Reports**. Lilly shall keep Precision reasonably informed as to the progress and results of its and its Affiliates' and Sublicensees' Clinical Development activities under this Agreement, and shall provide Precision with a written report describing its Clinical Development activities and the results thereof on at least [***] basis. In addition, Lilly shall make available to the JSC such additional information about its Clinical Development activities under this Agreement as may be reasonably requested from time to time. Lilly's obligations under this Section 5.4 shall cease with respect to a Licensed Product [***].

5.5 **Regulatory Responsibilities**.

5.5.1 **Lilly Responsibility and Control**. Subject to Section 5.5.2 and Section 5.5.3, except as provided under a Research Plan, as between the Parties, Lilly shall have sole responsibility for and control of the preparation, submission, and maintenance of all Regulatory Filings (using the IND Enabled Data Package provided by Precision) and obtaining and maintaining all Regulatory Approvals (including the preparation and submission of the IND filing and for seeking IND approval) with respect to Licensed Products, and shall have sole control over all interactions with the applicable Regulatory Authority, including all correspondence to or with the applicable Regulatory Authority. Precision shall reasonably cooperate with Lilly, at Lilly's reasonable request and expense, with respect to any regulatory matters related to Licensed Products. Subject to Section 15.5.3, Lilly will own all right, title and interest in and to any and all Regulatory Filings and Regulatory Approvals for Licensed Products and, as between the Parties, all such Regulatory Filings and Regulatory Approvals will be held in the name of Lilly. Precision

shall execute all documents and take all actions as are necessary or reasonably requested by Lilly to vest such title in Lilly. If Precision exercises its option to co-fund Clinical Development of a Licensed Product pursuant to Section 5.3, Lilly shall, upon reasonable request by Precision, provide Precision copies of Regulatory Documentation and Regulatory Filings and correspondence to or with the applicable Regulatory Authorities with respect thereto (including minutes and official contact reports relating to any communications with such Regulatory Authority) that pertain only to the Licensed Product for which Precision is co-funding Clinical Development in accordance with Section 5.3.

5.5.2 **Precision Responsibility and Control**. As between the Parties, during the Research Term, Precision shall be responsible for preparing the draft INTERACT filing, pre-IND Regulatory Filings, the portion of the IND filing which relates to Manufacturing or which relates to any Research or Clinical Development activities under Precision's control, and all non-clinical and CMC reports, in each case, as reasonably required by Lilly for inclusion in the first IND filing for each Licensed Product for which an IND filing is anticipated. Precision shall, in consultation with Lilly, prepare all such draft filings and reports, and provide Lilly with copies of any such filings and reports, in each case, in a timely manner to permit Lilly to make the applicable Regulatory Filing without delay. Lilly shall, upon request by Precision, allow Precision access to all of Lilly's correspondence with any applicable Regulatory Authorities for the purpose of preparing such draft Regulatory Filings and reports pursuant to this Agreement.

5.5.3 **ARCUS Nuclease Matters**. Notwithstanding Lilly's sole responsibility and control with respect to regulatory matters involving Licensed Products, Precision shall have the right, prior to BLA approval for each Licensed Product, to have its employees attend each INTERACT meeting or pre-IND submission meeting, the end of the Phase II Clinical Trial meeting for such Licensed Product, and any other meeting with the FDA or EMA if such other meeting has any item on the agenda directed to the manufacturing, quality, safety (including non-clinical safety related to production of ARCUS Nucleases) or delivery of ARCUS Nucleases or ARCUS Technology (collectively, "***ARCUS Regulatory Matters***"); provided, that such employees shall only be permitted to attend the portion of such meeting addressing such agenda items. Prior to BLA approval for each Licensed Product, Lilly will provide drafts of its communications with the FDA and EMA to the extent they relate to ARCUS Regulatory Matters to Precision for review and comment, and will consider Precision's comments in good faith, but need not accept such comments, before submitting such communications to the FDA or EMA. Following BLA approval for each Licensed Product, Lilly shall provide Precision notice regarding any communications from Regulatory Authorities related to ARCUS Regulatory Matters, and Precision shall make itself and relevant employees available to Lilly, upon Lilly's reasonable request, to address such communications. Following the Effective Date, and until the date which is [***], Precision shall, on a Calendar Quarterly basis, keep Lilly apprised, through the JSC, of [***].

5.5.4 **Priority Review Vouchers**. If a U.S. FDA priority review voucher is obtained for a Licensed Product, it may only be used for a subsequent BLA filing for another Licensed Product or another product of Lilly or its Affiliates, or sold. If

such priority review voucher is sold by Lilly to a Third Party, Lilly will pay Precision a priority review voucher fee in the amount of [***]. If however, the priority review voucher is used for a product of Lilly or its Affiliates other than a Licensed Product, Lilly will pay Precision a priority review voucher fee in the amount of [***].

5.6 **Adverse Event Reporting**. Lilly shall establish, hold, and maintain the global safety database for Licensed Products with respect to information on adverse events concerning the Licensed Products, as and to the extent required by Applicable Law.

5.7 **Right of Reference**. If [***] then each Party hereby grants, and shall cause its Affiliates and sublicensees to grant, at no cost, to the other Party, its Affiliates and any of their respective sublicensees that has granted the granting Party and each of its Affiliates a reciprocal right, a "Right of Reference", as that term is defined in 21 C.F.R. § 314.3(b), to any data and Regulatory Filings Controlled by such granting Party or its Affiliates or sublicensees that relates to [***], and the granting Party will provide, and shall cause its Affiliates and sublicensees to provide, a signed statement to the foregoing effect, if so requested by the other Party in accordance with 21 C.F.R. § 314.50(g)(3).

ARTICLE 6

COMMERCIALIZATION AND MANUFACTURING

6.1 **Commercialization**. Except with respect to Precision's manufacturing responsibilities in Section 6.3 or as set forth in any related Supply Agreement or Quality Agreement, Lilly shall have the sole right and responsibility for, and shall bear all costs associated with, the Commercialization of Licensed Products, including Manufacturing, distribution, marketing, and sales activities. Subject to the terms of this Agreement, all decisions concerning Commercialization of Licensed Products, including the marketing and sales of Licensed Products, and the design, price, and promotion of Licensed Products, shall be within Lilly's sole discretion.

6.2 **Diligence Efforts**. Lilly shall use Commercially Reasonable Efforts to achieve a First Commercial Sale for, and thereafter to Commercialize in the applicable country, each Licensed Product for which it obtains Regulatory Approval [***].

6.3 **Manufacturing.**

6.3.1 **Manufacture of Licensed Products**.

(a) **Pre-Clinical Development**. Precision shall be responsible for Manufacture of Licensed Products to support Pre-Clinical Development up to and including the conduct of GLP Toxicology Studies pursuant to the applicable Research Plans with respect to such Licensed Products.

(b) **First Clinical Trial of a Licensed Product**. With respect to the first Licensed Product to proceed to a Clinical Trial under this Agreement (the "***First Clinical Product***"), and for each subsequent Licensed Product to proceed to Clinical Trials if Lilly notifies Precision in writing that it desires Precision to Manufacture a Licensed Product for the

first Clinical Trial of such subsequent Licensed Product at least [***] prior to the anticipated date of IND filing set forth in the Research Plan for such Licensed Product, Precision shall be responsible for Manufacturing (or having Manufactured through a contract manufacturing organization ("***CMO***")) such Licensed Product in order to supply clinical trial material for the first Clinical Trial of such Licensed Product pursuant and subject to the terms and conditions of the Clinical Supply Agreement. Any CMO proposed by Precision shall be audited by Lilly for cGCP, GLP, GRP or cGMP requirements and must be approved in advance in writing by Lilly (such approval not to be unreasonably withheld, conditioned or delayed). Subject to completion of, and Lilly's satisfaction with the results of, a GQAAC audit thereof and subject to Lilly's right to conduct additional audits thereof to confirm ongoing compliance with the applicable Quality Agreement, Lilly agrees that Precision and its Affiliates are deemed to be approved for Manufacture of Licensed Products. Following completion of a Manufacturing Technology Transfer with respect to any Licensed Product pursuant to Section 6.3.2(a) and completion of any supply of such Licensed Product required under this Section 6.3.1(b) or Section 6.3.1(c), Precision shall have no further obligations under this Agreement with respect to Manufacture of such Licensed Product.

(c) **Subsequent Clinical Trials and Commercialization; Delayed Transfer**. In the event Lilly, in its reasonable discretion, determines that a Manufacturing Technology Transfer is not feasible within a reasonable amount of time following initiation of the first GLP Toxicology Study with respect to any Licensed Product being Manufactured by Precision under the Clinical Supply Agreement, Lilly may, upon written notice to Precision (i) at least [***] prior to the anticipated date of Initiation of the second Clinical Trial and each subsequent Clinical Trial for such Licensed Product and (ii) at least [***] prior to the anticipated date of First Commercial Sale of such Licensed Product, elect for Precision to continue Manufacturing (or having Manufactured through a CMO) such Licensed Product following the first Clinical Trial of such Licensed Product for up to [***] following submission of the IND filing for such Licensed Product for continued Clinical Development use and Commercialization of such Licensed Product pursuant and subject to the terms and conditions of the Clinical Supply Agreement, if for Clinical Development use, or Commercial Supply Agreement, if for Commercialization, and the applicable Quality Agreement. For clarity, Lilly's rights and obligations with respect to audits of Precision's CMOs in Section 6.3.1(b) shall continue to apply.

(d) **Manufacture by Lilly; Early Transfer**. Except as set forth in Section 6.3.1(b) or Section 6.3.1(c), Lilly shall be solely responsible for Manufacturing (or having Manufactured through a CMO) the Licensed Products for Clinical Development use and for Commercialization. Without limiting Section 6.3.1(a), on a Licensed Product-by-Licensed Product basis, following initiation of the first GLP Toxicology Study with respect to each Licensed Product other than the First Clinical Product, Lilly shall have the option to elect to (or, if Lilly fails to timely notify Precision pursuant to Section 6.3.1(b), shall have sole responsibility to) Manufacture (or have Manufactured through a CMO) such Licensed Product for the initial Clinical Trial of such Licensed Product upon written notice to Precision.

6.3.2 **Technology Transfer**.

(a) Following Initiation of the first GLP Toxicology Study with respect to a Licensed Product and Lilly's election to pursue Clinical Development with respect to such Licensed Product, upon written request by Lilly (including pursuant to Section 6.3.1(d)) and at Lilly's expense, Precision shall cooperate with Lilly to conduct a manufacturing technology transfer sufficient to enable Lilly (or its CMO) to Manufacture (or have Manufactured by such CMO) such Licensed Product ("***Manufacturing Technology Transfer***") for Clinical Development and Commercialization pursuant to the applicable Technology Transfer Plan for such Licensed Product.

(b) In connection with each Manufacturing Technology Transfer following the applicable request by Lilly under Section 6.3.2(a) with respect to a Licensed Product, the Parties shall promptly agree to a technology transfer plan with reasonable limitations on access to Precision personnel (including reasonable caps on hours of access) and facilities, for the Manufacturing Technology Transfer for the applicable Licensed Product to Lilly or its CMO, in a form reasonably acceptable to the Parties (the "***Technology Transfer Plan***"); provided that Lilly shall provide written notice to Precision specifying the identity of Lilly's CMO (if any) at least [***] prior to initiation of any Manufacturing Technology Transfer. The Parties agree that ARCUS Technology will not be transferred to Lilly or its designee under this Agreement. Any such technology transfers shall be overseen by a Working Group of the JSC established for such purposes.

6.3.3 **Supply Agreements**.

(a) Within [***] following the Effective Date, but in no event later than [***] prior to initiation of Manufacture of any Licensed Product that will be used in any Clinical Trials, the Parties shall enter into a master clinical supply agreement ("***Clinical Supply Agreement***") pursuant to which Precision will supply clinical trial material for Licensed Products as required by Section 6.3.1(b) or Section 6.3.1(c), as applicable. The terms of the Clinical Supply Agreement shall be customary and commercially reasonable and negotiated in good faith by the Parties, and shall include provisions for payment by Lilly for the costs of all cGMP CMC development activities, including cGMP batch costs, engineering batch costs and cGMP document preparation costs. All cGMP batches and engineering batches will be paid for by Lilly [***]; provided, however that all batches which, at the time of Manufacture, are intended for use in a Registration Trial will be paid for by Lilly [***]. Any Licensed Products manufactured by Precision for Lilly shall be in accordance with the applicable cGMPs, the applicable Quality Agreement and the Clinical Supply Agreement.

(b) If Lilly elects for Precision to supply Licensed Products for Commercialization pursuant to Section 6.3.1(c), then promptly following Lilly's delivery of written notice to Precision of such election pursuant to Section 6.3.1(c), but in no event later than [***] prior to initiation of Manufacture of any Licensed Product that will be used in the Commercialization for such Licensed Product, the Parties shall enter into a commercial master supply agreement ("***Commercial Supply Agreement***") pursuant to which Precision will supply Licensed Products for Commercialization as required by Section 6.3.1(c). The terms of the Commercial Supply Agreement shall be customary and commercially reasonable and negotiated

in good faith by the Parties, and shall include provisions for payment by Lilly of [***] for such Licensed Products and any related process development and scale-up. Any Licensed Products manufactured by Precision for Lilly shall be in accordance with the applicable cGMPs, the applicable Quality Agreement and the Commercial Supply Agreement.

6.3.4 **Quality Agreement**. In connection with the negotiation and execution of a Supply Agreement, the Parties shall also enter into a separate agreement governing the quality control, quality assurance and validation ("***Quality***") of any Licensed Products delivered by Precision (or its CMO) to Lilly under the applicable Supply Agreement (each, a "***Quality Agreement***"). Each Quality Agreement shall be negotiated in good faith by the Parties and contain reasonable and customary terms upon which Precision shall conduct Quality activities in connection with the supply of Licensed Products under such Supply Agreement. Lilly will have final functional Quality decision-making authority with respect to the Licensed Products used in any Clinical Trials under this Agreement.

6.3.5 **CMC**. Precision shall be primarily responsible, working in collaboration with Lilly, for all Chemistry Manufacturing and Controls ("***CMC***") development prior to submission of the IND filing, including CMC development for Licensed Products for Pre-Clinical Development; provided, however, that Lilly shall be responsible for the cost of all cGMP CMC development. Notwithstanding the foregoing, (a) Precision shall not be required to perform any cGMP CMC development activities except pursuant to a Supply Agreement entered into pursuant to Section 6.3.3, and (b) following completion of a Manufacturing Technology Transfer with respect to a Licensed Product pursuant to Section 6.3.2(a), Precision shall have no further obligations under this Agreement (other than completion of any applicable supply required under Section 6.3.1(b) or Section 6.3.1(c)) with respect to Manufacture of such Licensed Product, including any further CMC development.

ARTICLE 7

LICENSE RIGHTS

7.1 **License Grants to Lilly**.

7.1.1 **Exclusive License to Precision Product IP**. Subject to the terms and conditions of this Agreement, Precision (on behalf of itself and its Affiliates) hereby grants to Lilly an exclusive (even as to Precision and its Affiliates), royalty-bearing (as set forth in Section 9.4), license, with the right to grant sublicenses (through multiple tiers, as provided in Section 7.3), under the Precision Product IP to Research, Develop, Manufacture, make, have made, use, keep, import, export, offer for sale, sell, Commercialize, or otherwise exploit Licensed Products in the Field in the Territory. For clarity, Lilly shall have the right, at any time, to combine the ARCUS Nucleases delivered by Precision with other technologies owned or licensed by Lilly, and to Research, Develop and Commercialize products or therapies based on such combinations, but the foregoing license does not include any rights with respect to other products or therapies with which a Licensed Product may be combined or any other products or therapies other than the

Licensed Products under this Agreement. Lilly acknowledges and agrees that the foregoing license does not include any right to, and Lilly shall not, and shall not permit any of its Affiliates or its or their Sublicensees to, modify any Licensed ARCUS Nucleases without Precision's prior written consent.

7.1.2 **Non-Exclusive License to Precision Platform IP**. Subject to the terms and conditions of this Agreement, Precision (on behalf of itself and its Affiliates) hereby grants to Lilly a non-exclusive, royalty-bearing (as set forth in Section 9.4) license, with the right to grant sublicenses (through multiple tiers, as provided in Section 7.3), under the Precision Platform IP to Research, Develop, Manufacture, make, have made, use, keep, import, export, offer for sale, sell, Commercialize, or otherwise exploit Licensed Products in the Field in the Territory. For clarity, the foregoing license set forth in this Section 7.1.2 is intended to provide Lilly a "freedom to operate" license with respect to the Precision Platform IP solely for the Development, making, having made, using, keeping, importing, exporting, offering for sale, selling, Commercialization, and other exploitation of Licensed Products, and not for Lilly's independent use of the Precision Platform IP or After-Acquired IP, and does not include any rights with respect to other products or therapies with which a Licensed Product may be combined or any other products or therapies other than the Licensed Products under this Agreement. Lilly acknowledges and agrees that Lilly will not have any right to (a) access or receive any ARCUS Technology, (b) design, create, select, or optimize any ARCUS Nucleases using the ARCUS Technology, or (c) otherwise use the ARCUS Technology as a genome engineering tool.

7.2 **License Grant to Precision**. Subject to the terms and conditions of this Agreement, Lilly hereby grants to Precision a fully paid, royalty-free, non-sub-licensable (except to Third Party subcontractors acting on its behalf, as permitted by Section 4.9), non-exclusive license under the Lilly Background IP and Lilly Collaboration IP (in each case, excluding any Excluded Technology other than as specified in a Supply Agreement), in the Territory solely as and to the extent necessary for Precision or its Affiliates (or Third Party subcontractors) to (a) conduct Research and Pre-Clinical Development pursuant to the Research Plans during the Research Term or (b) Manufacture the Licensed Product pursuant to Sections 6.3.1(a), (b) or (c).

7.3 **Third Party Sublicenses**. Lilly and Precision may grant one or more sublicenses under the rights and licenses granted to it under Section 7.1 (in the case of Lilly) or Section 7.2 (in the case of Precision), in full or in part, to Third Parties (with the right to sublicense through multiple tiers); provided, that: (a) any such permitted sublicense is consistent with and subject to the terms and conditions of this Agreement, including the confidentiality provisions of Article 14 and the intellectual property provisions of Article 11; and (b) the Party granting such sublicense shall remain responsible for performance of such Party's obligations under this Agreement and shall be responsible for all actions of each such sublicensee as if such sublicensee were the Party hereunder. Notwithstanding the foregoing, during the Research Term with respect to a given Collaboration Target, Lilly shall not grant any sublicenses to a Third Party (other than a consultant or contractor engaged for such activities in accordance with Section 12.3.1) with respect to any Research or Development of a Licensed Product Directed Against such Collaboration Target without Precision's prior written consent. Each Party shall ensure that each sublicense under the licenses granted to it under Section 7.1 (in the case of Lilly) or Section 7.2

(in the case of Precision) grants the other Party rights with respect to Inventions discovered, created, conceived or reduced to practice by the Sublicensee under such sublicense as if such Inventions were discovered, created, conceived or reduced to practice by the sublicensing Party in the course of performing activities under this Agreement (with the exception of improvements to the Sublicensee's background technology that are unrelated to the intellectual property that is the subject of this Agreement). In addition, to the extent required by the Cellectis Agreement, each sublicense granted by Lilly under any Patents within Precision Product IP must grant the same scope of rights for all Patents within Precision Product IP and each sublicense granted by Lilly under any Patents within Precision Platform IP must grant the same scope of rights for all Patents within Precision Platform IP. Lilly shall provide Precision with prompt written notice of any grant of sublicense to a Sublicensee of the rights and licenses granted to Lilly under Section 7.1 (but excluding any sublicenses solely for the distribution, marketing or promotion of Licensed Products).

7.4 **Retention of Rights; No Implied Rights**. Subject to the terms and conditions of this Agreement, Lilly agrees that Precision may: (a) practice the Precision Product IP to exercise its rights and perform its obligations under this Agreement or a Supply Agreement; (b) conduct research related to the ARCUS Technology; and (c) practice and license the Precision Product IP outside the scope of the license granted to Lilly under Section 7.1.1. Except as expressly set forth in this Agreement, neither Party shall be granted, by implication, estoppel or otherwise, any license or right to or under any other intellectual property interest, including any trademarks, Know-How, or Patents, of the other Party.

7.5 **Safe Harbor Research**. Notwithstanding anything to the contrary in this Agreement, by entering into this Agreement, neither Party is forfeiting any rights that such Party may have to perform research activities in compliance with 35 U.S.C. § 271(e)(1) or any experimental or research use exemption that may apply under Applicable Law or in any country.

7.6 **Existing In-License Agreements**.

7.6.1 **Cellectis Patents.** Lilly acknowledges and agrees that rights under certain Precision Patents are licensed to Precision by Cellectis S.A. (the "***Cellectis Patents***") under that certain Patent Cross-License Agreement between Cellectis S.A. and Precision dated January 23, 2014 (the "***Cellectis Agreement***"), and, notwithstanding any exclusive license granted to Lilly under this Agreement, (a) Cellectis S.A. retains rights under the Cellectis Patents and is not restricted from granting rights to Third Parties under the Cellectis Patents, (b) any licenses and rights granted by Precision to Lilly under the Cellectis Patents are granted only within the permissible scope of sublicenses granted under the Cellectis Agreement, and (c) pursuant to the Cellectis Agreement, Cellectis S.A. retains non-exclusive rights under certain Precision Patents identified in the Cellectis Agreement, which may be further sublicensed by Cellectis S.A. without Precision control or consent. Lilly acknowledges and agrees that any exercise of any right by Cellectis S.A, or by any Third Party through Cellectis S.A, under the Cellectis Agreement shall not constitute a breach of this Agreement by Precision.

7.6.2 **Duke IP.** Lilly acknowledges and agrees that any licenses and rights granted by Precision to Lilly under the Duke IP are granted subject to the terms and

conditions of the Duke Agreement, including Duke's right to practice under the Duke IP for its own internal, non-commercial, educational, research and clinical purposes, and subject to the rights of the United States Government and applicable limitations under 37 C.F.R. § 401, Public Law 96-517 and Public Law 98-620 resulting from the United States Government's funding of research leading to creation of the Duke IP. Without limiting the foregoing, Lilly agrees to comply with any obligations resulting from such government rights with respect to its practice of the Duke IP (if any) under this Agreement.

7.7 **Preservation of Existing In-License Agreements.** To the extent relating to the Licensed Products, Precision shall, and shall procure that its Affiliates shall, (a) maintain the Existing In-License Agreements in full force and effect in accordance with their terms and conditions and keep Lilly reasonably informed in this regard and (b) promptly provide notice to Lilly in the event any disputes arise under the Existing In-License Agreements or in the event Precision receives any notices from Duke or Cellectis under such parties' respective Existing In-License Agreement which concern the Duke IP or Cellectis Patents or rights with respect thereto. Without limiting the foregoing and Section 9.5, Precision shall not (x) commit any acts or permit the occurrence of any omissions that could reasonably be expected to cause breach or termination of the Existing In-License Agreements or (y) amend or otherwise modify or permit to be amended or modified, the Existing In-License Agreements, in any way that would prejudice Lilly's rights under this Agreement or its ability to continue to Research, Develop, Manufacture, make, have made, use, keep, import, export, offer for sale, sell, Commercialize, or otherwise exploit Licensed Products. In the event any Existing In-License Agreement is terminated, the Parties agree that Lilly may offset from the amounts due to Precision under this Agreement any amounts Lilly is required to pay to the applicable counterparty for the licenses covered by such terminated Existing In-License Agreement (or, in the event Lilly cannot offset such amounts against payments due to Precision for any reason, Precision shall promptly reimburse Lilly for all such amounts.)

7.8 **Consideration**. The Parties acknowledge that each of the licenses and rights granted by Precision in this Agreement and each of the provisions of this Agreement for efforts or assistance by Precision and access to Precision Technology, individually and collectively, constitute good, valuable and sufficient consideration for each and all of the fees and payments called for hereunder and for each and all of the other obligations of Lilly, its Affiliates and its and their Sublicensees; and the Parties further acknowledge that the individual and collective rights under and access to Precision Technology renders the way in which those fees and payments hereunder are determined, their amount (and potential reduction) and their duration, appropriate and desirable as a matter of convenience.

ARTICLE 8

EXCLUSIVITY

8.1 **Lilly Exclusivity Obligations**. During the period commencing on the Effective Date and [***], except for Lilly's conduct of any Research, Development, Manufacturing or Commercialization activities under this Agreement or a Supply Agreement, neither Lilly nor [***] shall, directly or indirectly [***].

8.2 **Precision Exclusivity Obligations**. During the Term of this Agreement, except for Precision's conduct of any Research, Development or Manufacturing activities under this Agreement or a Supply Agreement, neither Precision nor [***], shall, directly or indirectly [***]. The Parties acknowledge and agree that Precision's conduct of any Research, Development or Manufacturing activities under this Agreement or a Supply Agreement shall not constitute a breach of this Section 8.2.

8.3 **Transactions Involving Competing Programs**.

8.3.1 **Acquisition of Existing Competing Program**. Notwithstanding the exclusivity obligations set forth in Sections 8.1 or 8.2, if, after the Effective Date, any Third Party becomes [***] as a result of a merger, acquisition, consolidation, asset sale, or other similar transaction (whether in a single transaction or series of related transactions), and, as of the closing date of such transaction, such Third Party is engaged in: (a) [***]; or (b) [***] (such activities in (a) and (b), a "***Competing Program***"), then continuation of the relevant Competing Program shall not be a breach of this Agreement provided that such Party provides the other Party with written notice of such transaction promptly, but no later than [***], and such Party does (or causes such Affiliate to), within [***], [***].

8.3.2 **Existing Competing Program of a Precision Acquirer**. If after the Effective Date any Third Party becomes an Acquirer of Precision as a result of a Change of Control of Precision, and, as of the closing date of such transaction, such Acquirer is engaged in a Competing Program, then the provisions of Section 17.8 shall apply.

ARTICLE 9

FEES, ROYALTIES, & PAYMENTS

9.1 **Upfront Payment**. As partial consideration for the rights granted by Precision to Lilly pursuant to the terms of this Agreement, Lilly shall pay to Precision a one-time payment equal to One Hundred Million Dollars ($100,000,000) within [***] following the Effective Date.

9.2 **Equity Investment**. As partial consideration for the rights granted by Precision to Lilly pursuant to the terms of this Agreement, as of the Effective Date, the Parties have entered into the Stock Purchase Agreement.

9.3 **Milestone Payments**.

9.3.1 On a Licensed Product-by-Licensed Product basis, Lilly shall pay to Precision certain milestone payments, as follows: (a) within [***] following any Licensed Product achieving a development milestone event set forth in Table 9.3 below (each, a "***Development Milestone Event***"), Lilly shall pay to Precision the corresponding Milestone Payment indicated in Table 9.3 (each such Milestone Payment, a "***Development Milestone Payment***"); and (b) within [***] following the end of the Calendar Quarter in which any Licensed Product achieves a commercial milestone event set forth in Table 9.3 (each, a "***Commercial Milestone Event***"), Lilly shall pay to Precision the corresponding Milestone Payment indicated in Table 9.3 (each such Milestone Payment, a "***Commercial***

Milestone Payment"). The Development Milestone Events and Commercial Milestone Events may be referred to individually or collectively as "***Milestone Events***", and Development Milestone Payments and Commercial Milestone Payments may be referred to individually or collectively as "***Milestone Payments***." For purposes of determining whether the Net Sales thresholds set forth in Table 9.3 have been achieved for a Licensed Product for purposes of this Section 9.3, all Net Sales of such Licensed Product shall be aggregated globally for all sales made by Lilly or any of its Affiliates or its or their Sublicensees of such Licensed Product, in any and all forms, presentations, dosages, and formulations. For clarity, each Milestone Payment shall be payable only once per Licensed Product, no Milestone Payment shall be payable for subsequent or repeated achievements of the same Milestone Event with respect to the same Licensed Product. [***].

9.3.2 The Development Milestone Events for clinical trial Initiation are intended to be sequential. Achievement of a Development Milestone Event relating to dosing of a Clinical Trial patient shall result in deemed achievement of all earlier Development Milestone Events, and achievement of a "First BLA filing" Development Milestone Event shall result in deemed achievement of all Development Milestone Events relating to initiation of toxicology studies or dosing of Clinical Trial patients. Similarly, achievement of each Commercial Milestone Event measured by annual Net Sales shall result in achievement of all Commercial Milestone Events measured by a lower amount of annual Net Sales.

9.3.3 In addition to the Development Milestone Payments payable by Lilly for achievement of the Development Milestone Events indicated in Table 9.3, if Lilly or any of its Affiliates or its or their Sublicensees [***], Lilly shall pay to Precision [***]. Any such payment shall be considered a Development Milestone Payment for purposes of this Agreement, and be treated consistently with other Development Milestone Payments, including for purposes of Section 9.5 through and including Section 9.9.

Table 9.3 – Milestone Payments

Development Milestone Event	**Milestone Payment**
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
Total Development Milestone Payments:	**[***]**
Commercial Milestone Event	**Milestone Payment**

First Commercial Sale in [***]	[***]
First Commercial Sale in [***]	[***]
First Commercial Sale in [***]	[***]
First Calendar Year in which [***]	[***]
First Calendar Year in which [***]	[***]
First Calendar Year in which [***]	[***]
First Calendar Year in which [***]	[***]
Total Commercial Milestone Payments:	**[***]**

9.4 **Royalties on Products**.

9.4.1 **Royalty Term**. Lilly shall pay Precision royalties as set forth in this Section 9.4 on a Licensed Product-by-Licensed Product and country-by-country basis in the Territory during the period of time beginning on the date of the First Commercial Sale of such Licensed Product in such country and continuing until the latest to occur of: (a) the expiration or abandonment of the last-to-expire Valid Claim in such country Covering such Licensed Product; (b) the expiration of any period of data, regulatory, or market exclusivity, or supplemental protection certificates (other than Patent rights) covering the Licensed Product in such country; and (c) ten (10) years after the First Commercial Sale of such Product in such country (the "***Royalty Term***"). Upon the expiration of the Royalty Term for a Licensed Product in a particular country, the license granted by Precision to Lilly under (i) Section 7.1.1 with respect to such Licensed Product and such country shall survive and become perpetual, fully-paid, and royalty-free, and shall remain exclusive (even as to Precision and its Affiliates) and (ii) Section 7.1.2 with respect to such Licensed Product and such country shall survive and become perpetual, fully-paid, and royalty-free, and shall remain non-exclusive.

9.4.2 **Royalty Rates**. On a Licensed Product-by-Licensed Product and country-by-country basis, during the Royalty Term, Lilly shall pay to Precision a tiered royalty equal to the percentages of annual global Net Sales of such Licensed Product, as set forth below (the "***Royalty***"), calculated by multiplying the applicable royalty rate percentage by the corresponding portion of aggregate global Net Sales for such Licensed Product in such Calendar Year. For purposes of determining whether the Net Sales thresholds below in this Section 9.4.2 have been achieved for a Licensed Product for purposes of this Section 9.4.2, all Net Sales of such Licensed Product shall be aggregated globally for all sales made by Lilly or any of its Affiliates or its or their Sublicensees of such Licensed Product, in any and all forms, presentations, dosages, and formulations. For clarity, the incremental royalty rates set forth below will only apply to that portion of the Net Sales of royalty-bearing Licensed Products that fall within the indicated range of sales.

Annual Global Net Sales of the Applicable Licensed Product	Royalty Rate
The portion of annual global Net Sales of such Licensed Product less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***] but less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***] but less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***] but less than or equal to [***]	[***]
The portion of annual global Net Sales of such Licensed Product greater than [***]	[***]

9.4.3 **Valid Claim**. If, at the time a Licensed Product is sold in a country during the Royalty Term for a Licensed Product, there is no longer a Valid Claim of a Precision Patent that Covers such Licensed Product in such country, the Royalty rates provided in Section 9.4.2 above for the sale of such Licensed Product in such country will be reduced in such country by [***].

9.4.4 **Biosimilar Products**. On a country-by-country and Licensed Product-by-Licensed Product basis: (a) upon the first commercial sale of one or more Biosimilar Products with respect to a Licensed Product in any country in the Territory during the Royalty Term, the Royalty rates provided in Section 9.4.2 above for the Licensed Product will be reduced in such country by [***] from the date of first commercial sale of such Biosimilar Product(s) in such country; and (b) [***].

9.4.5 **Third Party Payments**. Lilly may deduct from any Royalty payments to Precision under this Section 9.4 for the sale of a given Licensed Product in a given country (after application of Sections 9.4.3 and 9.4.4) an amount equal to [***] of any (a) royalty payments based on such sale, and (b) Qualifying Non-Royalty Payments, in each case ((a) and (b)) made by Lilly to a Third Party in consideration for a right or license under such Third Party's interest in any Patents [***] that contain a Valid Claim which Covers the relevant Licensed Product in the Field in the Territory; provided, that in no event will the Royalty payments payable to Precision under this Section 9.4 for each Licensed Product be reduced, as a result of this Section 9.4.5, by more than [***]. For purposes of this Section 9.4.5, "***Qualifying Non-Royalty Payments***" means [***]. Qualifying Non-Royalty Payments exclude in all cases Clinical Development Expenses set forth in Section 1.30.8 with respect to a Co-Funded Product.

9.4.6 **Payment; Reports**. Royalty payments due by Lilly to Precision under this Section 9.4 will be calculated and reported for each Calendar Quarter. All Royalty payments due under this Section 9.4 shall be paid within [***] after the end of

each Calendar Quarter and shall be accompanied by a report setting forth, with respect to each Calendar Quarter, on a Licensed Product-by-Licensed Product and country-by-country basis: (a) Net Sales of the Licensed Product by Lilly and its Affiliates and Sublicensees in the Territory and (b) a calculation of the Royalties due on such Net Sales.

9.5 **Payments under Existing In-License Agreements**. The Parties acknowledge and agree that Precision shall be solely responsible for, and shall promptly discharge, any and all payments payable pursuant to the Existing In-License Agreements.

9.6 **Method of Payment; Currency Conversion**. Unless otherwise agreed by the Parties, all payments due under this Agreement shall be paid in Dollars by wire transfer or electronic funds transfer of immediately available funds to an account designated by the payee; provided however, that Lilly shall only be required to disburse funds to the payee's jurisdiction of incorporation or to a jurisdiction in which the payee has a significant business presence. The initial wire transfer instructions for Precision are as set forth on Exhibit 9.6. When conversion of payments from any currency other than Dollars is required, Lilly's then-current standard exchange rate methodology will be employed for the translation of foreign currency sales into Dollars; provided, that this methodology is used by Lilly in the translation of its foreign currency operating results, is consistent with U.S. GAAP, is audited by Lilly's independent certified public accountants in connection with the audit of the consolidated financial statements of Lilly, and is used for external reporting of foreign currency operating results.

9.7 **Records and Audits**. Lilly shall keep, and shall cause its Affiliates and Sublicensees to keep, complete and accurate records pertaining to its gross sales and Net Sales of the Licensed Products as necessary to ascertain properly and to verify the Royalty and milestone payments due hereunder. Such records shall be kept for a period of time required by Applicable Laws, but no less than [***] following the end of the Calendar Quarter to which they pertain. Precision shall have the right, but not more than [***], to have a "Big 4" accounting firm (i.e., KPMG, PwC, Deloitte or Ernst & Young), designated by Lilly and approved by Precision, such approval not to be unreasonably withheld, inspect Lilly's records for the purpose of determining the accuracy of Royalty and milestone payments for a period covering not more than [***] following the Calendar Quarter to which they pertain. No period will be audited more than [***] and each audit must be reasonable in scope. The independent, certified public accountant selected shall keep confidential any information obtained during such inspection and shall report to Precision and Lilly only the amounts of Net Sales and royalties due and payable. Such audits may be exercised during normal business hours upon reasonable prior written notice to Lilly. Precision shall bear the full cost of such audit unless such audit discloses an underpayment by Lilly of more than [***], of the amount of royalties or other payments due under this Agreement for any applicable Calendar Quarter, in which case, Lilly shall bear the cost of such audit and shall remit to Precision the amount of any underpayment within [***] of the date the auditor's written report is received. Any overpayment by Lilly revealed by an audit shall be credited against future payments owed by Lilly to Precision (and if no further payments are due, shall be refunded by Precision at the request of Lilly within [***] of the receipt of the request).

9.8 **Late Payments**. If any payment properly due under this Agreement and not subject to a good faith dispute is not paid when due in accordance with the applicable provisions of this Agreement, the payment shall accrue interest from the date due at the rate of [***]. The

payment of such interest shall not limit the Party entitled to receive payment from exercising any other rights it may have as a consequence of the lateness of any payment.

9.9 **Taxes**.

9.9.1 **Cooperation and Coordination**. The Parties acknowledge and agree that it is their mutual objective and intent to minimize, to the extent feasible and in compliance with Applicable Laws, taxes payable with respect to their collaborative efforts under this Agreement and that they shall use reasonable efforts to cooperate and coordinate with each other to achieve such objective, including by completing and filing documents required or permitted under the provisions of any Applicable Laws in connection with a claim of exemption from, or entitlement to a reduced rate of, withholding taxes or in connection with any claim to a refund of or credit for any payment of such taxes. Notwithstanding the foregoing, for clarity, it is Precision's sole responsibility to prepare and file required documents necessary to claim an exemption from withholding tax or to claim a reduced rate of withholding tax, at Precision's sole expense.

9.9.2 **Payment of Tax**. The upfront, milestones, royalties and other amounts payable by Lilly to Precision to this Agreement (each, a "***Payment***") shall be paid free and clear of any and all taxes, except for any withholding taxes required by Applicable Law. Except as provided in this Section 9.9. Precision shall be solely responsible for paying any and all taxes (other than withholding taxes required by Applicable Law to be deducted from Payments and remitted by Lilly) levied on account of, or measured in whole or in part by reference to, any Payments it receives. Lilly shall deduct or withhold from the Payments any taxes that it is required by Applicable Law to deduct or withhold. Notwithstanding the foregoing, if Precision is entitled under any applicable tax treaty to a reduction in the rate of, or the elimination of, any applicable withholding tax, it may deliver to Lilly or the appropriate Governmental Authority (with the assistance of Lilly to the extent that this is reasonably required and is expressly requested in writing) the prescribed forms necessary to reduce the applicable rate of withholding or to relieve Lilly of its obligation to withhold such tax and Lilly shall apply the reduced rate of withholding or dispense with withholding as the case may be; provided that Lilly has received Precision's delivery of all applicable forms in a form satisfactory to Lilly (and, if necessary, evidence, in a form satisfactory to Lilly, of Precision's receipt of appropriate governmental authorization) at least [***] prior to the time Payments are due. If in accordance with the foregoing, Lilly withholds any amounts of tax, it shall pay to Precision the balance when due, make timely payment to the proper tax authority of the withheld amount and send to Precision proof of such payment within [***] following such payments.

9.9.3 **Withholding Tax Actions**. If Lilly changes its tax residence, performs a tax repatriation or takes any similar action that would increase any required withholding taxes with respect to any Payment that would not be required absent such action, Lilly shall provide Precision with prior written notice to allow Precision a reasonable opportunity to timely furnish forms, certificates or other items that would reduce or eliminate such withholding tax.

ARTICLE 10

HSR FILINGS AND CLOSING

10.1 **HSR Filings**. If required by Applicable Laws, promptly after the execution of this Agreement, both Parties shall file (or, if applicable, shall cause their respective Affiliate(s) to file) the appropriate notices with respect to the transactions contemplated hereby as promptly as reasonably practicable with the United States Federal Trade Commission ("***FTC***") and Department of Justice ("***DOJ***") under the Hart Scott Rodino Antitrust Improvements Act of 1976, as amended ("***HSR Act***"). Each of the Parties shall promptly supply (or, if applicable, shall cause their respective Affiliate(s) to supply) the other with any information that may reasonably be required in order to effectuate the filings under the HSR Act. Each of the Parties shall notify the other promptly upon receipt from the FTC or DOJ in connection with any filing made under the HSR Act and of any request for amendments or supplements to any such filings or of any communications with, and any other inquiries or requests for additional information from, the FTC and DOJ. Each Party agrees to request, and to cooperate with the other Party in requesting, early termination of any applicable waiting period under the HSR Act. Each Party shall comply (or, if applicable, cause their respective Affiliate(s) to comply) promptly, in accordance with advice received from counsel, as appropriate, with any such inquiry or request. Each Party agrees (and shall cause each of their respective Affiliates) to use their respective commercially reasonable efforts: (a) to cooperate to obtain any authorizations, clearances, orders or approvals required for transactions contemplated hereby under the HSR Act and any other federal, state or foreign Applicable Law, regulation or decree designed to prohibit, restrict or regulate actions intended to or having the effect of reducing competition or monopolizing or restraining trade (collectively, "***Antitrust Laws***"); (b) to promptly respond to any request by any Governmental Authority for information under any Antitrust Law with respect to the transactions contemplated hereby; (c) to promptly inform the other Party upon receipt of any material communication from the FTC, the DOJ or any other Governmental Authority regarding the transactions contemplated hereby; and (d) subject to applicable legal limitations and the instructions of any Governmental Authority, keep the other Party apprised of the status of matters relating to the transactions contemplated hereby, including promptly furnishing the other Party with copies of material notices or other material communications received by such Party or any of their respective Affiliates, as the case may be, from any Third Party and/or any Governmental Authority with respect to the transactions contemplated hereby. The Parties shall each permit legal counsel for the other Party a reasonable opportunity to review in advance, and consider in good faith the views of the other Party in connection with, any proposed material written communication to any Governmental Authority with respect to the transactions contemplated hereby. Each of the Parties agrees, subject to applicable legal limitations and the instructions of any Governmental Authority, not to participate in any substantive meeting or discussion, either in person or by telephone, with any Governmental Authority in connection with this Agreement unless it consults with the other Party in advance and gives the other Party the opportunity to attend and participate, provided, however, that neither Party shall be required to consent to the divestiture or other disposition of any of its assets or the assets of its Affiliates or to consent to any other structural or conduct remedy and neither Party nor its Affiliates shall have any obligation to contest, administratively or in court, any ruling, order or other action of the FTC or DOJ or any Third Party with respect to the transactions contemplated by this Agreement. Each Party shall be responsible for paying its own costs and expenses (including

legal and consultants' fees) incurred in connection with obtaining clearance of the transactions contemplated hereby from the FTC and the DOJ, except that Lilly will pay the filing fees incurred by both Parties in connection with the filings required pursuant to the HSR Act. In the event the Parties determine that HSR filings are required, this Agreement (other than Article 10, Article 16 and Section 14.2) shall not be binding until the Closing Date (as defined in the Stock Purchase Agreement) occurs following the HSR Clearance Date (such date, the "***Effective Date***") and information exchanged between the Parties shall continue to be subject to the terms of the Confidentiality Agreement. If the Effective Date does not occur prior to the date on which the term of the Confidentiality Agreement would expire, then the term of the Confidentiality Agreement is hereby extended until the earlier of the Effective Date or the date of termination of this Agreement. As used herein, the "***HSR Clearance Date***" means the earlier of (i) the date on which the FTC or DOJ shall notify the Parties of early termination of the waiting period under the HSR Act or (ii) the date on which the applicable waiting period under the HSR Act expires; provided, however, that if the FTC or DOJ commences any investigation by means of a second request or otherwise, HSR Clearance Date means the date on which any investigation opened by the FTC or DOJ has been terminated, without action to prevent the Parties from implementing the transactions contemplated by this Agreement with respect to the United States. Notwithstanding any other provisions of this Agreement to the contrary, either Party may terminate this Agreement effective upon notice to the other Party if the HSR Clearance Date has not occurred on or before the date that is [***] after the Parties make their respective HSR filings.

10.2 **Conduct Pending HSR Clearance Date**. If the Parties determine that HSR filings are required, (a) between the Execution Date and the earlier of (i) the Effective Date or (ii) the date of termination of this Agreement, each Party shall conduct its business with respect to the intellectual property rights granted hereunder in the ordinary course, and it will refrain from taking any action or omitting to take any action that would have the effect of restricting or impairing the rights to be granted to either Party hereunder or preventing either Party's ability to perform its obligations under this Agreement, and (b) [***].

10.3 **Information Rights as of Effective Date**. On the Effective Date, Precision shall notify Lilly of any facts or circumstances arising between the Execution Date and the Effective Date that, to Precision's Knowledge, would result in Precision's representations and warranties set forth in [***] not being true or correct in all material respects on and as of the Effective Date as though such representations and warranties were made as of and with respect to facts and circumstances existing, to Precision's Knowledge, as of the Effective Date instead of the Execution Date. For clarity, no such facts or circumstances arising after the Execution Date, and no information provided by Precision to Lilly related to any such facts or circumstances, shall give rise to, or be a basis for, any claim of breach by Lilly of any representations or warranties set forth in [***].

ARTICLE 11

INTELLECTUAL PROPERTY

11.1 **Ownership of Intellectual Property**.

11.1.1 **Background IP**. As between the Parties, and subject to the licenses granted under this Agreement (a) Lilly shall solely own (or retain ownership of) all rights, title and interests in and to the Lilly Background IP, and (b) Precision shall solely own (or retain ownership of) all rights, title and interests in and to the Precision Background IP. If any Third Party becomes an Acquirer of Precision after the Effective Date pursuant to a Change of Control, any Patent rights and Know-How Controlled by the Acquirer before the relevant Change of Control transaction or thereafter during the Term will not be considered part of the Precision Background IP; provided, however, that any Patent rights or Know-How that would otherwise constitute Precision Background IP and are discovered or created by or on behalf of the Acquirer after the relevant Change of Control transaction by using any Precision Technology relating to the Research Program will be considered part of the Precision Background IP.

11.1.2 **Inventions**. Ownership of Inventions arising in the course of the Research Program or otherwise under this Agreement shall be as follows:

(a) Lilly shall solely own (or retain ownership of) all Inventions discovered, created, acquired, conceived or reduced to practice, solely by or on behalf of Lilly or any of its Affiliates in the course of the Research Program or otherwise in the course of performing activities under this Agreement, except to the extent constituting Precision Sole IP ("***Lilly Sole IP***");

(b) Precision shall solely own (or retain ownership of) (i) all Inventions discovered, created, acquired, conceived or reduced to practice, solely by or on behalf of Precision or any of its Affiliates in the course of the Research Program or otherwise in the course of performing activities under this Agreement, and (ii) [***] ("***Precision Sole IP***"). Lilly agrees to assign and hereby assigns to Precision all of its and its Affiliates' right, title and interests in and to the Precision Sole IP and agrees to execute such documents and perform such other acts as Precision may reasonably request to obtain, perfect and enforce the Precision Sole IP and the assignment thereof; and

(c) Except to the extent constituting Precision Sole IP, any Invention discovered, created, conceived, reduced to practice or acquired, jointly by or on behalf of the Parties in the course of the Research Program or otherwise in the course of performing activities under this Agreement ("***Joint IP***"), will be jointly owned by the Parties.

11.1.3 **Inventorship**. Inventorship as between the Parties will be determined in accordance with U.S patent laws. All such determinations shall be documented to ensure that the Patent claims in any divisional or continuation patent applications reflect appropriate inventorship.

11.1.4 **Rights of Joint Owners**. Subject to the licenses and obligations of exclusivity granted hereunder and the payment obligations under Article 9, each Party shall have full rights to exploit and license Joint IP (and any Patent rights therein), without any obligation or requirement of an accounting to the other Party.

11.1.5 **Independent Development**. Subject to the licenses and obligations of exclusivity granted hereunder, nothing in this Agreement shall be construed as limiting either Lilly's or Precision's right to research, develop, improve and in-license technology related to the Lilly Background IP (in the case of Lilly) or Precision Background IP (in the case of Precision) outside the scope of this Agreement in its ordinary course of business.

11.1.6 **Enabling Technology; After-Acquired IP**.

(a) Enabling Technology for the Licensed Products will be secured: (i) [***] to the extent necessary for Precision (as determined by Precision) to use the ARCUS Technology or to design, create, select or optimize ARCUS Nucleases [***] ("***Platform-Enabling IP***"); or (ii) [***] to the extent it relates to other elements of the Licensed Products, [***].

(b) If Precision or any of its Affiliates [***] discovers, creates, conceives or reduces to practice or acquires, and Controls, any Patent rights or Know-How outside the course of performing activities under this Agreement after the Effective Date that is necessary or reasonably useful for the Research, Development, making, having made, use, keeping, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of a Licensed Product, including any such Patent that Covers a Licensed Product ("***After-Acquired IP***"), [***].

11.1.7 **Contribution of Licensed Precision Technology**. Precision shall inform Lilly in writing, prior to contributing to any Research or Pre-Clinical Development to be conducted under any Research Plan any portion of the Precision Technology that is in-licensed from a Third Party, the contribution of which would prevent or conflict with the ownership and use rights with respect to Patents and Know-How contemplated by this Agreement. Lilly acknowledges that it has received a copy of the Cellectis Agreement and the Duke Agreement prior to the Execution Date.

11.1.8 **Assignment Obligation**. Each Party shall cause all of its Affiliates, employees, agents, independent contractors, consultants, and others who perform activities for such Party under this Agreement to be under an obligation to assign (or, if such Party is unable to cause such person or entity to agree to such assignment obligation despite such Party using reasonable efforts to negotiate such assignment obligation, provide a license, preferably exclusive, under) to such Party their rights in and to any Inventions and all intellectual property rights therein, except where Applicable Law requires otherwise and except in the case of governmental, not-for-profit and public institutions that have standard policies against such an assignment (in which case a Party shall obtain a suitable license, preferably exclusive, or right to obtain such a license). Each Party shall use reasonable efforts to promptly disclose to the other Party in writing all

Inventions, including any invention disclosures, or other similar documents, submitted to it by its employees, agents or independent contractors describing such Inventions, and all information relating to such Inventions to the extent necessary or useful for the preparation, filing and maintenance of any Patent with respect to such Invention.

11.2 **Patent Prosecution and Maintenance**.

11.2.1 **Patent Working Group Representatives**. Each Party shall designate to the other Party in writing a patent Prosecution and Maintenance representative to liaise with the other Party's Prosecution and Maintenance representative via the Patent Working Group with respect to the Prosecution and Maintenance of Patents under this Section 11.2. Each Party may update its patent Prosecution and Maintenance representative at any time upon written notice to the other Party.

11.2.2 **Rights to Prosecute and Maintain Patents**. As between the Parties:

(a) Lilly has the sole right, but not the obligation, to Prosecute and Maintain any Patents constituting or claiming any Lilly Background IP or Lilly Sole IP, at Lilly's sole cost and expense;

(b) Subject to Section 11.2.2(c) with respect to any Licensed Product Patents, Precision has the sole right, but not the obligation, to Prosecute and Maintain any Patents constituting or claiming any Precision Background IP or Precision Sole IP, at Precision's sole cost and expense, and will give Lilly (by means of the Patent Working Group) the opportunity to review (i) the text of any application covering or claiming Precision Product IP (whether included in Precision Background IP or Precision Sole IP) and (ii) responses to office actions related thereto, in each case, before filing of the relevant application or responding to such office action. Precision will reasonably consider any input or feedback from Lilly with respect to the foregoing, provided, that Precision shall have the final authority with respect to any such decisions;

(c) In addition to the rights of Lilly set forth in Section 11.2.2(b), with respect to each Licensed Product Patent, (A) Precision shall not [***], (B) subject to Applicable Laws, Lilly shall [***], and (C) if [***], Lilly shall [***]. For the avoidance of doubt, all such prosecution and maintenance shall at all times be conducted by Precision, subject to [***];

(d) Lilly has the first right, but not the obligation, to Prosecute and Maintain any Patents constituting or claiming any Joint IP, at Lilly's sole cost and expense, and Precision shall have the secondary right, at Precision's sole cost and expense, to Prosecute and Maintain any Patents constituting or claiming any Joint IP, subject to and in accordance with Section 11.2.3; and

(e) Lilly acknowledges and agrees that Precision has no rights or responsibility for preparing, filing, Prosecuting or Maintaining the Cellectis Patents.

11.2.3 **Prosecution and Maintenance Procedures for Joint IP**. The Party handling the Prosecution and Maintenance of a Patent claiming or constituting Joint

IP under Section 11.2.2(d) (the "***Prosecuting Party***") shall keep the other Party reasonably informed of the status of the applicable Patent and shall promptly provide the other Party with all material correspondence received from any patent authority in connection therewith. In addition, the Prosecuting Party shall promptly provide the other Party, through the Patent Working Group, with drafts of all proposed material filings and correspondence to any patent authority with respect to the applicable Patent for the other Party's review and comment prior to the submission of such proposed filings and correspondences, and the Prosecuting Party shall consider the other Party's reasonable comments in good faith. The Prosecuting Party shall notify the other Party of its intention to suspend or cease any Prosecution and Maintenance of any such Patent. The Prosecuting Party shall provide such notice at least [***] prior to any filing or payment due date, or any other due date that requires action, in connection with such Patent. In such event, the Prosecuting Party shall permit the other Party, at the other Party's discretion and at its sole expense, to continue Prosecution and Maintenance of such Patent.

11.2.4 **Separation of Patent Claims**.

(a) If Lilly determines that an application for a Patent filed, or sought to be filed, by Precision claims both [***], the Parties agree that, to the extent practicable, such application shall be divided into two (2) or more Patent applications, so that each application shall contain claims that cover only [***].

(b) If Precision determines that an application for a Patent filed, or sought to be filed, by Lilly claims both [***], the Parties agree that, to the extent practicable, such application shall be divided into two (2) or more Patent applications, so that each application shall contain claims that cover only [***].

(c) If the division contemplated in Sections 11.2.4(a) or (b) is not practicable, or a single claim covers both [***], such Patent application shall be subject to the provisions of this Agreement relating to [***]; provided, however, that if a Patent application containing claims covering [***] cannot be so divided, then such Patent application shall be subject to the provisions of this Agreement relating to [***].

(d) Similarly, an attempt shall be made to divide Patent applications into those that claim Inventions [***].

11.2.5 **Cooperation of the Parties**. Each Party shall cooperate fully with the other Party in the Prosecution and Maintenance of Patents under this Section 11.2 at [***] cost (except as expressly set forth otherwise in this Article 11), including by: (a) executing all papers and instruments, or requiring its employees or contractors, to execute such papers and instruments, to enable the other Party to apply for and to Prosecute and Maintain such Patents in any country as permitted by this Section 11.2; and (b) promptly informing the other Party of any matters coming to such Party's attention that may affect the Prosecution and Maintenance of any such Patents. Each Party will use reasonable efforts via good faith consultation through the Patent Working Group to avoid creating potential issues in Prosecution and Maintenance of Patents under this Section 11.2.

11.3 **Infringement or Misappropriation by Third Parties**.

11.3.1 **Notice**. Each Party shall notify the other within [***] of becoming aware of any alleged or threatened infringement by a Third Party of any of the Precision Patents, Lilly Patents, or Joint Patents, in each case in the Field in the Territory, and any related declaratory judgment, opposition, or similar action alleging the invalidity, unenforceability or non-infringement of any of the Precision Patents, Lilly Patents, or Joint Patents (collectively "***Infringement***").

11.3.2 **Joint IP and Precision Product IP**.

(a) As between the Parties, Lilly has the first right, but not the obligation, to bring and control any legal action, at [***] cost and expense, in connection with (i) any Infringement of any [***] or (ii) any Infringement of any Joint IP (other than any [***]) that is competitive with a Licensed Product. Lilly shall keep Precision reasonably informed of the status of such enforcement efforts for such Joint IP or [***], and shall consider in good faith Precision's comments thereon. Lilly shall provide Precision with drafts of all material papers and statements to be filed with the court in sufficient time to allow Precision to review, consider and substantively comment thereon, and shall in good faith consider all reasonable comments thereto by Precision before filing such papers or statements. Precision may, at [***] expense, join as a party to such claim, suit, or proceeding and be represented in any such action by counsel of its own choice. If Lilly does not bring such legal action within [***] after the notice provided pursuant to Section 11.3.1 (or within such shorter period prior to the next deadline for any action that must be taken in order to bring such legal action), Precision may bring and control any legal action in connection with such Infringement, at [***] cost and expense as it reasonably determines appropriate so long as Lilly does not reasonably object to such action.

(b) As between the parties, Precision shall have the first right, but not the obligation, to bring and control any legal action, at [***] cost and expense, in connection with any Infringement of any Joint IP (other than any Infringement described in Section 11.3.2(a)). Precision shall keep Lilly reasonably informed of the status of such enforcement efforts for such Joint IP, and shall consider in good faith Lilly's comments thereon. Precision shall provide Lilly with drafts of all material papers and statements to be filed with the court in sufficient time to allow Lilly to review, consider and substantively comment thereon, and shall in good faith consider all reasonable comments thereto by Lilly before filing such papers or statements. Lilly may, at [***] expense, join as a party to such claim, suit, or proceeding and be represented in any such action by counsel of its own choice. If Precision does not bring such legal action within [***] after the notice provided pursuant to Section 11.3.1, Lilly may bring and control any legal action in connection with such Infringement, at [***] cost and expense as it reasonably determines appropriate.

11.3.3 **Precision Background IP and Precision Sole IP**. Except as set forth in Section 11.3.2(a), as between the Parties, Precision has the sole right to initiate any proceedings or take other appropriate actions against an Infringement of any Precision Background IP or Precision Sole IP or to defend against any challenge of any Precision Background IP or Precision Sole IP. Lilly acknowledges and agrees that (a) Precision has no rights or responsibility for enforcing the Cellectis Patents, and therefore all references

to Precision Background IP in this Section 11.3 shall be deemed to exclude the Cellectis Patents for all purposes, (b) prior to initiating enforcement actions against a Third Party with respect to certain Precision Patents which are subject to the non-exclusive license granted by Precision to Cellectis S.A. pursuant to the Cellectis Agreement, Precision is required by the Cellectis Agreement to confirm that Cellectis S.A. has not granted a license to such Third Party under such Precision Patents, and Lilly will cooperate with Precision in taking such actions as required by the Cellectis Agreement, and (c) Duke retains discretion as to whether to become a party plaintiff and has certain rights with respect to enforcement of Patents contained within the Duke IP in the event Precision does not enforce such Patents.

11.3.4 **Lilly Background IP and Lilly Sole IP**. Lilly has the sole right to initiate any proceedings or take other appropriate actions against an Infringement of any Lilly Background IP or Lilly Sole IP or to defend against any challenge of a Lilly Background IP or Lilly Sole IP.

11.3.5 **Allocation of Recoveries**. Any recoveries resulting from enforcement action relating to a claim of Infringement shall be [***].

11.3.6 **Cooperation**. At the request and expense of the Party bringing an action under this Section 11.3, the other Party shall provide reasonable assistance in connection therewith, including by executing reasonably appropriate documents, cooperating in discovery and joining as a party to the action if required by Applicable Law to pursue such action. In connection with any such enforcement action, the Party bringing the action shall not enter into any settlement admitting the invalidity or non-infringement of, or otherwise impairing the other Party's rights in the applicable Patents without the prior written consent of the other Party.

11.4 **Defense and Settlement of Third Party Claims**. Each Party shall promptly notify the other in writing of: (a) any allegation by a Third Party that the activity of either of the Parties pursuant to this Agreement infringes or may infringe the intellectual property rights of such Third Party; or (b) any declaratory judgment action that is brought naming either Party as a defendant and alleging invalidity of any of the Lilly Patents, Precision Patents, or Joint Patents. Precision has the sole right to control any defense of any such claim described in (a) involving alleged infringement of Third Party rights by Precision's activities at [***] expense and by counsel of its own choice, and Lilly may, at [***] expense, be represented in any such action by counsel of its own choice. Lilly has the sole right to control any defense of any such claim described in (a) involving alleged infringement of Third Party rights by Lilly's activities at [***] expense and by counsel of its own choice, and Precision may, at [***] expense, be represented in any such action by counsel of its own choice. Neither Party may settle any patent infringement litigation under this Section 11.4 in a manner that admits the invalidity or unenforceability of the other Party's Patents or a Joint Patent or imposes on the other Party restrictions or obligations or other liabilities, without the written consent of such other Party, which consent shall not be unreasonably withheld, conditioned, or delayed. Nothing in this Section 11.4 will limit any indemnification rights or obligations of a Party under Article 13.

11.5 **Patent Extension**. The Parties shall cooperate through the Patent Working Group in determining which Patent claiming or covering a Licensed Product should be extended, and thereafter the Parties shall cooperate in obtaining patent term restorations, supplemental protection certificates or their equivalents, and other forms of patent term extensions for a given Licensed Product with respect to any applicable Precision Patent, Lilly Patent, or Joint Patent in any country or region where applicable. Lilly shall have final decision-making authority with respect to decisions regarding patent term extensions with respect to Lilly Patents and [***]. Subject to Lilly's rights with respect to Lilly Patents and [***], Precision shall have final decision-making authority with respect to decisions regarding patent term extensions with respect to Precision Patents and [***].

11.6 **CREATE Act**. It is the Parties' intention that this Agreement is a "joint research agreement" as that phrase is defined in 35 U.S.C. § 102(c) as amended by the Cooperative Research and Technology Enhancement (CREATE) Act, including the provisions of 35 U.S.C. § 102(b)(2)(c). The Parties agree to cooperate and to take reasonable actions to maximize the protections available for the Licensed ARCUS Nucleases and Licensed Products under such safe harbor provisions.

11.7 **Trademarks**. Lilly shall have the right to select, and will be free, in its sole discretion, to use and to register in any trademark office in the Territory, any trademark for use with a Licensed Product (the "***Licensed Product Trademarks***"); provided that Lilly shall not use, file applications for, or register any trademarks owned by Precision (or its Affiliates), whether stand-alone or in combination with a design element, for the benefit of branding (including co-branding) without the prior written consent of Precision. As between the Parties, Lilly shall own all right, title and interest in and to any such Licensed Product Trademarks adopted by Lilly for use with Licensed Product, and is responsible for the registration, filing, maintenance and enforcement thereof.

ARTICLE 12

REPRESENTATIONS, WARRANTIES AND COVENANTS

12.1 **Mutual Representations and Warranties**. Each of Lilly and Precision represent and warrant, as of both the Execution Date and the Effective Date, that:

12.1.1 it is duly organized and validly existing under in the Applicable Laws of the jurisdiction of its incorporation or formation, as applicable, has full corporate, limited liability company or other power and authority, as applicable, to enter into this Agreement and to carry out the provisions hereof, and has sufficient facilities, experienced personnel or other capabilities (including via Affiliates and/or Third Parties) to enable it to perform its obligations under this Agreement;

12.1.2 it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the individual executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate, limited liability company or other action, as applicable; and

12.1.3 this Agreement is legally binding upon it and enforceable in accordance with its terms (except as the enforceability thereof may be limited by bankruptcy, bank moratorium or similar laws affecting creditors' rights generally and laws restricting the availability of equitable remedies and may be subject to general principles of equity whether or not such enforceability is considered in a proceeding at law or in equity) and the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate action and do not and will not: (a) conflict with, or constitute a default or result in a breach under, any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, or violate any Applicable Law; or (b) require any consent or approval of its stockholders or similar.

12.2 **Precision Representations and Warranties**. Precision represents and warrants to Lilly that, as of the Execution Date and, unless otherwise set forth below, as of the Effective Date:

12.2.1 **No Targets Encumbered**. As of the Execution Date only, there are no Targets that are subject to an executed agreement between Precision and a Third Party (or Precision's binding commitment to negotiate an agreement with a Third Party) that would prevent or conflict with the inclusion of the Target as a Collaboration Target under this Agreement on an exclusive basis as set forth in Section 7.1.1 and Section 8.2.

12.2.2 **No Grants that Conflict with this Agreement**. Precision and its Affiliates have not granted any rights (or other encumbrances) to any Third Party under Precision Technology that conflict with the rights granted to Lilly hereunder.

12.2.3 **Control over Know-How and Patents**. Precision has Control over all Know-How and Patent rights owned by it or its Affiliates that are necessary or reasonably useful for the Research, Development, making, having made, use, keeping, importation, exportation, offering for sale, sale, Commercialization, or other exploitation of Collaboration Targets or Licensed Products in the Field, as known to be contemplated by this Agreement.

12.2.4 **Existing Patents**.

(a) All Patent rights contained in the Precision Technology existing as of the Execution Date or the Effective Date, other than the Cellectis Patents, that are issued or subject to a pending application for issuance are listed on Exhibit 12.2.4 (the "***Existing Patents***") (recognizing that Precision may add but not delete from Exhibit 12.2.4 between the Execution Date and the Effective Date to include additional Patent rights).

(b) All Existing Patents are: (i) to the extent issued (unless otherwise indicated on Exhibit 12.2.4), subsisting and, to Precision's Knowledge, not invalid or unenforceable, in whole or in part, or to Precision's Knowledge, confer a valid right to claim priority thereto; (ii) solely and exclusively owned or exclusively licensed to Precision, free of any encumbrance, lien or claim of ownership by any Third Party; (iii) in respect of Existing Patents owned by Precision, to the extent subject to a pending application for issuance, being

prosecuted in good faith in the respective patent offices in which such applications have been filed in accordance with Applicable Law and, to Precision's Knowledge, all material references, documents and information have been presented to the relevant patent office in respect of such Existing Patents to the extent required by such patent office; and (iv) in respect of Existing Patents owned by Precision, filed and maintained in accordance with applicable Patent office rules, and all applicable fees applicable thereto have been paid on or before any final due date for payment.

(c) [***].

(d) The Existing Patents and the Cellectis Patents represent all Precision Patents that relate to the Precision Technology or the exploitation thereof.

(e) [***].

(f) Each of the Existing In-License Agreements is valid, enforceable and binding on the parties thereto.

12.2.5 **No Third Party Agreements**. Other than the Existing In-License Agreements, there are no license or other agreements with Third Parties regarding the exploitation of any Precision Technology or other materials contemplated to be provided by Precision to Lilly hereunder, to which Precision or its Affiliate is a party.

12.2.6 [***].

12.2.7 **Other Material Claims and Actions**. As of the Execution Date only: (a) there are no claims, actions, or proceedings pending or, to Precision's Knowledge, threatened by any Third Party; and (b) to Precision's Knowledge, there are no formal inquiries initiated or written notices received that may lead to the institution of any such legal proceedings, in each case (or in aggregate) against Precision or its properties, assets or business, which if adversely decided, would, individually or in the aggregate, have a material adverse effect on, or prevent Precision's ability to conduct the Research or to grant the licenses or rights granted to Lilly under this Agreement.

12.2.8 **Assignment by Employees, Agents and Consultants**. Precision has obtained from each of its current employees, consultants and contractors, in each case who perform research or development activities pursuant to this Agreement, written agreements containing obligations of confidentiality and non-use and an assignment to Precision of all inventions (and all of such Person's rights thereto) for which Precision or Lilly is intended to have ownership or license rights under this Agreement such that no such employee, contractor or consultant shall retain any rights to such inventions that would prevent or conflict with Lilly's rights of ownership or use of such inventions contemplated by this Agreement.

12.2.9 **No Government Funding**. Except with respect to the Duke IP, the inventions claimed or covered by the Precision Patents: (a) were not conceived, discovered, developed or otherwise made in connection with any research activities funded, in whole or in part, by the federal government of the United States of America or

any agency thereof; (b) are not a "subject invention" as that term is described in 35 U.S.C. Section 201(e) and (c) are not otherwise subject to the provisions of the Patent and Trademark Law Amendments Act of 1980, as amended, codified at 35 U.S.C. §§ 200-212, as amended, as well as any regulations promulgated pursuant thereto, including in 37 C.F.R. Part 401 (the "***Bayh-Dole Act***"). With regard to any inventions within the Duke IP that are subject to the Bayh-Dole Act, Precision and its Affiliates have complied with the applicable provisions of the Bayh-Dole Act, in a manner that protects and preserves Precision's right, title and interest in such inventions to the maximum extent permitted by law.

12.2.10 **Regulatory Documentation**. Precision and its Affiliates have generated, prepared, maintained and retained all Regulatory Documentation that is required to be maintained or retained pursuant to and in accordance with, to the extent applicable, good laboratory and clinical practice and Applicable Law and all such information is true, complete and correct in all material respects and what it purports to be. "***Regulatory Documentation***" means all: (a) applications (including all INDs and applications for Regulatory Approval), registrations, licenses, authorizations and approvals (including Regulatory Approvals); (b) correspondence and reports submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority) and all supporting documents with respect thereto, including all adverse event files and complaint files; (c) supplements or changes to any of the foregoing following Regulatory Approval; and (d) clinical and other data, including Clinical Trial data, contained or relied upon in any of the foregoing; in each case ((a)–(d)) relating to a Collaboration Target in the Field and Licensed Products Directed Against a Collaboration Target in the Field.

12.3 **Mutual Covenants**.

12.3.1 **Employees, Consultants and Contractors**. Each Party covenants that it has obtained or will obtain written agreements from each of its employees, consultants and contractors who perform research or development activities pursuant to this Agreement, which agreements will obligate such persons to obligations of confidentiality and non-use and to assign inventions in a manner consistent with the provisions of this Agreement.

12.3.2 **Debarment**. Each Party represents, warrants and covenants to the other Party that neither it nor its officers, employees, agents, consultants or any other person used by such Party in the performance of the respective research and development activities under this Agreement is: (a) debarred or disqualified under the U.S. Federal Food, Drug and Cosmetic Act; (b) listed by any government or regulatory agencies as ineligible to participate in any government healthcare programs or government procurement or non-procurement programs (as that term is defined in 42 U.S.C. § 1320a-7b(f)), or excluded, debarred, suspended or otherwise made ineligible to participate in any such program; or (c) convicted of a criminal offense related to the provision of healthcare items or services, or is subject to any such pending action. Each Party will not during the Term knowingly, employ or use, directly or indirectly, including through Affiliates the services of any such person. In the event that either Party becomes aware of the debarment

or disqualification or threatened debarment or disqualification of any person providing services to such Party, directly or indirectly, including through Affiliates or, in the case of Lilly, Sublicensees, which directly or indirectly relate to activities contemplated by this Agreement, such Party shall promptly notify the other Party in writing and such Party shall cease employing, contracting with, or retaining any such person to perform any such services.

12.3.3 **Protection of Information**. Each Party agrees that during the Term of this Agreement, and without limiting its obligations hereunder, each Party shall implement technical and organizational measures to protect all information under the Agreement that are appropriate and that provide no less protection than both (i) good industry practice (i.e., in accordance with ISO 27001 and/or similar industry standards) and (ii) such Party's measures to protect its own information of a similar nature or importance.

12.3.4 **Invention Assignment Obligation**. Each Party will obtain from each of its future employees, consultants and contractors, in each case who perform Research or Development activities pursuant to this Agreement, written agreements containing obligations of confidentiality and non-use and an assignment to such Party of all Inventions (and all of such Person's rights thereto) for which Precision or Lilly is intended to have ownership or license rights under this Agreement such that no such employee, contractor or consultant shall retain any rights to such Inventions that would prevent or conflict with Precision's or Lilly's, as applicable, rights of ownership or use of such Inventions contemplated by this Agreement.

12.4 **Precision Covenants**.

12.4.1 Precision agrees that during the Term of this Agreement, neither Precision nor its Affiliates will grant any rights (or other encumbrances) to any Third Party to Precision Technology that conflict with the rights granted to Lilly hereunder. For the avoidance of doubt, nothing in this Section 12.4.1 shall limit Precision's rights pursuant to Section 3.9.

12.4.2 Within [***] following the Effective Date, Precision shall deliver to Lilly [***], in substantially the form set forth in Exhibit 12.4.2[***].

12.5 **Compliance**.

12.5.1 **Compliance with this Agreement**. Each of the Parties shall, and shall cause their respective Affiliates to, comply in all material respects with the terms of this Agreement.

12.5.2 **Compliance with Applicable Laws**. Each Party covenants to the other that in the performance of its obligations under this Agreement, such Party shall comply with, and shall cause its Affiliates and its and its Affiliates' employees and contractors to comply, with all Applicable Laws. No Party shall, or shall be required to, undertake any activity under or in connection with this Agreement which violates, or which it believes, in good faith, may violate, any Applicable Laws.

12.5.3 **Compliance with Party-Specific Regulations**. In carrying out their respective obligations under this Agreement, the Parties agree to cooperate with each other as may reasonably be required to help ensure that each is able to fully meet its obligations with respect to all judgments, decrees, orders or similar decisions issued by any Governmental Authority specific to a Party, and all consent decrees, corporate integrity agreements, or other agreements or undertakings of any kind by a Party with any Governmental Authority, in each case as the same may be in effect from time to time and applicable to a Party's activities contemplated by this Agreement (the "***Party-Specific Regulations***"). Each Party shall be responsible for providing the other Party with any Party-Specific Regulations applicable to the other Party, including any updates to such Party-Specific Regulations, and the covenant in the preceding sentence shall only apply to the extent such Party-Specific Regulations and any updates thereto have been provided to the other Party. Neither Party shall be obligated to pursue any course of conduct that would result in such Party being in material breach of any Party-Specific Regulation applicable to it; provided that in the event that a Party refuses to fulfill its obligations under this Agreement in any material respect on such basis, the other Party shall have the right to terminate this Agreement in accordance with Section 15.2; however, under such circumstances, such termination, including the applicable effects of such termination set forth in Sections 15.5 and 15.6, shall be the sole remedy for such terminating Party and such terminating Party shall not be entitled to any other remedy under law or equity. All Party-Specific Regulations are binding only in accordance with their terms and only upon the Party to which they relate.

12.5.4 **Compliance with Internal Compliance Codes**. All Internal Compliance Codes shall apply only to the Party to which they relate. The Parties agree to cooperate with each other to help ensure that each Party is able to comply with the substance of its respective Internal Compliance Codes and, to the extent practicable, each Party shall operate in a manner consistent with its Internal Compliance Codes applicable to its performance under this Agreement. "***Internal Compliance Codes***," as used in this Section 12.5.4, means a Party's internal policies and procedures intended to ensure that a Party complies with Applicable Laws, Party-Specific Regulations, and such Party's internal ethical, medical and similar standards.

12.5.5 **Compliance with Anti-Corruption Laws**. In connection with this Agreement, the Parties shall comply with all applicable local, national, and international laws, regulations, and industry codes dealing with government procurement, conflicts of interest, corruption or bribery, including, if applicable, the U.S. Foreign Corrupt Practices Act of 1977, as amended, and any laws enacted to implement the Organisation of Economic Cooperation and Development Convention on Combating Bribery of Foreign Officials in International Business Transactions.

12.5.6 **Prohibited Conduct**. Without limiting the other obligations of the Parties set forth in this Section 12.5, each Party covenants to the other that, as of the Effective Date and in the performance of its obligations under this Agreement through the expiration and termination of this Agreement, such Party and, to its knowledge, its Affiliates and its and its Affiliates' employees and contractors, in connection with the performance of their respective obligations under this Agreement, have not made, offered,

given, promised to give, or authorized, and will not make, offer, give, promise to give, or authorize, any bribe, kickback, payment or transfer of anything of value, directly or indirectly through Third Parties, to any Government Official for the purpose of: (a) improperly influencing any act or decision of the Person or Government Official; (b) inducing the Person or Government Official to do or omit to do an act in violation of a lawful or otherwise required duty; (c) securing any improper advantage; or (d) inducing the Person or Government Official to improperly influence the act or decision of any organization, including any government or government instrumentality, to assist any Party in obtaining or retaining business. For the purpose of this Section "***Government Official***" means: (x) any officer, employee (including physicians, hospital administrators, or other healthcare professionals), agent, representative, department, agency, de facto official, representative, corporate entity, instrumentality or subdivision of any government, military or international organization, including any ministry or department of health or any state-owned or affiliated company or hospital; (y) any candidate for political office, any political party or any official of a political party, in each case for the purpose of obtaining or retaining business for or with, or directing business to, any Person, including either Party; or (z) any Person acting in an official capacity on behalf of any of the foregoing.

12.6 **Disclaimer**. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS Article 12, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR VALIDITY OF PATENT CLAIMS OR THE AVAILABILITY OF ANY LICENSES WITH RESPECT TO INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS A REPRESENTATION MADE OR WARRANTY GIVEN BY EITHER PARTY THAT EITHER PARTY WILL BE SUCCESSFUL IN OBTAINING ANY PATENTS OR THAT ANY PATENTS WILL ISSUE BASED ON A PENDING APPLICATION. WITHOUT LIMITING THE RESPECTIVE RIGHTS AND OBLIGATIONS OF THE PARTIES EXPRESSLY SET FORTH HEREIN, EACH PARTY SPECIFICALLY DISCLAIMS ANY GUARANTEE THAT ANY PROGRAM OR LICENSED PRODUCTS WILL BE SUCCESSFUL, IN WHOLE OR IN PART.

ARTICLE 13

INDEMNIFICATION

13.1 **Indemnity**.

13.1.1 **By Precision**. Subject to Section 13.1.3, Precision shall defend, indemnify and hold harmless Lilly and its Affiliates, and their respective directors, officers, employees, and agents (each, a "***Lilly Indemnitee***") from and against any and all costs, fees, expenses, losses, liabilities, and damages, including reasonable legal expenses and attorneys' fees (collectively, "***Losses***") to which any Lilly Indemnitee may become subject as a result of any claim, demand, action or other proceeding by any Third Party (a "***Claim***") to the extent such Losses arise out of: (a) the gross negligence or willful

misconduct of Precision or its Affiliates in connection with its activities under this Agreement; (b) the breach of this Agreement or the representations, warranties, and covenants made hereunder by Precision; (c) [***]; (d) [***]; or (e) [***]; except, in each case, to the extent such Losses result from matters subject to clause (a), (b), or (c) of Section 13.1.2.

13.1.2 **By Lilly**. Subject to Section 13.1.3, Lilly shall defend, indemnify and hold harmless Precision, its Affiliates, Duke, and its and their respective directors, officers, employees and agents (each, a "***Precision Indemnitee***") from and against any and all Losses to which any Precision Indemnitee may become subject as a result of any Claim to the extent such Losses arise out of: (a) the gross negligence or willful misconduct of Lilly, its Affiliates, or their respective Sublicensees in connection with its activities under this Agreement; (b) the breach of this Agreement or the representations, warranties and covenants made hereunder by Lilly; or (c) [***]; except, in each case, to the extent such Losses result from matters subject to clause (a), (b), (c) (d) or (e) of Section 13.1.1.

13.1.3 **Procedure**. A Party that intends to claim indemnification under this Article 13 (the "***Indemnitee***") shall promptly notify the Indemnitor (the "***Indemnitor***") in writing of any Claim in respect of which the Indemnitee intends to claim such indemnification. The failure to deliver written notice to the Indemnitor within a reasonable time after the commencement of any action with respect to a Claim shall only relieve the Indemnitor of its indemnification obligations under this Article 13 if and to the extent the Indemnitor is actually and materially prejudiced thereby. The Indemnitor has sole control of the defense or settlement thereof. The Indemnitee shall cooperate fully with the Indemnitor and its legal representatives in the investigation of any action with respect to a Claim covered by this indemnification. The Indemnitee may participate at its expense in the Indemnitor's defense of and settlement negotiations for any Claim with counsel of the Indemnitee's own selection. The Indemnitor shall not settle any Claim without the prior written consent of the Indemnitee, not to be unreasonably withheld, conditioned or delayed. So long as the Indemnitor is actively defending the Claim in good faith, the Indemnitee shall not settle or compromise any such Claim without the prior written consent of the Indemnitor. If the Indemnitor does not assume and conduct the defense of the Claim as provided above: (a) the Indemnitee may defend against, consent to the entry of any judgment, or enter into any settlement with respect to such Claim in any manner the Indemnitee may deem reasonably appropriate (and the Indemnitee need not consult with, or obtain any consent from, the Indemnitor in connection therewith); and (b) the Indemnitor shall remain responsible to indemnify the Indemnitee as provided in this Article 13.

13.2 **Insurance**. During the Term, each Party shall maintain such types and amounts of liability insurance (including self-insurance) as is normal and customary in the industry generally for similarly situated parties and adequate to cover its obligations under this Agreement, and Precision will upon request provide Lilly with a certificate of insurance in that regard, along with any amendments and revisions thereto.

ARTICLE 14

CONFIDENTIALITY

14.1 **Confidential Proprietary Information**.

14.1.1 **Confidential Proprietary Information**. In connection with this Agreement, each Party may disclose technical, business or other confidential information in connection with this Agreement, whether prior to, on, or after the Effective Date, including (a) any unpublished Patents, and (b) any information regarding the scientific, regulatory or business affairs or other activities of either Party (such confidential information, "***Confidential Proprietary Information***"). Without limiting the foregoing, the terms of this Agreement and all Joint IP are the Confidential Proprietary Information of both Parties and shall be treated confidentially by each of the Parties, subject to the exceptions set forth in Section 14.1.6. [***]. Information exchanged by the Parties pursuant to the Confidentiality Agreement shall be treated as Confidential Proprietary Information under this Agreement and governed by the terms of this Agreement. [***].

14.1.2 **Restrictions**. A Party (the "***Receiving Party***") that receives Confidential Proprietary Information from the other Party (the "***Disclosing Party***") shall keep all the Disclosing Party's Confidential Proprietary Information in confidence with the same degree of care with which the Receiving Party holds its own confidential information (but in no event less than a commercially reasonable degree of care). A Receiving Party shall not use the Disclosing Party's Confidential Proprietary Information except in connection with the performance of its obligations and exercise of its rights under this Agreement.

14.1.3 **Exceptions**. The obligations of confidentiality and restriction on use of Confidential Proprietary Information under Section 14.1.2 do not apply to any information that the Receiving Party can prove by competent written evidence: (a) is now, or hereafter becomes, through no act or failure to act on the part of the Receiving Party, generally known or available to the public; (b) is known by the Receiving Party at the time of receiving such information, other than by previous disclosure of the Disclosing Party, or its Affiliates, employees, agents, consultants, or contractors; (c) is hereafter furnished to the Receiving Party without restriction by a Third Party who has no obligation of confidentiality or limitations on use with respect thereto, as a matter of right; or (d) is independently discovered or developed by the Receiving Party without the use of or reference to Confidential Proprietary Information belonging to the Disclosing Party. Specific information shall not be deemed to be within any of the foregoing exclusions merely because it is embraced by more general information falling within those exclusions. Further, any combination of Confidential Proprietary Information shall not be deemed to be generally known, available to the public or known by the Receiving Party merely because individual elements of such Confidential Proprietary Information are subject to such exclusions unless the combination and its principles are subject to such exclusions.

14.1.4 **Permitted Disclosures**. The Receiving Party may disclose Confidential Proprietary Information belonging to the Disclosing Party as expressly permitted by this Agreement or if and to the extent such disclosure is reasonably necessary in the following instances:

(a) made by or on behalf of the Receiving Party to a Patent authority as may be reasonably necessary or useful for purposes of Prosecution and Maintenance of Patents as permitted by this Agreement; provided, that neither Party shall file a patent application that discloses Collaboration IP that is solely owned by the other Party pursuant to this Agreement without the prior written consent of the owning Party (such consent not to be unreasonably withheld, conditioned or delayed);

(b) made by or on behalf of the Receiving Party to Regulatory Authorities as required in connection with any Regulatory Filings for a product that such Party has a license or right to develop in a given country or jurisdiction;

(c) made by or on behalf of the Receiving Party as may be reasonably necessary for prosecuting or defending litigation as permitted by this Agreement;

(d) made by or on behalf of the Receiving Party for the purpose of complying with a valid order of a court of competent jurisdiction or other Governmental Authority of competent jurisdiction or, if in the opinion of the Receiving Party's legal counsel, such disclosure is otherwise required by Applicable Law;

(e) made by or on behalf of the Receiving Party where such disclosure is required by a Regulatory Authority (including in filings with the Securities and Exchange Commission or other agency) of certain material developments or material information generated under this Agreement; provided that, to the extent permitted, the Party seeking such disclosure first provides the other Party a copy of the proposed disclosure; and provided, further, that the receiving Party shall afford to the other Party an opportunity to review and comment, which period shall be no less than [***] (provided that if the applicable disclosure is required to be made within fewer than [***], then the receiving Party shall afford to the other Party a reasonable opportunity to review and comment consistent with such disclosure requirement), and the Receiving Party shall accept any reasonable comments so provided;

(f) made by or on behalf of Precision to Duke solely as and to the extent necessary to fulfill Precision's reporting obligations under the Duke Agreement as of the Effective Date so long as (i) such information is disclosed subject to the confidentiality provisions of the Duke Agreement as of the Effective Date and (ii) Precision shall afford Lilly the opportunity to review and comment on such disclosure, which period shall be no less than [***] and Precision shall accept any reasonable comments so provided, to the extent permitted under the Duke Agreement;

(g) made by or on behalf of the Receiving Party in response to a valid request by a U.S., state, foreign, provincial, or local tax authority, in which case either Party may disclose, a copy of this Agreement (including any Exhibits, Appendices, ancillary agreements, and amendments hereto);

(h) made by the Receiving Party to its and its Affiliates' employees, consultants, contractors and agents, and to Sublicensees (in the case of Lilly) or licensees (in the case of Precision with respect to Terminated Products), in each case on a need-to-know basis (as reasonably determined by the Receiving Party) in connection with the Research, Development, making, having made, use, keeping, importing, exporting, offering for sale, selling, Commercialization, or other exploitation of Licensed Products or Terminated Products (if applicable) in the Field in the Territory, in each case under written obligations of confidentiality and non-use at least as stringent as those herein; and

(i) made by the Receiving Party to potential and actual investors, acquirers, licensees and other financial or commercial partners solely for the purpose of evaluating or carrying out an actual or potential investment, acquisition, or collaboration, in each case under written obligations of confidentiality and non-use at least as stringent as those herein; provided, however, that with respect to disclosure to actual or bona fide potential investors, such disclosure is under a written obligation of confidentiality that is consistent with market terms, including a shorter period of time during which such information must be held confidential.

In addition to the foregoing, Precision may [***].

14.1.5 **Public Domain Information and Residual Knowledge**. Nothing in this Agreement shall prevent a Party from using any information that is in the public domain. A Party shall also not be restricted under, and shall not be in breach of, this Agreement from using, within or outside this Agreement and for any purpose, any general knowledge, skill, and expertise acquired by its employees (or its Affiliates' employees) in their performance of this Agreement ("***Residuals***") solely to the extent such Residuals shall have been retained in the unaided memory (without intentional memorization) of such employees in intangible form and without use by the Party or such employees of tangible copies of any Confidential Proprietary Information of the other Party; provided that this provision will not be deemed in any event to provide any right to infringe the Patent rights of the other Party or of Third Parties that have licensed or provided materials to the other Party; provided, further, that a Party's use of such Residuals is on an "as is, where is" basis, with all faults and all representations and warranties disclaimed and at such Party's sole risk.

14.1.6 **Disclosure of Agreement**. Notwithstanding the foregoing, either Party or its Affiliates may disclose the relevant terms of this Agreement: (a) to the extent required or advisable to comply with the rules and regulations promulgated by the U.S. Securities and Exchange Commission or any equivalent governmental agency in any country in the Territory, provided that such Party shall submit a confidential treatment request in connection with such disclosure and shall submit with such confidential treatment request only such redacted form of this Agreement, which redacted form of this Agreement shall be provided to the other Party for review and comment and which comments shall be considered in good faith by the disclosing Party; (b) upon request from a Governmental Authority (such as a tax authority), provided the disclosing Party uses reasonable efforts to ensure the Governmental Authority maintains such terms as confidential; (c) to applicable licensors, to the extent necessary to comply with the terms of any Third Party license agreement, the rights under which are sublicensed to the other

Party under this Agreement (provided that the Parties have agreed that with respect to any disclosure of this Agreement to Duke, this Agreement shall only be disclosed in redacted form, which redacted form shall be provided to Lilly for review and approval prior to such disclosure); and (d) to the extent necessary to perform obligations or exercise rights under this Agreement, to any sublicensee, collaborator or potential sublicensee or potential collaborator of such Party, provided that any sublicensee, collaborator or potential sublicensee or collaborator agree in writing to be bound by obligations of confidentiality and non-use no less protective of the Disclosing Party than those set forth in this Agreement.

14.1.7 **Survival**. Each Party's obligations under this Section 14.1 (other than Section 14.1.5) shall apply during the Term and continue for [***]. Section 14.1.5 shall apply during the Term and shall survive any expiration or termination of this Agreement.

14.2 **Publicity**. Promptly following the Execution Date, the Parties shall issue a joint press release mutually agreed upon by the Parties. Thereafter, either Party may make subsequent public disclosure of the contents of such press release and, except as permitted under Section 14.1.4 and this Section 14.2, neither Party shall issue any subsequent press release or public statement disclosing information relating to this Agreement or the transactions contemplated hereby or the terms hereof without the prior written consent of the other Party, not to be unreasonably withheld, conditioned, or delayed; provided however, that neither Party will be prevented from complying with any duty of disclosure it may have pursuant to Applicable Laws or pursuant to the rules of any recognized stock exchange or quotation system subject to the restrictions set forth in Sections 14.1.4 and 14.1.6. If either Party desires to issue a press release or other public statement disclosing information relating to this Agreement or the transactions contemplated hereby or the terms hereof, the issuing Party will provide the other Party with a copy of the proposed press release or public statement. The issuing Party shall specify with each such proposed press release or public statement, taking into account the urgency of the matter being disclosed, a reasonable period of time within which the Receiving Party may provide any comments on such proposed press release or public statement. If the reviewing Party provides any comments, the Parties shall consult with one another on such proposed press release or public statement and work in good faith to prepare a mutually acceptable press release or public statement. Each Party may repeat any information relating to this Agreement that has already been publicly disclosed in accordance with this Section 14.2, provided such information continues as of such time to be accurate.

14.3 **Publication**. Lilly shall be entitled to issue scientific publications and make presentations with respect to the Research Program, Collaboration Targets, the Licensed Products, and their testing in accordance with Lilly's internal guidelines without approval by Precision, and Lilly shall be in control of any scientific publications or scientific presentations regarding the Licensed Products or their testing, subject to this Section 14.3. For any such publications and presentations regarding Licensed Products for which a First Commercial Sale has not yet occurred, Lilly shall: (a) provide Precision with a draft of such publication or presentation at least [***] prior to submission to the publisher; (b) remove any Confidential Proprietary Information of Precision related to ARCUS Technology or ARCUS Nucleases generally, as requested by Precision; (c) delay the submission for publication of such publication

or presentation of such presentation, as applicable, for an additional [***] to allow the applicable Party under Section 11.2 the opportunity to seek patent protection with respect to the content of such publication or presentation; and (d) give Precision a pre-publication right to review and comment upon such publication or presentation, which comments shall be considered in good faith by Lilly. Precision shall not issue any scientific publications regarding the Collaboration Targets, the Licensed Products or their testing without Lilly's prior written consent. Notwithstanding the foregoing, during the Research Term Precision may issue scientific publications and make presentations relating specifically to the ARCUS Technology (including the cleavage activity, specificity, mechanics of cleavage or other performance characteristics of ARCUS Nucleases) that do not identify a Collaboration Target or a Licensed Product; provided, that for any publication or presentation that discloses information relating to the Collaboration Targets or the Licensed Products, Precision shall: (i) provide Lilly with a draft of such publication or presentation at least [***] prior to submission to the publisher; (ii) remove any Confidential Proprietary Information of Lilly or any Confidential Proprietary Information of either Party which identifies the Licensed ARCUS Nucleases, as requested by Lilly; (iii) delay the submission for publication of such publication or presentation of such presentation, as applicable, for an additional [***] to allow the applicable Party under Section 11.2 the opportunity to seek patent protection with respect to the content of such publication or presentation; and (iv) consider in good faith any comments from Lilly with respect to the information contained therein relating to Collaboration Targets or the Licensed Products.

ARTICLE 15

TERM & TERMINATION

15.1 **Term**. This Agreement commences on the Effective Date and, unless terminated earlier as provided in this Article 15, shall continue on a Licensed Product-by-Licensed Product basis until the expiration of the last Royalty Term in the Territory for such Licensed Product (the "***Term***").

15.2 **Termination for Material Breach**.

15.2.1 **Termination**. Either Party may terminate this Agreement upon written notice to the other Party if such other Party materially breaches its obligations under this Agreement and, after receiving written notice from the non-breaching Party identifying such material breach in reasonable detail, fails to cure such material breach within [***] from the date of such notice [***].

15.2.2 **Dispute**. If the alleged breaching Party disputes in good faith the existence or materiality of a breach specified in a notice provided by the other Party in accordance with Section 15.2.1, and such alleged breaching Party provides the other Party notice of such dispute within the applicable cure period, then the non-breaching Party may not terminate this Agreement under Section 15.2.1 unless and until it has been finally determined pursuant to Article 16 that the alleged breaching Party has materially breached this Agreement and such Party fails to cure such breach within [***] following such court's decision. During the pendency of such dispute, all of the terms and conditions of

this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder.

15.2.3 **Lilly Option to Continue Agreement**. Notwithstanding anything to the contrary under this Agreement, if Precision [***]. For clarity, the Agreement shall continue in accordance with its terms, save as expressly set forth in this Section 15.2.3.

15.3 **Termination by Lilly**.

15.3.1 **Partial Termination**. Lilly may, at any time in its sole discretion and without cause, terminate this Agreement on a Collaboration Target-by-Collaboration Target or Licensed Product-by-Licensed Product basis upon [***] prior written notice to Precision.

15.3.2 **Entire Agreement**. Lilly may, in its sole discretion, terminate this Agreement in its entirety at any time and without cause upon [***] prior written notice to Precision.

15.4 **Termination for Patent Challenges**. Except to the extent the following is unenforceable under the Applicable Law of a jurisdiction, then:

15.4.1 if Lilly, its Affiliates or Sublicensees, directly or indirectly: (a) initiate, request or participate in an interference or opposition proceeding with respect to any Precision Patents; (b) make, file, maintain or participate in any claim, demand, lawsuit, cause of action or any other administrative, judicial or similar proceeding to challenge the validity, enforceability or patentability of any Precision Patents; or (c) oppose any extension of, or the grant of a supplementary protection certificate with respect to, any Precision Patent (in each case, (a), (b) or (c)), other than in response to a threat of an infringement claim by Precision or its Affiliates, then Precision may terminate, upon [***] prior written notice to Lilly, this Agreement [***]; provided, however, that if Lilly or its applicable Affiliate or the applicable Sublicensee withdraws (or causes to be withdrawn) the applicable action described in above in this Section 15.4.1 within [***] after being requested to do so by Precision in writing (which termination notice will be deemed a request), then Precision will have no right to terminate this Agreement pursuant to this Section 15.4.1 on the basis of such challenge or action; and

15.4.2 if Precision, its Affiliates, or sublicensees, directly or indirectly, (a) initiate, request or participate in an interference or opposition proceeding with respect to any Lilly Patents, (b) make, file, maintain or participate in any claim, demand, lawsuit, cause of action or any other administrative, judicial or similar proceeding to challenge the validity, enforceability or patentability of any Lilly Patents, or (c) oppose any extension of, or the grant of a supplementary protection certificate with respect to, any Lilly Patents (in each case, (a), (b) or (c)), other than in response to a threat of an infringement claim by Lilly, then Lilly may terminate, upon [***] prior written notice to Precision, this Agreement [***]; provided, however, that if Precision or its applicable Affiliate or the applicable sublicensee withdraws (or causes to be withdrawn) the applicable action described in above in this Section 15.4.2 within [***] after being requested to do so by

Lilly in writing (which termination notice will be deemed a request), then Lilly will have no right to terminate this Agreement pursuant to this Section 15.4.2 on the basis of such challenge or action.

15.4.3 For clarity, (i) neither Party may terminate this Agreement pursuant to Section 15.4.1 or Section 15.4.2 if the other Party or any of its Affiliates or Sublicensees or sublicensees (as applicable) is required by legal process to be joined as a party in any challenge or other action by a Third Party, and (ii) "participates in" as used in this Section 15.4 shall not include a Party's truthful responses to mandated requests by a relevant Governmental Authority (such as subpoenas or depositions).

15.5 **Effects of Termination**. Upon any termination of this Agreement, the following will apply, provided that if this Agreement is terminated only with respect to specified Licensed Products ("***Terminated Products***") and not in its entirety, then the following will apply to such Terminated Products only, and if this Agreement is terminated in its entirety, then all Licensed Products will be deemed Terminated Products. If this Agreement is terminated with respect to a Collaboration Target, or a Collaboration Target otherwise ceases to be a Collaboration Target pursuant to the terms of this Agreement, all Licensed Products Directed Against such Collaboration Target will be deemed Terminated Products.

15.5.1 **Termination of Licenses**. All licenses for Terminated Products granted under Article 7 terminate automatically as of the termination effective date and all such rights shall revert to Precision; provided that, if Lilly (or its Affiliates or Sublicensees) has inventory of usable Licensed Product(s) as of the effective date of termination, then Lilly (and its Affiliates and Sublicensees) may continue to sell off such inventory of Licensed Products in the Field in the Territory (and fulfill customer orders therefor) until the earlier to occur of [***] after the effective date of termination and the date on which Lilly (or its Affiliates or Sublicensees) no longer has such inventory of Licensed Product(s) and shall pay Precision any applicable royalties due based on such sales. Any permitted sublicense granted by Lilly or its Affiliate to a Third Party under the licenses granted to Lilly under this Agreement shall survive the termination of this Agreement and Lilly shall endeavor in good faith to assign such sublicense to Precision such that such sublicense becomes a direct license between Precision and the Sublicensee on the same terms and conditions as those set forth in this Agreement to the extent applicable to the rights granted by Lilly to such Sublicensee, provided that, such sublicense was granted in accordance with the terms of Section 7.3 and in the case where termination of this Agreement was for Lilly's uncured material breach pursuant to Section 15.2, such Sublicensee did not cause such uncured material breach and such Sublicensee is, at the time of such termination, otherwise in compliance with the sublicense granted by Lilly to such Sublicensee and the applicable terms and conditions of this Agreement[***].

15.5.2 **Destruction of Confidential Proprietary Information**. Subject to the potential transfer of any data and information covered below in Section 15.5.3, each Receiving Party shall destroy (at the Disclosing Party's written request) all such Confidential Proprietary Information of the Receiving Party in its possession as of the effective date of expiration or termination (with the exception of one copy of such

Confidential Proprietary Information, which may be retained by the legal department of the Receiving Party to confirm compliance with the non-use and non-disclosure provisions of this Agreement), and any Confidential Proprietary Information of the Disclosing Party contained in its laboratory notebooks or databases, provided that each Receiving Party may retain and continue to use such Confidential Proprietary Information of the Disclosing Party only to the extent necessary to exercise any surviving rights, licenses or obligations under this Agreement. Notwithstanding the foregoing, a Receiving Party shall not be required to destroy any computer files created during automatic system back up that are subsequently stored securely by it and not readily accessible to its employees, consultants, or others who received the Disclosing Party's Confidential Proprietary Information under this Agreement, and neither Party shall be required to destroy any Joint IP.

15.5.3 **Terminated Product Reversion**.

(a) Precision shall have the option, exercisable within [***] following the effective date of termination of this Agreement with respect to a Terminated Product, to have Lilly and its Affiliates grant Precision the license and rights set forth in this Section 15.5.3(a) with respect to such Terminated Product (the "***Reversion Option***"). Effective upon Precision's delivery of written notice to Lilly of exercise of the Reversion Option with respect to a given Terminated Product, (i) subject to Section 15.5.3(c), Lilly agrees to grant and hereby grants (on behalf of itself and its Affiliates) to Precision an exclusive (even as to Lilly and its Affiliates), [***] license under Lilly Collaboration IP, and (ii) [***], in each case (i) and (ii), to the extent relating to such Terminated Product or developed pursuant to the Research Program, to Research, Develop, Manufacture, have Manufactured, use, keep, import, export, offer for sale, sell, Commercialize and otherwise exploit such Terminated Product in any and all fields; provided, that (x) if Precision does not exercise the Reversion Option with respect to a given Terminated Product within [***] of termination of this Agreement with respect to such Terminated Product, Lilly shall have no obligation to grant Precision such license or rights with respect to such Terminated Product and (y) in no event shall Precision receive, and Lilly shall have no obligation to grant to Precision, any rights or licenses to any Excluded Technologies.

(b) Except as otherwise set forth in Section 15.5.3(c) (if applicable), if Precision exercises the Reversion Option with respect to a given Terminated Product, then[***].

(c) If Precision exercises the Reversion Option with respect to a given Terminated Product in a case where this Agreement was terminated [***].

(d) If Precision exercises the Reversion Option with respect to a given Terminated Product, upon Precision's request Lilly shall perform the following obligations[***]:

(i) to the extent permitted by Applicable Laws or the terms of any applicable Third Party agreements, (A) assign to Precision (x) its and its Affiliates' entire right, title and interest in and to all materials, preclinical and clinical data, safety data and all other supporting data, in each case, solely relating to such Terminated Product that is in Lilly's or its Affiliates' Control, and (y) [***], and (B) deliver to Precision a copy of all relevant Know-How, in each case that relates to, and to the extent reasonably necessary for, Precision to

continue the Research, Development, Manufacture, use and Commercialization of such Terminated Product; provided, that Lilly shall not be obligated to translate or reformat any data or to convert or adapt any database or software (it being understood that such data and databases shall be transferred on an as-is basis) or to provide any Excluded Technologies, and Lilly will retain the right to use any of the assigned materials or data as necessary for legal or compliance purposes;

(ii) to the extent permitted by Applicable Laws and the terms of any applicable Third Party agreements, [***];

(iii) to the extent permitted by Applicable Laws and the terms of any applicable Third Party agreements, transfer to Precision [***];

(iv) after fulfillment of Lilly's existing commitments to its customers (including its Distributors) (which fulfillment period shall not in any event exceed [***] following termination of this Agreement as set forth in Section 15.5.1), sell to Precision Lilly's then-existing inventory of such Terminated Product, [***]; provided that Precision shall not be obligated to purchase such inventory and such sale shall only occur if Precision shall notify Lilly within [***] after the effective date of termination that Precision elects to exercise such right;

(v) grant to Precision a non-exclusive, worldwide, royalty-free, fully paid up license for use of the Licensed Product Trademarks that have been used in commerce solely with such Terminated Product (excluding any corporate name or logo of Lilly or any of its Affiliates and any trademarks that are used by Lilly or any of its Affiliates on products that are not Terminated Products), together with all goodwill relevant thereto, throughout the Territory;

(vi) Lilly shall not withdraw or cancel any such Terminated Product's Regulatory Approval or Marketing Authorization or application for either, unless expressly instructed so by Precision in writing; provided that Precision shall be responsible for all costs and expenses for the maintenance of all Regulatory Approvals and Marketing Authorizations following receipt of notice of termination; and

(vii) following written request by Precision, Lilly shall take such other actions and execute such other instruments, assignments and documents that are reasonably necessary to effect the transfers and grants of rights under this Section 15.5.3(c) to Precision.

Following the foregoing assignments and transfer, all information and Know-How so assigned or transferred that was previously Confidential Proprietary Information of Lilly shall thereafter be deemed the Confidential Proprietary Information of Precision under Article 14.

15.5.4 **Other Rights and Obligations**. All other rights granted under this Agreement and all obligations of the Parties will automatically terminate except as expressly set forth in this Section 15.5 or Section 15.6.

15.6 **Survival**. Expiration or termination of this Agreement shall not relieve the Parties of any obligation or right accruing prior to such expiration or termination. Except as set forth

below or elsewhere in this Agreement, the obligations and rights of the Parties under the following provisions of this Agreement shall survive expiration or termination of this Agreement: Article 1 (to the extent such definitions are used in surviving provisions), Article 13 (with respect to claims for which the cause of action arose prior to the effective date of termination or expiration), Article 16, and Sections 4.6.1, 4.11, 7.4 (last sentence only), 9.3 (with respect to Milestone Events reached prior to such expiration or termination), 9.4 (with respect to (i) Lilly's perpetual license upon expiration in Section 9.4.1 and (ii) sales of Licensed Products made before such expiration or termination or pursuant to Section 15.2.3), 9.5, 9.6, 9.7, 9.8, 9.9, 11.1, 11.2.2(a), 11.2.2(d), 11.2.3, 11.2.5 (to the extent such cooperation is implicated by other surviving provisions of Article 11), 11.3.2(b) (with respect to any and all Infringements of Joint Patents), 11.3.6 (with respect to actions brought under Section 11.3.2(b)), 11.4 (with respect to Joint Patents), 11.5 (first sentence only, and only with respect to Joint Patents), 11.6, 11.7 (last sentence only), 12.5.3 (to the extent applicable), 12.6, 14.1 (to the extent and as described in Section 14.1.7), 15.5, 15.6, 15.7, 17.1, 17.2, 17.5, 17.6, 17.9, 17.11, 17.16, 17.17.

15.7 **Exercise of Rights to Terminate; Damages; Relief**. The valid use by either Party of a termination right provided for under this Agreement shall not give rise to the payment of damages or any other form of compensation or relief to the other Party with respect thereto; provided, however, that termination of this Agreement shall not preclude either Party from claiming any other damages, compensation or relief that it may be entitled to upon termination.

15.8 **Bankruptcy Code**. If this Agreement is rejected by a Party as a debtor under Section 365 of the United States Bankruptcy Code or similar provision in the bankruptcy laws of another jurisdiction (the "***Code***"), then, notwithstanding anything else in this Agreement to the contrary, all licenses and rights to licenses granted under or pursuant to this Agreement by the Party in bankruptcy to the other Party are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the Code (or similar provision in the bankruptcy laws of the jurisdiction), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code (or similar provision in the bankruptcy laws of another applicable jurisdiction). The Parties agree that a Party that is a licensee of rights under this Agreement shall retain and may fully exercise all of its rights and elections under the Code, and that upon commencement of a bankruptcy proceeding by or against a Party under the Code, the other Party shall be entitled to a complete duplicate of, or complete access to (as such other Party deems appropriate), any such intellectual property to which such other Party is otherwise entitled to have access under this Agreement and all embodiments of such intellectual property, if not already in such other Party's possession, shall be promptly delivered to such other Party: (a) upon any such commencement of a bankruptcy proceeding upon written request therefor by such other Party, unless the bankrupt Party elects to continue to perform all of its obligations under this Agreement; or (b) if not delivered under the foregoing subclause (a), upon the rejection of this Agreement by or on behalf of the bankrupt Party upon written request therefor by the other Party. The foregoing provisions of this Section 15.8 are without prejudice to any rights a Party may have arising under the Code.

ARTICLE 16

GOVERNING LAW; DISPUTE RESOLUTION

16.1 **Governing Law**. This Agreement is governed by and will be construed in accordance with the laws of the State of New York, without reference to its conflict of laws principles. The United Nations Convention of International Contracts on the Sale of Goods (the Vienna Convention) does not apply to this Agreement.

16.2 **Disputes**. The Parties recognize that controversies or claims arising out of, relating to, or in connection with this Agreement may arise from time to time. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes in an expedient manner by mutual cooperation and without resort to litigation. To accomplish this objective, the Parties shall follow the procedures set forth in this Article 16 to resolve any dispute, claim or controversy of any nature arising out of or relating to this Agreement, including any action or claim based on tort, contract or statute, or concerning the interpretation, effect, termination, validity, performance or breach of this Agreement (each, a "***Dispute***"). Notwithstanding the foregoing, "Dispute" shall not include matters within the purview of the JSC, which shall be resolved pursuant to Section 2.7, including through the exercise by Precision or Lilly of its final decision-making authority in accordance therewith; provided that Disputes regarding whether a decision is subject to Precision's JSC representatives having final decision-making authority or to Lilly's JSC representatives having final decision-making authority pursuant to Section 2.7 shall be resolved pursuant to the procedures set forth in this Article 16. If a Dispute arises between the Parties, either Party may refer the Dispute to Executive Officers of each Party for resolution within [***] of a written request by either Party to the other Party. Each Party, within [***] after a Party has received such written request from the other Party to so refer such Dispute, shall notify the other Party in writing of the Executive Officer to whom such Dispute is referred. If, after an additional [***] after the notice of Dispute, such Executive Officers have not succeeded in negotiating a resolution of the Dispute, and a Party wishes to pursue the matter, the Parties may seek to resolve the Dispute in any federal court having jurisdiction thereof located in New York, New York as further described in Section 16.3.

16.3 **Litigation; Equitable Relief**. The Federal courts located in New York, New York shall have exclusive jurisdiction over, and shall be the exclusive venue for resolution of, any Dispute not resolved through the informal Dispute-resolution procedures described above. If, within [***] following a notice by either Party to the other that it does not believe the Dispute can be resolved through the Executive Officers, neither Party has commenced proceedings seeking to resolve such Dispute in any federal court having jurisdiction, then such Dispute and all related rights, demands, claims, actions, causes of action, suits, proceedings and Losses of every kind and nature shall be deemed to have been irrevocably waived and released, to the fullest extent permitted under Applicable Laws. Either Party may, at any time and without waiving any remedy under this Agreement, seek from any court having jurisdiction any temporary injunctive or provisional relief necessary to protect the rights or property of that Party. Any final judgment resolving a Dispute may be enforced by either Party in any court having appropriate jurisdiction.

ARTICLE 17

MISCELLANEOUS

17.1 **Entire Agreement; Amendment**. This Agreement, including the Exhibits and Schedules hereto, together with the Stock Purchase Agreement, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto with respect to the subject matter hereof and supersedes, as of the Effective Date, all prior and contemporaneous agreements and understandings between the Parties with respect to the subject matter hereof, including the Confidentiality Agreement. The foregoing may not be interpreted as a waiver of any remedies available to either Party as a result of any breach, prior to the Effective Date, by the other Party of its obligations under the Confidentiality Agreement. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party.

17.2 **Limitation of Liability**. NEITHER PARTY MAY RECOVER FROM THE OTHER PARTY ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES IN CONNECTION WITH THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THIS SECTION 17.2 SHALL NOT BE CONSTRUED TO LIMIT EITHER PARTY'S INDEMNIFICATION OBLIGATIONS UNDER ARTICLE 13, EITHER PARTY'S LIABILITY FOR BREACH OF ITS EXCLUSIVITY OBLIGATIONS UNDER ARTICLE 8 OR CONFIDENTIALITY OBLIGATIONS UNDER ARTICLE 14 OR LIABILITY OF A PARTY FOR ITS INFRINGEMENT OR MISAPPROPRIATION OF ANY INTELLECTUAL PROPERTY RIGHTS OR FOR A PARTY'S GROSS NEGLIGENCE, WILFUL MISCONDUCT OR FRAUD.

17.3 **Independent Contractors**. The relationship between Lilly and Precision created by this Agreement is solely that of independent contractors. This Agreement does not create any agency, distributorship, employee-employer, partnership, joint venture or similar business relationship between the Parties. Neither Party is a legal representative of the other Party, and neither Party can assume or create any obligation, representation, warranty, or guarantee, express or implied, on behalf of the other Party.

17.4 **Notice**. Any notice required or permitted to be given by this Agreement must be in writing, in English. Any and all notices or other communications or deliveries required or permitted to be provided hereunder must be in writing and will be deemed given and effective if: (a) delivered by hand or by overnight courier with tracking capabilities; (b) mailed postage prepaid by first class, registered, or certified mail; or (c) delivered by facsimile or electronic mail followed by delivery via either of the methods set forth in clauses (a) and (b) of this Section 17.4, in each case, addressed as set forth below unless changed by notice so given:

If to Precision:

Precision BioSciences, Inc.
302 East Pettigrew Street, Suite A-100
Durham, NC 27701
Attn: [***], Vice President, Business Development
Fax: (480) 393-5553
E-mail: [***]

with a copy (which shall not constitute notice) to:

Smith, Anderson, Blount, Dorsett,
Mitchell & Jernigan, LLP
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: John Therien
Fax: (919) 821-6800

If to Lilly:

Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285
Attn: Senior Vice President, Corporate Business Development
Fax: (317) 651-3051

with a copy (which shall not constitute notice) to:

Eli Lilly and Company
Lilly Corporate Center
Indianapolis, IN 46285
Attn: General Counsel
Fax: (317) 433-3000

Precision shall also provide a copy of any notice (via e-mail if available) to Lilly's Alliance Manager.

17.5 **Severability**. If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable, or illegal by a court of competent jurisdiction, (a) such adjudication shall not, to the extent feasible, affect or impair, in whole or in part, the validity, enforceability, or legality of any remaining portions of this Agreement, (b) this Agreement shall be construed and enforced as if such invalid, unenforceable or illegal provision had never comprised a part hereof, (c) all remaining portions will remain in full force and effect and shall not be affected by the invalid, unenforceable or illegal provision or by its severance herefrom, and (d) in lieu of such invalid, unenforceable or illegal provision, the Parties shall use reasonable efforts to seek and agree on an alternative valid and enforceable provision that preserves the original purpose and intent of this Agreement.

17.6 **Non-Use of Names**. Precision shall not use the name, trademark, logo, or physical likeness of Lilly or its respective officers, directors or employees, or any adaptation of any of them, in any advertising, promotional or sales literature, without Lilly's prior written consent; provided that Precision shall have the right to use the name and logo of Lilly on its website solely for the purpose of referring to Lilly as a partner of Precision. Precision shall require its Affiliates to comply with the foregoing. Lilly shall not use the name, trademark, logo, or physical likeness of Precision or its officers, directors or employees, or any adaptation of any of them, in any advertising, promotional or sales literature, without Precision's prior written consent. Lilly shall require its Affiliates and Sublicensees to comply with the foregoing.

17.7 **Assignment**. Neither Party may assign or transfer this Agreement or any rights or obligations hereunder without the prior written consent of the other, except that a Party may make such an assignment or transfer, without the other Party's consent to: (a) its Affiliate, provided that such Party shall remain primarily liable for any acts or omissions of such Affiliate; or (b) to an Acquirer in connection with a Change of Control, subject to Section 17.8. Any permitted assignee shall, in writing to the non-assigning party, expressly assume performance of such assigning Party's rights and obligations. Any permitted assignment or transfer is binding on the successors of the assigning or transferring Party. Any assignment or transfer or attempted assignment or transfer by either Party in violation of the terms of this Section 17.7 is null, void and of no legal effect.

17.8 **Precision Change of Control**.

17.8.1 **Notification of Change of Control**. Precision shall provide Lilly with written notice of any Change of Control of Precision promptly, but no later than [***], following the earlier of the first public announcement of such Change of Control or the execution of a definitive agreement relating to such Change of Control (or, if not prohibited under Applicable Law or by the terms of any written agreement between Precision and any third party, any earlier date prior to the first public announcement of, or execution of a definitive agreement pertaining to such Change of Control, as determined in Precision's sole discretion), which notice shall describe in reasonable detail the nature of the transaction and the identity of the Acquirer (a "***Change of Control Notice***"). If Precision undergoes a Change of Control, then Section 17.8.3 shall apply. For avoidance of doubt, a Change of Control of Precision shall not in any way limit or alter Lilly's termination rights in accordance with Section 15.3, and the provisions of Section 17.8.3 below shall only apply if Lilly has not exercised any such termination right.

17.8.2 **Notification of Sale Process**. If, during the Target Nomination Period, Precision, following authorization from its board of directors, determines to solicit from two or more Third Parties indications of interest or proposals providing for a Change of Control of Precision (the "***Solicitation***"), then Precision shall notify Lilly of such determination promptly following the first Solicitation. In connection therewith, Precision shall provide Lilly with an opportunity to participate in the process undertaken by Precision to make such Solicitations (a "***Process***") by [***]. Lilly's opportunity to participate in such Process shall be contingent upon [***]. The obligations set forth in this Section 17.8.2 shall in no way restrict Precision's right to (i) determine whether to make any Solicitations, (ii) the type of terms of any Process it may choose to undertake if it

were to decide to make Solicitations or (iii) the counterparties (if any) with which it enters into any definitive agreement in connection with any Solicitation or Change of Control, other than to provide Lilly with the opportunity to participate as set forth in this Section 17.8.2. For the avoidance of doubt, nothing set forth in this Agreement (including this Section 17.8.2) shall obligate Precision to provide Lilly with any other rights with respect to any Process (including any rights to remain in any Process or consummate a Change of Control) or any right of first offer or right of first negotiation with respect to any Change of Control.

17.8.3 **Effects of Change of Control**. Except in the scenario set forth in Section 17.8.5 below (in which case, the terms of Section 17.8.5 shall apply to such scenario), following a Change of Control of Precision, Lilly may [***].

(a) **[*****]:

(i) Precision[***];

(ii) with respect to [***];

(iii) the JSC shall [***];

(iv) Precision shall [***];

(v) solely if [***];

(vi) with respect to [***]; and

(vii) Precision shall [***].

(b) **[*****].

17.8.4 **Acquirer Engaged in Competing Program**. If Precision undergoes a Change of Control and, as of the closing date of such Change of Control transaction, the applicable Acquirer is engaged in a Competing Program, then Lilly may, by written notice delivered to Precision within [***] following the earlier of the first public announcement of such Change of Control or Lilly's receipt of a Change of Control Notice from Precision, [***]; provided, that [***].

17.8.5 **Acquirer Not Engaged in Competing Program**. If Precision undergoes a Change of Control and, as of the closing date of such Change of Control transaction, the applicable Acquirer is not engaged in a Competing Program, then the following shall apply:

(a) [***], then Lilly may, by written notice delivered to Precision within [***] following the earlier of the first public announcement of such Change of Control or Lilly's receipt of a Change of Control Notice from Precision[***]; and

(b) [***], then the Research Program and this Agreement shall continue in the same manner as prior to the Change of Control [***].

17.8.6 **[*****].

17.8.7 **[***]**. Promptly following the first to occur of any of the following events in relation to an Acquirer of Precision: (a) the effective date of a Change of Control of Precision [***], (b) Lilly's delivery to Precision of a Nomination Request pursuant to Section 3.2.1 or a Replacement Request pursuant to Section 3.3.1 (if applicable) specifying the identity of a Target that Lilly desires to include as a Collaboration Target under this Agreement, [***], or (c) the initiation of [***] (each of (a), (b) and (c), with respect to such Competing Program, the "***Firewall Event***"), Precision shall implement and enforce Firewalls between the applicable Research Program and Competing Program for the duration of the applicable Firewall Period.

17.8.8 **Firewall Audits**. Lilly shall have the right, through a designated Third Party auditor reasonably acceptable to Precision, to audit Precision's (and, as applicable, its Affiliates') implementation and enforcement of Firewalls under this Section 17.8 for purposes of confirming compliance with the Firewalls, identifying any vulnerabilities or breaches and requiring Precision (or its Affiliates) to promptly remediate any non-compliance identified by such audit. In connection with such audit, duly authorized representatives of Lilly's designated auditor may make an on-site visit to Precision (or its Affiliate) for the purpose of conducting such audit. Precision may require such auditor to execute a reasonable confidentiality agreement prior to commencing the audit, provided that the results of such audit (excluding all Third Party confidential information and any of Precision's or its Affiliates' confidential information that Lilly does not otherwise have the right to access under this Agreement) may be shared with Lilly. Lilly may conduct such audits from time to time as reasonably necessary to confirm Precision's compliance with such Firewall requirements [***]. Any audits described under this Section 17.8.8 shall be conducted during Precision's regular business hours, for a duration only as reasonably necessary to confirm Precision's compliance with the applicable Firewall requirements, and shall not unreasonably interfere with or impede Precision's business operations. Lilly shall provide Precision with written notice of such audit at least [***] prior to such requested audit (or such shorter period as may be designated by Lilly if Lilly reasonably believes at any time that Precision is not in compliance with such Firewall requirements). All such audits shall be conducted at Lilly's cost and expense. If the auditor identifies any breach of the Firewall, Lilly and/or the auditor will notify Precision, and Precision will promptly (and will use reasonable efforts to ensure its Affiliates promptly) take all action necessary to remedy such breach, and will provide Lilly with reasonable assurance that such action has been taken, at Precision's sole expense.

17.9 **Waivers**. The failure of a Party to insist upon strict performance of any provision of this Agreement or to exercise any right arising out of this Agreement shall neither impair that provision or right nor constitute a waiver of that provision or right, in whole or in part, in that instance or in any other instance. Any waiver by a Party of a particular provision or right shall be

in writing, shall be as to a particular matter and, if applicable, for a particular period of time and shall be signed by such Party.

17.10 **Force Majeure**. Neither Party shall be responsible to the other for any failure or delay in performing any of its obligations under this Agreement or for other nonperformance hereunder (excluding, in each case, the obligation to make payments when due) if such delay or nonperformance is caused by strike, fire, flood, earthquake, accident, war, act of terrorism, epidemics, pandemics, the spread of infectious diseases, quarantines, act of God or of the government of any country or of any local government, or by any other cause unavoidable or beyond the control of any Party hereto. In such event, such affected Party shall use Commercially Reasonable Efforts to resume performance of its obligations and will keep the other Party informed of actions related thereto.

17.11 **Interpretation**. The captions and headings to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless specified to the contrary, references to Articles, Sections, Appendices or Exhibits mean the particular Articles, Sections, Appendices or Exhibits to this Agreement and references to this Agreement include all Exhibits hereto. In the event of any conflict between the main body of this Agreement and any Exhibit hereto, the main body of this Agreement shall prevail. Unless context otherwise clearly requires, whenever used in this Agreement: (a) the words "include" or "including" shall be construed as incorporating, also, "but not limited to" or "without limitation"; (b) the word "day" or "year" means a calendar day or year unless otherwise specified; (c) the word "notice" means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (d) the words "hereof," "herein," "hereby" and derivative or similar words refer to this Agreement as a whole and not merely to the particular provision in which such words appear; (e) the words "shall" and "will" have interchangeable meanings for purposes of this Agreement; (f) provisions that require that a Party, the Parties or a committee hereunder "agree," "consent" or "approve" or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise; (g) words of any gender include the other gender; (h) words using the singular or plural number also include the plural or singular number, respectively; (i) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement law, rule or regulation thereof; (j) the phrase "non-refundable" shall not prohibit, limit or restrict either Party's right to obtain damages in connection with a breach of this Agreement; (k) neither Party shall be deemed to be acting on behalf of the other Party; and (l) the words "gene editing" and "genome editing" have interchangeable meanings for purposes of this Agreement and do not include gene therapy activities (other than gene editing).

17.12 **Counterparts; Electronic Signatures**. This Agreement may be executed in any number of counterparts, each of which is deemed an original, but all of which together constitute one instrument. This Agreement may be executed and delivered electronically and upon such delivery such electronic signature will be deemed to have the same effect as if the original signature had been delivered to the other Party.

17.13 **Expenses**. Each Party shall pay its own costs, charges and expenses incurred in connection with the negotiation, preparation and execution of this Agreement.

17.14 **Further Assurances**. Lilly and Precision hereby covenant and agree without the necessity of any further consideration, to execute, acknowledge and deliver any and all documents and take any action as may be reasonably necessary to carry out the intent and purposes of this Agreement.

17.15 **No Third Party Beneficiary Rights**. This Agreement is not intended to and shall not be construed to give any Third Party any interest or rights (including any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby, except as otherwise expressly provided for in this Agreement.

17.16 **Construction**. The Parties hereto acknowledge and agree that: (a) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (b) the rule of construction to the effect that any ambiguities are resolved against the drafting Party shall not be employed in the interpretation of this Agreement; and (c) the terms and provisions of this Agreement shall be construed fairly as to all Parties hereto and not in a favor of or against any Party, regardless of which Party was generally responsible for the preparation of this Agreement.

17.17 **Cumulative Remedies**. No remedy referred to in this Agreement is intended to be exclusive unless explicitly stated to be so, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

17.18 **Extension to Affiliates**. Except as expressly set forth otherwise in this Agreement, each Party shall have the right to extend the rights and immunities granted in this Agreement to one or more of its Affiliates. All applicable terms and provisions of this Agreement, except this right to extend, shall apply to any such Affiliate to which this Agreement has been extended to the same extent as such terms and provisions apply to the Party extending such rights and immunities. For clarity, Lilly extending the rights and immunities granted hereunder shall remain primarily liable for any acts or omissions of its Affiliates.

[signature page follows]

In Witness Whereof, the Parties have caused this Agreement to be executed as of the Execution Date by their duly authorized representatives.

Precision BioSciences, Inc.

By: /s/ Matthew Kane
Name: Matthew Kane
Title: Chief Executive Officer

Eli Lilly and Company

By: /s/ David A. Ricks
Name: David A Ricks
Title: Chairman and CEO, Eli Lilly and Company

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Exhibit 1.201

Sequence of [***] ARCUS Nuclease

[Omitted]

Exhibit 3.4

Certain Unavailable Targets

[Omitted]

Exhibit 4.4.1

Initial Research Plan

[Omitted]

Exhibit 4.8 – Part A

Eli Lilly and Company Good Research Practices

[Omitted]

Exhibit 4.8

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Exhibit 4.8 – Part B

Lilly Principles for Animal Care and Use for Third Party Organizations

[Omitted]

Exhibit 4.10

Form of Materials Transfer Record

[Omitted]

Exhibit 9.6

Precision Wire Instructions

[Omitted]

Exhibit 12.2.4

Existing Patents

[Omitted]

Exhibit 12.4.2

[***]

[Omitted]

Schedule 1.65

Duke IP

[Omitted]

STOCK PURCHASE AGREEMENT

This **Stock Purchase Agreement** (this "***Agreement***") is entered into as of November 19, 2020 (the "***Execution Date***"), by and between **Precision BioSciences, Inc.**, a corporation organized and existing under the laws of Delaware, with its principal business office located at 302 East Pettigrew St., Suite A-100, Durham, North Carolina 27701 ("***Precision***"), and **Eli Lilly and Company**, a corporation organized and existing under the laws of Indiana, with its principal business office located at Lilly Corporate Center, Indianapolis, Indiana 46285, U.S.A. ("***Lilly***"). Precision and Lilly are each hereafter referred to individually as a "***Party***" and together as the "***Parties***." The capitalized terms used herein and not otherwise defined have the meanings given to them in Appendix 1 or the Development and License Agreement.

Whereas, the Parties are entering into that certain Development and License Agreement of even date herewith (the "***Development and License Agreement***"); and

Whereas, pursuant to the terms and subject to the conditions set forth in this Agreement, Precision desires to issue and sell to Lilly, and Lilly desires to purchase from Precision, certain shares of Precision's common stock, $0.000005 par value per share ("***Common Stock***").

Now, Therefore, in consideration of the following mutual promises and obligations, and for good and valuable consideration, the adequacy and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1

SALE AND PURCHASE OF STOCK

1.1 Purchase of Stock. Subject to the terms and conditions of this Agreement, at the Closing, Precision will issue and sell to Lilly, and Lilly will purchase from Precision, 3,762,190 shares of Common Stock (the "***Shares***") for an aggregate purchase price of $35,000,000 (the "***Purchase Price***").

1.2 Payment. At the Closing, Lilly will pay the Purchase Price by wire transfer or electronic funds transfer of immediately available funds to an account designated by Precision, which account Precision shall designate to Lilly no less than two (2) Business Days prior to the Closing Date, and Precision will deliver the Shares in book-entry form to Lilly.

1.3 **Closing**.

(a) The closing of the purchase and sale of the Shares hereunder (the "***Closing***") shall be held on the second (2nd) Business Day after the satisfaction or waiver of the conditions to Closing set forth in Article 6 (other than those conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or waiver of such conditions at the Closing), at 10:00 a.m. Eastern Time, remotely via the exchange of documents and signatures, or at such other time, date and location as the Parties may agree orally or in writing. The date the Closing occurs is hereinafter referred to as the "***Closing Date***."

(b) Precision shall instruct its transfer agent at the Closing to register the Shares in book-entry in the name of Lilly, and Precision shall cause its transfer agent to deliver written confirmation of the book-entry delivery of the Shares to Lilly. Precision will also deliver to Lilly at the Closing a certificate in form and substance reasonably satisfactory to Lilly and duly executed on behalf of Precision by an authorized officer of Precision, certifying that the conditions to the Closing set forth in Section 6.3 of this Agreement have been fulfilled; and

(c) Lilly will deliver to Precision at the Closing a certificate in form and substance reasonably satisfactory to Precision and duly executed on behalf of Lilly by an authorized officer of Lilly, certifying that the conditions to Closing set forth in Section 6.2 of this Agreement have been fulfilled.

ARTICLE 2

REPRESENTATIONS AND WARRANTIES OF PRECISION

Except as otherwise specifically contemplated by this Agreement, Precision hereby represents and warrants as of the Execution Date and the Closing Date to Lilly that:

2.1 Private Placement. Subject to the accuracy of the representations made by Lilly in Article 3, the Shares will be issued and sold to Lilly in compliance with applicable exemptions from the registration and prospectus delivery requirements of the Securities Act and the registration and qualification requirements of all applicable securities laws of the states of the United States.

2.2 Organization and Qualification. Precision is duly incorporated, validly existing and in good standing under the laws of the State of Delaware, with full corporate power and authority to conduct its business as currently conducted. Precision is duly qualified as a foreign corporation to do business and is in good standing in every jurisdiction in which the nature of the business conducted by it or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision. True and correct copies of Precision's amended and restated certificate of incorporation, amended and restated bylaws and similar organizational documents (collectively, the "***Organizational Documents***"), as in effect on the Execution Date, are each filed or incorporated by reference as exhibits to the SEC Documents (as defined below).

2.3 **Subsidiaries**. Precision has provided to Lilly a complete list of each direct and indirect subsidiary of Precision (each, a "***Subsidiary***" and, collectively, the "***Subsidiaries***") as of the Execution Date, including its name and jurisdiction of incorporation or formation. Each Subsidiary that owns any assets material to Precision has been duly incorporated or organized, as the case may be, and is validly existing as a corporation, partnership or limited liability company, as applicable, in good standing under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as presently conducted. Each Subsidiary is duly qualified as a foreign corporation, partnership or limited liability company, as applicable, to do business and is in good standing in each jurisdiction in which such qualification is required, whether by reason

of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or be in good standing would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision. All of the issued and outstanding capital stock or other equity or ownership interests of each Subsidiary have been duly authorized and validly issued, are fully paid and nonassessable and are owned by Precision, directly or through Subsidiaries, free and clear of any encumbrances or preemptive and similar rights to subscribe for or purchase securities.

2.4 Authorization; Enforcement. Precision has all requisite corporate power and authority to enter into and to perform its obligations under this Agreement, to consummate the transactions contemplated hereby and to issue the Shares in accordance with the terms hereof. The execution, delivery and performance of this Agreement by Precision and the consummation by it of the transactions contemplated hereby (including the issuance of the Shares at the Closing in accordance with the terms hereof) have been duly authorized by the Board and no further consent or authorization of Precision, the Board or Precision's stockholders is required. This Agreement has been duly executed by Precision and constitutes a legal, valid and binding obligation of Precision, enforceable against Precision in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' and contracting parties' rights generally and except as enforceability may be subject to general principles of equity and except as rights to indemnity and contribution may be limited by state or federal securities laws or public policy underlying such laws.

2.5 Issuance of Shares. The Shares have been duly authorized and, upon their issuance and delivery to Lilly at the Closing in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable and will not be subject to liens, encumbrances or restrictions on transfer, including preemptive rights, rights of first refusal, purchase options, call options, subscription rights or other similar rights of stockholders of Precision, other than as arising pursuant to this Agreement, as a result of any action by Lilly or under federal or state securities laws. No stop order or suspension of trading of the Common Stock has been imposed by Nasdaq or the SEC and remains in effect.

2.6 **SEC Documents, Financial Statements**.

(a) Precision has (i) timely filed or furnished, as applicable, all reports, schedules, forms, statements and other documents required to be filed or furnished by it with the SEC since March 27, 2019, pursuant to the reporting requirements of the Exchange Act (all of the foregoing and all exhibits included therein and financial statements and schedules thereto and documents (other than exhibits) incorporated by reference therein, collectively, the "***SEC Documents***") and (ii) delivered or made available (by filing on the SEC's electronic data gathering and retrieval system (EDGAR)) to Lilly complete copies of the SEC Documents, including, but not limited to, its Annual Report on Form 10-K for the year ended December 31, 2019 (the "***Form 10-K***") and its Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (the "***Form 10-Q***"). As of its date, or if amended, as of the date of the last such amendment, each SEC Document complied in all material respects with the requirements of the Exchange Act and the Securities Act applicable to such SEC Documents, and, as of its date, or if amended, as of the date of the last such amendment, such SEC Document did not contain any untrue statement of a material

fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

(b) As of the respective dates and for the respective periods indicated, the consolidated financial statements (including the notes thereto) of Precision included in the Form 10-K and the Form 10-Q comply as to form in all material respects with the published rules and regulations of the SEC with respect thereto, have been prepared in accordance with GAAP applied on a consistent basis during the periods involved (except as may be indicated in the notes thereto) and fairly present in all material respects, in accordance with GAAP, the consolidated financial position of Precision as of the dates thereof and the consolidated results of its operations and cash flows for the periods then ended.

(c) The Common Stock is listed on Nasdaq and registered pursuant to Section 12(b) of the Exchange Act, and Precision has taken no action designed to or reasonably likely to have the effect of terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq. As of the Execution Date, Precision has not received any notification that, and has no Knowledge that, the SEC or Nasdaq is contemplating terminating such registration or listing. Precision is in compliance in all material respects with the requirements of Nasdaq for continued listing of the Common Stock thereon.

2.7 Internal Controls; Disclosure Controls and Procedures. Precision has established and maintains internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act. Precision has implemented the "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) that (a) are required in order for the principal executive officer and principal financial officer of Precision to engage in the review and evaluation process mandated by the Exchange Act, (b) have been evaluated by management of Precision for effectiveness as of September 30, 2020 and (c) are, to the Knowledge of Precision, effective in all material respects to perform the functions for which they were established. To the Knowledge of Precision, as of the Execution Date, Precision is in compliance with such disclosure controls and procedures in all material respects. Each of the principal executive officer and the principal financial officer of Precision has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 with respect to all reports, schedules, forms, statements and other documents required to be filed by Precision with the SEC. From December 31, 2019 through the Execution Date, to the Knowledge of Precision, there have been no significant deficiencies or material weaknesses in Precision's internal control over financial reporting (whether or not remediated) and no change in Precision's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, Precision's internal control over financial reporting.

2.8 **Capitalization and Voting Rights**.

(a) The authorized capital of Precision as of the Execution Date consists of (i) 200,000,000 shares of Common Stock of which, as of November 16, 2020, (x) 52,503,765 shares were issued and outstanding, (y) 10,860,894 shares were issuable upon the exercise of stock options outstanding or issuable upon vesting of restricted stock unit awards outstanding, and (z) 2,716,368 shares were reserved for issuance in connection with future grants of awards pursuant to Precision's stock incentive plans, and (ii) 10,000,000 shares of Preferred Stock, of which no

shares are issued and outstanding as of the Execution Date. All of the issued and outstanding shares of Common Stock (A) have been duly authorized and validly issued, (B) are fully paid and non-assessable and (C) were issued in material compliance with applicable federal and state securities laws and not in violation of any preemptive rights.

(b) All of the authorized shares of Common Stock are entitled to one (1) vote per share.

(c) Except as described or referred to in the SEC Documents, as of the Execution Date, there were no (i) outstanding equity securities, options, warrants, rights (including conversion or preemptive rights, rights of first refusal, rights of first purchase, purchase options, call options or subscription rights) or other agreements pursuant to which Precision is or may become obligated to issue or sell, any shares of its capital stock or any other securities of Precision other than equity securities that may have been granted pursuant to its stock incentive plans, which plans are described in the SEC Documents, (ii) restrictions on the transfer of capital stock of Precision other than pursuant to federal or state securities laws or as set forth in this Agreement or (iii) obligation (contingent or otherwise) to repurchase, redeem or otherwise acquire any of its equity securities or any interests therein or to pay any dividend or make any distribution in respect thereof.

(d) Precision is not a party to or subject to any agreement or understanding relating to the voting of shares of capital stock of Precision or the giving of written consents by a stockholder or director of Precision.

(e) As of the Execution Date, Precision does not have outstanding any stockholder rights plans or "poison pill" or any similar arrangement in effect giving any Person the right to purchase any equity interest in Precision upon the occurrence of certain events.

2.9 **No Conflicts; Government Consents and Permits**.

(a) The execution, delivery and performance of this Agreement by Precision and the consummation by Precision of the transactions contemplated hereby (including the issuance of the Shares) will not (i) conflict with or result in a violation of any provision of Precision's Organizational Documents, (ii) result in any encumbrance upon any of the Shares, other than restrictions on resale pursuant to securities laws or as set forth in this Agreement, (iii) materially violate or conflict with, or result in a material breach, default, modification, acceleration of payment or termination under of any provision of, or constitute a default under, any Material Contract, or (iv) result in a material violation of any law, rule, regulation, order, judgment or decree (including United States federal and state securities laws and regulations and regulations of any self-regulatory organizations) applicable to Precision as of the Execution Date.

(b) Precision is not required to obtain any consent, authorization or order of, or make any filing or registration with, any Governmental Authority in order for it to execute, deliver and perform its obligations under this Agreement in accordance with the terms hereof, or to issue and sell the Shares in accordance with the terms hereof, other than such as have been made or obtained, and except for (i) for any post-Closing filings required to be made under federal or state "blue sky" or securities laws, (ii) for any required filings or notifications regarding the

issuance or listing of additional shares with Nasdaq, and (iii) as required under the HSR Act or as may be required pursuant to Article 10 of the Development and License Agreement.

2.10 Litigation. As of the Execution Date, other than as set forth in the SEC Documents, there is no material action, suit, proceeding or investigation pending (of which Precision has received notice or otherwise has Knowledge) or, to Precision's Knowledge, threatened, against Precision or which Precision intends to initiate.

2.11 Licenses and Other Rights; Compliance with Laws. As of the Execution Date, each of Precision and its Subsidiaries possesses such valid and current certificates, authorizations or permits required by state, federal, provincial or foreign regulatory agencies or bodies to conduct its business as currently conducted and as described in the SEC Documents, except where the failure to so possess would not reasonably be expected to be materially adverse to Precision ("***Permits***"). As of the Execution Date, each of Precision and its Subsidiaries is not in violation of, or in default under, any of the Permits, except for such violations or defaults that would not reasonably be expected to be materially adverse to Precision. As of the Execution Date, neither Precision nor any of its Subsidiaries has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such Permits, which if the subject of an unfavorable decision, ruling, or finding would reasonably be expected to be materially adverse to Precision.

2.12 Intellectual Property.

(a) To Precision's Knowledge, and except as disclosed in the SEC Documents, Precision and its Subsidiaries own, possess, license or have other rights to use all foreign and domestic patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, Internet domain names, know-how and other intellectual property (collectively, the "***Precision IP***"), necessary for the conduct of their respective businesses as now conducted except to the extent that the failure to own, possess, license or otherwise hold adequate rights to use such Precision IP would not reasonably be expected to have a Material Adverse Effect on Precision.

(b) Except as disclosed in the SEC Documents, (i) there are no rights of Third Parties to any such Precision IP owned by Precision or its Subsidiaries; (ii) to Precision's Knowledge, there is no infringement by Third Parties of any such Precision IP; (iii) there is no pending or, to Precision's Knowledge, threatened action, suit, proceeding or claim by others challenging Precision's and its Subsidiaries' rights in or to any such Precision IP; (iv) there is no pending or, to Precision's Knowledge, threatened action, suit, proceeding or claim by any Third Party challenging the validity or scope of any such Precision IP, other than patent application prosecution proceedings in the United States Patent Office, and foreign counterpart offices, with respect to pending patent applications owned or licensed by Precision or its Subsidiaries; (v) there is no pending or, to Precision's Knowledge, threatened action, suit, proceeding or claim by any Third Party that Precision or its Subsidiaries infringe or otherwise violate, or has infringed or otherwise violated, any patent, trademark, copyright, trade secret or other proprietary rights of any Third Party; and (vi) to Precision's Knowledge, Precision and its Subsidiaries have complied in all material respects with the terms of each agreement pursuant to which Precision IP has been licensed to Precision or such Subsidiary, and all such agreements are in full force and effect;

except, in the case of any of the items described in clauses (i)-(vi) above, those that would not reasonably be expected to have a Material Adverse Effect on Precision.

(c) To Precision's Knowledge, and except as disclosed in a writing referencing this Section 2.12(c) delivered to Lilly simultaneously with or prior to the execution hereof, (i) the conduct of the business of Precision and its Subsidiaries as presently conducted has not infringed, misappropriated or otherwise violated, and is not infringing, misappropriating or otherwise violating any Intellectual Property of any Third Party, and (ii) no Third Party has infringed, misappropriated or otherwise violated, or is infringing, misappropriating or otherwise violating any of the Precision Patents or material Precision IP, and no such claims have been made against any Third Party by Precision; except, in the case of each of clause (i) and (ii), for infringements, misappropriations and other violations that would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision.

2.13 **Taxes and Tax Returns**.

(a) Each of Precision and each of its Subsidiaries has timely filed (taking into account all applicable extensions) all material Tax Returns required to be filed by it; all such Tax Returns were correct and complete in all material respects; and each of Precision and each of its Subsidiaries has paid (or has had paid on its behalf) to the appropriate Governmental Authority all material Taxes that are required to be paid by it; except, in each case, with respect to matters contested (or that could be contested) in good faith or for which materially adequate reserves have been established in accordance with GAAP. As of the Execution Date, there are no disputes pending or, to the Knowledge of Precision, claims asserted in writing in respect of Taxes of Precision or any of its Subsidiaries for which reserves that are adequate under GAAP have not been established.

(b) Precision has not been a United States real property holding company within the meaning of Section 897(c)(2) of the Internal Revenue Code of 1986, as amended (the "***Code***") during the period specified in Section 897(c)(1)(A)(ii) of the Code.

2.14 **Absence of Certain Changes**. Since September 30, 2020 through the Execution Date, except as set forth in the SEC Documents or as contemplated by this Agreement or the Development and License Agreement, there has not been:

(a) Any change, development, occurrence or event that has had or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on Precision;

(b) except as contemplated by this Agreement or the Development and License Agreement, any declaration, setting aside or payment of any dividends, or authorization or making of any distribution upon or with respect to any class or series of Precision's capital stock, (ii) sale, exchange or other disposition of any material assets or rights outside the ordinary course of business of Precision or its Subsidiaries, or (iii) repurchase, redemption or other acquisition of any outstanding shares of Precision's capital stock;

(c) any admission by Precision in writing of its inability to pay its debts generally as they become due, filing or consent to the filing against it of a petition in bankruptcy

or a petition to take advantage of any insolvency act, made an assignment for the benefit of creditors, consent to the appointment of a receiver for itself or for the whole or any substantial part of its property, or any petition in bankruptcy filed against it, been adjudicated a bankrupt or filed a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other laws of the United States or any other jurisdiction;

(d) any material Tax election made or changed, any audit settled or any amended Tax Returns filed of Precision;

(e) any material damage, destruction or loss (whether or not covered by insurance) involving any material asset or right of Precision and its Subsidiaries;

(f) any sale, assignment or transfer, or any agreement to sell, assign or transfer, any material asset, liability, property, obligation or right of Precision or any Subsidiary to any Person, in each case, other than in the ordinary course of business;

(g) any material obligation or liability incurred, or any material loans or advances made, by Precision or any Subsidiary of Precision to any of its or their other Affiliates, other than in the ordinary course of business;

(h) any purchase or acquisition, or agreement, plan or arrangement to purchase or acquire, any material property, rights or assets other than in the ordinary course of business by Precision or any of its Subsidiaries;

(i) any material waiver of any material rights or claims of Precision or any Subsidiary;

(j) any material lien upon, or adversely affecting, any material property or other material assets of Precision or any Subsidiary; or

(k) any Contract entered into by Precision or any Subsidiary to do any of the foregoing.

2.15 **Material Contracts**. Each Material Contract is included as an exhibit in the SEC Documents. Each Material Contract is the legal, valid and binding obligation of Precision, enforceable against Precision in accordance with its terms, and, to the Knowledge of Precision, is the legal, valid and binding obligation of the other party thereto, enforceable against each other party thereto in accordance with its terms, except in each case except to the extent that (a) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles and (b) the indemnification provisions of certain agreements may be limited by federal or state securities laws or public policy considerations in respect thereof. As of the Execution Date, Precision is not in material breach, violation or default under any such Material Contract or, to Precision's Knowledge, is any other Person. As of the Execution Date, Precision has not been notified that any Third Party to any Material Contract has indicated that such Third Party intends to cancel, terminate or not renew any Material Contract.

2.16 **Brokers' or Finders' Fees**. No broker, finder, investment banker, or other Person is entitled to any brokerage, finder's or other similar fee or commission from Precision in connection with the transactions contemplated by this Agreement or the Development and License Agreement.

2.17 **Not an Investment Company**. Precision is not, and solely after receipt of the Purchase Price, will not be, required to register as an "investment company" as defined in the Investment Company Act of 1940, as amended.

2.18 **No Integration**. Neither Precision, nor any of its Affiliates or any other Person acting on its behalf has, directly or through any agent, engaged in any form of general solicitation or general advertising with respect to the Shares nor have any of such Persons sold, offered for sale, solicited offers to buy or otherwise negotiated in respect of any security (as defined in the Securities Act) of Precision or its Affiliates under circumstances that would require registration of the Shares under the Securities Act or cause this offering of Shares to be integrated with any prior offering of securities of Precision for purposes of the Securities Act or any applicable shareholder approval provisions of Nasdaq, nor will Precision take any action or steps that would cause the offering or issuance of the Shares to be integrated with other offerings.

2.19 **Foreign Corrupt Practices Act**. Neither Precision nor any of its Subsidiaries nor, to Precision's Knowledge, any director, officer, agent, employee or other Person acting on behalf of Precision or any of its Subsidiaries has, in the course of its actions for, or on behalf of, Precision or any of its Subsidiaries (a) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (b) made any direct or indirect unlawful payment to any domestic government official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "***FCPA***")) or employee from corporate funds; (c) violated or is in violation of any provision of the FCPA or, to Precision's Knowledge, any applicable non-U.S. anti-bribery statute or regulation; or (d) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any domestic government official, such foreign official or employee. Precision and its Subsidiaries have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure continued compliance therewith.

2.20 **Money Laundering Laws**. The operations of Precision and its Subsidiaries are, and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, and to Precision's Knowledge, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any Governmental Authority.

2.21 **OFAC**. Neither Precision nor any of its Subsidiaries nor, to Precision's Knowledge, any director, officer, agent, employee or Person acting on behalf of Precision or any of its Subsidiaries is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("***OFAC***"); and Precision will not directly or indirectly use the proceeds from the sale of the Shares, or lend, contribute or otherwise make available such

proceeds to any Subsidiary or any joint venture partner or other Person, for the purpose of financing the activities of or business with any Person, or in any country or territory, that currently is subject to any U.S. sanctions administered by OFAC or in any other manner that will result in a violation by Precision or any of its Subsidiaries of U.S. sanctions administered by OFAC.

2.22 **Preclinical and Clinical Data and Regulatory Compliance**. Except as set forth in the SEC Documents (excluding any forward-looking disclosures set forth in any "risk factors" section or "forward-looking statements" section thereof), as of the Execution Date, the preclinical tests and clinical trials (collectively, "***Studies***") that are described in, or the result of which are referred to in, the SEC Documents were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such Studies, except in each case as would not, individually or in the aggregate, reasonably be expected to be materially adverse to Precision. Except as set forth in the SEC Documents, as of the Execution Date, neither Precision nor any Subsidiary has received any written notice of, or correspondence from, any Regulatory Authority (as defined below) or institutional review board requiring the termination, suspension or material modification of any Studies that are described or referred to in the SEC Documents and Precision and each Subsidiary have operated and currently are in compliance in all material respects with applicable laws, rules, regulations and policies of the federal, state, local or foreign agencies or bodies engaged in the regulation of pharmaceuticals and biological products such as those being developed by Precision (collectively, "***Regulatory Authorities***"), including current Good Laboratory Practices and current Good Clinical Practices, except in each case as would not, individually or in the aggregate, reasonably be expected to be materially adverse to Precision.

2.23 **Regulatory Permits**. Except as set forth in the SEC Documents, (a) Precision and each Subsidiary have such material permits, licenses, certificates, approvals, clearances, authorizations or amendments thereto (the "***Regulatory Permits***") issued by the appropriate federal, state, local or foreign regulatory agencies or bodies necessary to conduct the business of Precision as currently conducted and as described in the SEC Documents, including, without limitation, any Investigational New Drug Application as required by the United States Food and Drug Administration ("***FDA***") or authorizations issued by Regulatory Authorities; (b) Precision and each Subsidiary are in compliance in all material respects with the requirements of the Regulatory Permits, and all of the Regulatory Permits are valid and in full force and effect, in each case in all material respects; (c) as of the Execution Date, Precision has not received any notice of proceedings relating to the revocation, termination, modification or impairment of any of the Regulatory Permits; (d) neither Precision nor any Subsidiary has failed to file with the FDA or any other Regulatory Authority any material required application, submission, report, document, notice, supplement or amendment, and all such filings were in material compliance with applicable laws when filed and have been supplemented as necessary to remain in material compliance with applicable laws; and (e) as of the Execution Date, no material deficiencies have been asserted by the FDA or any other Regulatory Authority with respect to any such filings; except, in each case ((a)-(e)), as would not, individually or in the aggregate, reasonably be expected to be materially adverse to Precision.

2.24 **Related-Party Transactions**. The SEC Documents disclose all related person transactions required to be disclosed therein pursuant to Item 404 of Regulation S-K promulgated by the SEC.

ARTICLE 3

REPRESENTATIONS AND WARRANTIES OF LILLY

Except as otherwise specifically contemplated by this Agreement, Lilly hereby represents and warrants as of the Execution Date and Closing Date to Precision that:

3.1 Authorization; Enforcement. Lilly has all requisite corporate power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. Lilly has taken all necessary corporate action to authorize the execution, delivery and performance of this Agreement. Upon the execution and delivery of this Agreement, this Agreement will constitute a valid and binding obligation of Lilly enforceable against Lilly in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' and contracting parties' rights generally and except as enforceability may be subject to general principles of equity and except as rights to indemnity and contribution may be limited by state or federal securities laws or public policy underlying such laws.

3.2 **No Conflicts; Government Consents**.

(a) The execution, delivery and performance of this Agreement by Lilly and the consummation by Lilly of the transactions contemplated hereby (including the purchase of the Shares) will not (i) conflict with or result in a violation of any provision of Lilly's amended articles of incorporation or amended bylaws, (ii) materially violate or conflict with, or result in a material breach of any provision of, or constitute a default under, any agreement, indenture or instrument to which Lilly is a party, or (iii) result in a material violation of any law, rule, regulation, order, judgment or decree (including United States federal and state securities laws and regulations and regulations of any self-regulatory organizations) applicable to Lilly.

(b) Lilly is not required to obtain any consent, authorization or order of, or make any filing or registration with, any Governmental Authority in order for it to execute, deliver or perform any of its obligations under this Agreement in accordance with the terms hereof, or to purchase the Shares in accordance with the terms hereof, other than such as have been made or obtained and except as required under the HSR Act.

3.3 Investment Purpose. Lilly is purchasing the Shares for its own account and not with a present view toward the public distribution thereof and has no arrangement or understanding with any other Persons regarding the distribution of the Shares. Lilly will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) any of the Shares except in accordance with the Securities Act and to the extent permitted by Sections 5.2 and 5.3 of this Agreement.

3.4 Reliance on Exemptions. Lilly has not taken any of the actions set forth in, and is not subject to, the disqualification provisions of Rule 506(d)(1) under the Securities Act and did not learn of the investment in the Shares as a result of any general solicitation or advertising. Lilly understands that Precision intends for the Shares to be offered and sold to it in reliance upon specific exemptions from the registration requirements of United States federal and state securities laws and that Precision is relying upon the truth and accuracy of, and Lilly's

compliance with, the representations, warranties, agreements, acknowledgments and understandings of Lilly set forth herein (including in this Section 3.4) in order to determine the availability of such exemptions and the eligibility of Lilly to acquire the Shares.

3.5 Accredited Investor; Access to Information. Lilly is an "accredited investor" as defined in Regulation D under the Securities Act and is knowledgeable, sophisticated and experienced in making, and is qualified to make decisions with respect to, investments in shares presenting an investment decision like that involved in the purchase of the Shares. Lilly has had an opportunity to receive, review and understand all information related to Precision requested by it and to ask questions of and receive answers from Precision regarding Precision, its business and the terms and conditions of the offering of the Shares, and has conducted and completed its own independent due diligence. Lilly acknowledges that Precision has made the SEC Documents available to Lilly. Based on the information Lilly has deemed appropriate, and without reliance upon any Third Party, Lilly has independently made its own analysis and decision to enter into this Agreement. Lilly is relying exclusively on its own investment analysis and due diligence (including professional advice it deems appropriate) with respect to the execution, delivery and performance of this Agreement, the Shares and the business, condition (financial and otherwise), management, operations, properties and prospects of Precision, and in entering into this Agreement Lilly has not relied upon, nor shall it be entitled to rely upon, any representation, warranty, collateral contract or other assurances made by or on behalf of Precision except for those that are expressly set forth in this Agreement.

3.6 Governmental Review. Lilly understands that no United States federal or state agency or any other Governmental Authority has passed upon or made any recommendation or endorsement of the Shares or an investment therein.

ARTICLE 4

STANDSTILL AGREEMENT

4.1 Standstill Provisions. Until the one-year anniversary of the Closing Date (the "***Standstill Period***"), Lilly and its Affiliates will not, directly or indirectly, except as expressly approved or invited by Precision in writing:

(a) effect or seek, offer or propose (whether publicly or otherwise) to effect, or cause or participate in or in any way advise, assist or encourage any other Person to effect or seek, offer or propose (whether publicly or otherwise) to effect or participate in, directly or indirectly, (i) any acquisition of any securities of Precision or any of its Subsidiaries or any securities convertible into or exercisable or exchangeable for any securities of Precision or any of its Subsidiaries (or beneficial ownership thereof); (ii) any acquisition of any material assets of Precision or any of its Subsidiaries, (iii) any tender or exchange offer, merger or other business combination or Change of Control involving Precision or any of its Subsidiaries, (iv) any recapitalization, restructuring, liquidation, dissolution or other extraordinary transaction with respect to Precision or any of its Subsidiaries, or (v) any "solicitation" of "proxies" (as such terms are used in the proxy rules of the SEC) or consents to vote any securities of Precision;

(b) form, join or in any way participate in a "group" (as defined under the Exchange Act) with respect to any securities of Precision or any of its Subsidiaries;

(c) otherwise act, alone or in concert with others, to seek to control or influence the board of directors or the management or policies of Precision or any of its Subsidiaries;

(d) take any action that would reasonably be expected to require Precision to make a public announcement regarding any of the matters set forth in this Section 4.1;

(e) enter into any discussions or arrangements with any Third Party with respect to any of the foregoing; or

(f) publicly disclose any intention, plan or arrangement regarding any of the matters set forth in this Section 4.1.

4.2 Amendment or Waiver of Standstill; Ownership of Securities. Lilly agrees during the Standstill Period not to request Precision (or its representatives), directly or indirectly, to amend or waive any provision of this Article 4, other than by means of a confidential communication to Precision's Chairman of the Board or Chief Executive Officer. Lilly represents and warrants that, as of the Execution Date, neither Lilly nor any of its Subsidiaries owns, of record or beneficially, any securities of Precision or any securities convertible into or exercisable or exchangeable for securities of Precision, and neither Lilly nor any of its Subsidiaries has engaged in any transactions involving, directly or indirectly, any securities of Precision (other than the purchase of the Shares).

4.3 Automatic Termination of Standstill. Notwithstanding the provisions set forth in Sections 4.1 and 4.2 of this Agreement (the "***Standstill Provisions***"), (a) if at any time (i) a Third Party enters into a definitive agreement with Precision contemplating a Change of Control of Precision, including a merger, consolidation or other business combination transaction or tender offer related thereto, or the purchase of all or substantially all of the assets of Precision and its Subsidiaries, and the Board approves and, if applicable, recommends that the stockholders approve the transactions contemplated by such agreement, then the Standstill Provisions automatically shall be terminated and of no further force or effect or (ii) a Third Party commences a bona fide tender or exchange offer that, if consummated, would result in a Change of Control of Precision, then the Standstill Provisions automatically shall be terminated and of no force or effect; (b) Lilly will not be precluded from making any confidential offers or proposals to the Board in a manner reasonably believed not to require Precision to make a public announcement of such offer or proposal; provided that Lilly shall not publicly disclose any such offers or proposals; and (c) Lilly shall not be precluded from owning or acquiring interests in mutual funds or similar entities that own shares of Common Stock, and nothing herein shall prohibit passive investments by pension or employee benefit plans of Lilly. For the avoidance of doubt, nothing contained in the Standstill Provisions shall be deemed to prevent any (i) investment funds from acquiring (together with any shares of Common Stock held on or prior to the Closing Date), in the aggregate, less than five percent (5%) of the outstanding Common Stock or (ii) pension or other employee benefit plan administrator for any pension or other employee benefit plan for Lilly's or its Affiliates' employees from engaging in investment operations (including trading and owning shares of Common Stock) that, in the case of (i) and

(ii) are not directed by Lilly, are conducted without the intent or objective of effecting a Change of Control of Precision or otherwise influencing the management or policy of Precision.

ARTICLE 5

ADDITIONAL COVENANTS AND AGREEMENTS

5.1 **HSR Clearance; Market Listing**.

(a) The Parties agree that any required filings with the FTC and the DOJ under the HSR Act with respect to the transactions contemplated hereby and by the Development and License Agreement shall be governed by Article 10 of the Development and License Agreement.

(b) From the Execution Date through the Closing, Precision shall use best efforts to (i) maintain the listing and trading of the Common Stock on Nasdaq and (ii) effect the listing of the Shares on Nasdaq.

5.2 Transfer or Resale. Lilly understands that:

(a) the Shares have not been and are not being registered under the Securities Act or any applicable state securities laws and, consequently, Lilly may have to bear the risk of owning the Shares for an indefinite period of time because the Shares may not be transferred unless (i) the resale of the Shares is registered pursuant to an effective registration statement under the Securities Act; (ii) Lilly has delivered to Precision an opinion of counsel (in form, substance and scope customary for opinions of counsel in comparable transactions) to the effect that the Shares to be sold or transferred may be sold or transferred pursuant to an exemption from such registration; or (iii) the Shares are sold or transferred pursuant to Rule 144 (provided, that Lilly provides Precision with reasonable assurances (including in the form of seller and broker representation letters) that the Shares may be sold pursuant to such rule);

(b) Precision has no obligation to register the Shares under the Securities Act or any applicable state securities laws; and

(c) any sale of the Shares made in reliance on Rule 144 may be made only in accordance with the terms of Rule 144 and, if Rule 144 is not applicable, any resale of the Shares under circumstances in which the seller (or the Person through whom the sale is made) may be deemed to be an underwriter (as that term is defined in the Securities Act) may require compliance with some other exemption under the Securities Act.

(d) Precision acknowledges and agrees that the combination of Lilly's purchase of the Shares pursuant to this Agreement and its rights pursuant to the Development and License Agreement, taken alone and assuming no further acquisitions of Common Stock by Lilly or any Affiliates of Lilly or other changes to the relationship of the Parties, does not result in Lilly's being an affiliate of Precision for purposes of Rule 144 and that Precision shall direct its transfer agent to remove the restrictive legends referred to in Section 5.4 hereof (and any stop-transfer orders placed against the transfer of the Shares) no later than the first anniversary of the Closing Date.

5.3 **Lock-Up**. Lilly agrees that it will hold and will not, directly or indirectly, without Precision's prior approval, sell, transfer or otherwise dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, whether now owned or hereafter acquired or with respect to which Lilly now has or hereafter acquires beneficial ownership or the power of disposition (the "***Lock-Up Securities***"), or otherwise make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale of the Lock-Up Securities (any such transaction, a "***Transfer***"), until the nine-month anniversary of the Closing Date (the "***Holding Period***"); provided, however, that the foregoing shall not prohibit (a) Lilly from transferring any Lock-Up Securities to (i) a Permitted Transferee or (ii) Precision and (b) the disposition of Lock-Up Securities pursuant to any (i) merger, consolidation or similar transaction to which Precision is a constituent corporation or (ii) a bona fide tender offer or exchange offer to be made to all of the holders of Common Stock by a Person other than Lilly (or any of its Affiliates or any Person acting on behalf of or as part of a group or in concert with Lilly or any of its Affiliates); provided, further, that, in the event Precision enters into any definitive agreement with a Third Party during the Holding Period contemplating a (y) Change of Control pursuant to a merger, consolidation or similar transaction to which Precision is a constituent corporation or (z) tender offer or exchange offer to be made to all of the holders of Common Stock by a Third Party (other than a Third Party acting on behalf of or as part of a group or in concert with Lilly) then the restrictions on the Lock-Up Securities automatically shall be terminated and of no further force or effect.

5.4 **Legends**. Lilly understands the Shares will bear restrictive legends in substantially the following form (and a stop-transfer order may be placed against transfer of the Shares):

> THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER THE SECURITIES ACT OR AN OPINION OF COUNSEL (WHICH COUNSEL SHALL BE REASONABLY SATISFACTORY TO PRECISION BIOSCIENCES, INC.) THAT SUCH REGISTRATION IS NOT REQUIRED OR UNLESS SOLD PURSUANT TO RULE 144 OF THE SECURITIES ACT.
>
> THE SALE, PLEDGE, HYPOTHECATION AND TRANSFER OF THESE SECURITIES IS SUBJECT TO THE TERMS AND CONDITIONS OF A STOCK PURCHASE AGREEMENT DATED NOVEMBER 19, 2020 BETWEEN PRECISION BIOSCIENCES, INC. AND ELI LILLY AND COMPANY, AS SUCH AGREEMENT MAY BE AMENDED FROM TIME TO TIME.

If such Shares are transferred pursuant to Sections 5.2 or 5.3 of this Agreement, Lilly may request that Precision remove, and if so requested, Precision shall agree to authorize and instruct (including by causing any required legal opinion to be provided) the removal of any legend from the Shares, if permitted by applicable securities law, within two (2) Business Days of any such request; provided, however, each Party will be responsible for any fees it incurs in connection with such request and removal.

5.5 **Information Rights**.

(a) Until Lilly no longer holds Shares representing beneficial ownership of at least five percent (5%) of the outstanding Common Stock, Lilly shall be entitled to consult with Precision's Chief Executive Officer, who shall make himself or herself available quarterly on a reasonable basis and who shall respond to the reasonable information and other requests made by Lilly on a quarterly basis with respect to Precision's business and financial matters.

(b) Without limiting any other obligations of confidentiality that Lilly has to Precision under the Development and License Agreement or otherwise, Lilly agrees that it will keep confidential and will not disclose, divulge or use for any purpose (other than to monitor its investment in Precision pursuant to this Agreement) any confidential information obtained from Precision pursuant to the terms of this Agreement, including Section 5.5(a) of this Agreement, unless such confidential information is known or becomes generally known to the public in general (other than as a result of a breach of this Section 5.5(b) of this Agreement).

5.6 **Right to Conduct Activities**. Precision hereby agrees and acknowledges that Lilly is a public company with numerous business lines (the "***Existing Lilly Business***") and an active investment and acquisition program. Precision hereby agrees that none of Lilly or any of its Affiliates (together, the "***Lilly Group***") shall be liable to Precision or any of its Affiliates for any claim arising out of, or based upon, (a) the investment by the Lilly Group in any entity competitive with Precision, (b) actions taken by any partner, officer or other representative of the Lilly Group to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on Precision, or (c) with respect to the Lilly Group, the Lilly Group engaging in Existing Lilly Business; provided, however, that the foregoing shall not limit any of Lilly's or any of its Affiliates' obligations under this Agreement or the Development and License Agreement or otherwise relieve Lilly or any Affiliate of Lilly from liability associated with the breach by Lilly of any representation, warranty, covenant, agreement or obligation set forth in this Agreement or the Development and License Agreement, including (for the avoidance of doubt) Lilly's obligations of confidentiality and non-use under this Agreement and the Development and License Agreement.

ARTICLE 6

CONDITIONS TO CLOSING

6.1 Mutual Conditions to Closing. The obligations of Precision and Lilly to consummate the Closing are subject to the satisfaction or waiver of the following conditions at or prior to the Closing:

(a) Absence of Litigation. No proceeding challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit, alter, prevent or materially delay the Closing, will have been instituted or be pending before any Governmental Authority.

(b) No Governmental Prohibition. The sale of the Shares by Precision and the purchase of the Shares by Lilly will not be prohibited by any applicable law or Governmental Authority.

(c) Development and License Agreement. The Development and License Agreement shall be in full force and effect, and the "HSR Clearance Date," if applicable, and the "Effective Date" under the Development and License Agreement each shall have occurred.

6.2 Conditions to Obligations of Precision to Close. Precision's obligation to complete the purchase and sale of the Shares and deliver the Shares to Lilly is subject to the satisfaction or waiver of the following conditions at or prior to the Closing:

(a) Receipt of Funds. Precision will have received immediately available funds in the full amount of the Purchase Price for the Shares.

(b) Representations and Warranties. The representations and warranties made by Lilly in Article 3 will be true and correct as of the Closing Date, except to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties will be true and correct as of such other date, except in each case where the failure of such representations and warranties to be so true and correct (without giving effect to any limitation as to "materiality" set forth therein) would not reasonably be expected to have a material adverse effect on Lilly's ability to perform its obligations hereunder or consummate the transactions contemplated hereby.

(c) Covenants. All covenants and agreements contained in this Agreement to be performed or complied with by Lilly on or prior to the Closing Date shall have been performed or complied with in all material respects.

(d) Closing Deliverables. All Closing deliverables required to be delivered by Lilly to Precision under Section 1.3(c) of this Agreement shall have been so delivered.

6.3 Conditions to Lilly's Obligations to Close. Lilly's obligation to complete the purchase and sale of the Shares is subject to the satisfaction or waiver of the following conditions at or prior to the Closing:

(a) Representations and Warranties. The representations and warranties made by Precision in Article 2 of this Agreement will be true and correct as of the Closing Date, except to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties will be true and correct as of such other date, except in each case where the failure of such representations and warranties to be so true and correct (without giving effect to any limitation as to "materiality" or "Material Adverse Effect" set forth therein) would not reasonably be expected to have a Material Adverse Effect on Precision.

(b) Covenants. All covenants and agreements contained in this Agreement to be performed or complied with by Precision on or prior to the Closing Date shall have been performed or complied with in all material respects.

(c) Closing Deliverables. All Closing deliverables as required to be delivered by Precision to Lilly under Section 1.3(b) of this Agreement shall have been so delivered

(d) Nasdaq Matters.

(i) Prior to the Closing, Precision shall have taken all actions which are reasonably necessary, including providing appropriate notice to Nasdaq of the transactions contemplated by this Agreement, for the Shares to be listed on Nasdaq and shall have complied with all listing, reporting, filing and other obligations under the rules of Nasdaq and of the SEC with respect to the matters contemplated by this Agreement.

(ii) The Common Stock shall not have been suspended, as of the Closing Date, by the SEC or Nasdaq from trading on Nasdaq nor shall any such suspension by the SEC or Nasdaq have been threatened, as of the Closing Date, in writing by the SEC or Nasdaq.

(e) No Material Adverse Effect. Since the Execution Date, there shall not have been any change, development, occurrence or event that has had or would reasonably be expected to have a Material Adverse Effect on Precision.

ARTICLE 7

TERMINATION

7.1 Ability to Terminate. This Agreement may be terminated prior to the Closing by:

(a) mutual written consent of Precision and Lilly;

(b) either Precision or Lilly, upon written notice to the other, if any of the conditions to the Closing set forth in Section 6.1 of this Agreement shall have become incapable of fulfillment by the Termination Date and such conditions shall not have been waived by the other Party within ten (10) Business Days after receipt of notice of an intention to terminate pursuant to this Section 7.1(b) of this Agreement; provided, however, that the right to terminate this Agreement under this Section 7.1(b) shall not be available to any Party whose failure to fulfill any obligation under this Agreement or the Development and License Agreement has been the cause of, or resulted in, the failure to consummate the transactions contemplated hereby prior to the Termination Date;

(c) Precision, upon written notice to Lilly, so long as Precision is not then in breach of its representations, warranties, covenants or agreements under this Agreement such that any of the conditions set forth in Section 6.3(a) or (b), as applicable, could not be satisfied by the Termination Date, (i) upon a breach of any covenant or agreement on the part of Lilly set forth in this Agreement or (ii) if any representation or warranty of Lilly shall have been or become untrue, in each case such that any of the conditions set forth in Section 6.2(b) or (c), as applicable, could not be satisfied by the Termination Date;

(d) Lilly, upon written notice to Precision, so long as Lilly is not then in breach of its representations, warranties, covenants or agreements under this Agreement such that any of the conditions set forth in Section 6.2(b) or (c), as applicable, could not be satisfied by the Termination Date, as applicable, could not be satisfied by the Termination Date, (i) upon a breach of any covenant or agreement on the part of Precision set forth in this Agreement or (ii) if any representation or warranty of Precision shall have been or become untrue, in each case such that

any of the conditions set forth in Section 6.3(a) or (b), as applicable, could not be satisfied by the Termination Date; and

(e) either Lilly or Precision, upon written notice to the other, if the Closing has not occurred on or before the second (2nd) Business Day following the outside date set forth in Section 10.1 of the Development and License Agreement (the "***Termination Date***").

7.2 Automatic Termination. In the event that the Development and License Agreement is terminated prior to the "Effective Date" (as defined in the Development and License Agreement) thereof being deemed to occur, this Agreement shall terminate automatically.

7.3 Effect of Termination. In the event of the termination of this Agreement pursuant to Section 7.1 or Section 7.2, (a) this Agreement (except for this Section 7.3 and Article 8, and any definitions set forth in this Agreement and used in this Section 7.3 or Article 8) shall forthwith become void and have no effect, without any liability on the part of either Party, and (b) all filings, applications and other submissions made pursuant to this Agreement, to the extent practicable, shall be withdrawn from the agency or other Person to which they were made or appropriately amended to reflect the termination of the transactions contemplated hereby; provided, however, that nothing contained in this Section 7.3 shall relieve either Party from liability for fraud or any intentional or willful breach of this Agreement or the Development and License Agreement.

ARTICLE 8

MISCELLANEOUS

8.1 Entire Agreement; Amendment. This Agreement, together with the Development and License Agreement, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties with respect to the subject matter hereof and supersedes, as of the Execution Date, all prior and contemporaneous agreements and understandings between the Parties with respect to the subject matter hereof. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party.

8.2 **Survival**. The representations and warranties contained in this Agreement shall survive the Closing of the transactions contemplated by this Agreement until the date that is one (1) year following the date of this Agreement. The covenants and agreements contained in this Agreement shall survive Closing of the transactions contemplated by this Agreement.

8.3 Notice. Any notice required or permitted to be given by this Agreement must be in writing, in English. Any and all notices or other communications or deliveries required or permitted to be provided hereunder must be in writing and will be deemed given and effective if (a) delivered by hand or by overnight courier with tracking capabilities; (b) mailed postage prepaid by first class, registered or certified mail; or (c) delivered by facsimile or electronic mail followed by delivery via either of the methods set forth in clauses (a) and (b) of this Section 8.3, in each case, addressed as set forth below unless changed by notice so given:

If to Precision: Precision BioSciences, Inc.

302 East Pettigrew Street, Suite A-100
Durham, NC 27701
Attn: Abid Ansari
Fax: (480) 393-5553
E-mail: abid.ansari@precisionbiosciences.com

with a copy (which shall not constitute notice) to:

Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, LLP
150 Fayetteville Street, Suite 2300
Raleigh, NC 27601
Attention: John Therien
Fax: (919) 821-6800
E-mail: jtherien@smithlaw.com

If to Lilly: Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285
Attn: Senior Vice President, Corporate Business Development
Fax: (317) 651-3051
E-mail: custer_kenneth_1@lilly.com

with a copy (which shall not constitute notice) to:

Eli Lilly and Company
Lilly Corporate Center
Indianapolis, IN 46285
Attn: General Counsel
Fax: (317) 433-3000
E-mail: hakim_anat@lilly.com

8.4 **Severability**. If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable or illegal by a court of competent jurisdiction, (a) such adjudication shall not, to the extent feasible, affect or impair, in whole or in part, the validity, enforceability or legality of any remaining portions of this Agreement, (b) this Agreement shall be construed and enforced as if such invalid, unenforceable or illegal provision had never comprised a part hereof, (c) all remaining portions will remain in full force and effect and shall not be affected by the invalid, unenforceable or illegal provision or by its severance herefrom, and (d) in lieu of such invalid, unenforceable or illegal provision, the Parties shall use reasonable efforts to seek and agree on an alternative valid and enforceable provision that preserves the original purpose and intent of this Agreement.

8.5 **Successors and Assigns**. This Agreement is binding upon and inures to the benefit of the Parties and their respective successors and permitted assigns. Except for an assignment by Lilly of this Agreement or any rights hereunder to a Permitted Transferee (which

assignment will not relieve Lilly of any obligation hereunder), neither Party may assign this Agreement or any rights or obligations hereunder without the prior written consent of the other Party.

8.6 Waivers. The failure of a Party to insist upon strict performance of any provision of this Agreement or to exercise any right arising out of this Agreement shall neither impair that provision or right nor constitute a waiver of that provision or right, in whole or in part, in that instance or in any other instance. Any waiver by a Party of a particular provision or right shall be in writing, shall be as to a particular matter and, if applicable, for a particular period of time and shall be signed by such Party.

8.7 Interpretation. The captions and headings to this Agreement are for convenience only and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement. Unless specified to the contrary, references to Articles, Sections or Appendices mean the particular Articles, Sections or Appendices to this Agreement. Unless the context otherwise clearly requires, whenever used in this Agreement: (a) the words "include" or "including" shall be construed as incorporating, also, "but not limited to" or "without limitation"; (b) the word "day" or "year" means a calendar day or year unless otherwise specified; (c) the word "notice" means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (d) the words "hereof," "herein," "hereby" and derivative or similar words refer to this Agreement as a whole and not merely to the particular provision in which such words appear; (e) the words "shall" and "will" have interchangeable meanings for purposes of this Agreement; (f) provisions that require that a Party or the Parties "agree," "consent" or "approve" or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise; (g) words of any gender include the other gender; (h) words using the singular or plural number also include the plural or singular number, respectively; (i) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement law, rule or regulation thereof; and (j) neither Party shall be deemed to be acting on behalf of the other Party.

8.8 Counterparts; Electronic Signatures. This Agreement may be executed in any number of counterparts, each of which is deemed an original, but all of which together constitute one instrument. This Agreement may be executed and delivered electronically and upon such delivery such electronic signature will be deemed to have the same effect as if the original signature had been delivered to the other Party.

8.9 Expenses. Each Party shall pay its own costs, charges and expenses incurred in connection with the negotiation, preparation, execution and performance of this Agreement.

8.10 Further Assurances. The Parties hereby covenant and agree, without the necessity of any further consideration, to execute, acknowledge and deliver any and all documents and take any action as may be reasonably necessary to carry out the intent and purposes of this Agreement.

8.11 No Third Party Beneficiary Rights. This Agreement is not intended to and shall not be construed to give any Third Party any interest or rights (including any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby.

8.12 Construction. The Parties acknowledge and agree that (a) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (b) the rule of construction to the effect that any ambiguities are resolved against the drafting Party shall not be employed in the interpretation of this Agreement; and (c) the terms and provisions of this Agreement shall be construed fairly as to each Party and not in a favor of or against either Party, regardless of which Party was generally responsible for the preparation of this Agreement.

8.13 Governing Law; Jurisdiction. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws principles thereof that would require the application of the laws of any other jurisdiction. Any action brought under or arising out of this Agreement shall be brought in the Court of Chancery of the State of Delaware. Each Party hereby irrevocably submits to the exclusive jurisdiction of such court in respect of any claim relating to the validity, interpretation and enforcement of this Agreement and hereby waives, and agrees not to assert, as a defense in any action, suit or proceeding in which any such claim is made that it is not subject to the jurisdiction of such court or that such action, suit or proceeding may not be brought or is not maintainable in such court, or that the venue thereof may not be appropriate or that this agreement may not be enforced in or by such court. Each Party hereby consents to and grants the Court of Chancery of the State of Delaware jurisdiction over such Party and over the subject matter of any such claim and agree that mailing of process or other papers in connection with any such action, suit or proceeding in the manner provided in Section 8.3 of this Agreement or in such other manner as may be permitted by law, shall be valid and sufficient.

8.14 Equitable Relief. Each Party acknowledges and agrees that if it fails to perform any of its covenants or agreements or discharge any of its obligations under this Agreement, irreparable damage could occur and any remedy at law may prove to be inadequate relief for the other Party. Accordingly, notwithstanding anything herein to the contrary, each Party shall be entitled (without any requirement to post bond) to seek injunctive relief and specific performance (including any relief or recovery under this Agreement) in any court of competent jurisdiction anywhere in the world (including the court designated in Section 8.13 of this Agreement).

8.15 Cumulative Remedies. No remedy referred to in this Agreement is intended to be exclusive unless explicitly stated to be so, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

[Remainder of page intentionally left blank.]

In Witness Whereof, the Parties have caused this Agreement to be executed as of the Execution Date by their duly authorized representatives.

Precision BioSciences, Inc.

By: _____
Name:
Title:

Eli Lilly and Company

By: _____
Name:
Title:

[Signature page to Stock Purchase Agreement]

APPENDIX 1

DEFINED TERMS

"***Affiliate***" means, with respect to any Person, any entity that, at the relevant time (whether as of the Execution Date or thereafter), directly or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with such Person, for so long as such control exists. For purposes of this definition, "control" means (i) to possess, directly or indirectly, the power to direct or cause the direction of the management or policies of an entity, whether through ownership of voting securities or by contract relating to voting rights or corporate governance, or (ii) direct or indirect ownership of 50% (or such lesser percentage that is the maximum allowed to be owned by a foreign entity in a particular jurisdiction) or more of the voting share capital or other equity interest in such entity.

"***Board***" means the board of directors of Precision.

"***Business Day***" means any day, other than any Saturday, Sunday or any day that banks are authorized or required to be closed in Durham, North Carolina or Indianapolis, Indiana.

"***Change of Control***" means, with respect to either Party, (i) the acquisition by a Third Party, in one transaction or a series of related transactions, of direct or indirect beneficial ownership of more than fifty percent (50%) of the outstanding voting equity securities of such Party (excluding, for clarity, an acquisition by a Third Party where the equity holders of such acquired Party or its parent immediately prior to such transaction hold a majority of the outstanding voting equity securities of the surviving entity or the parent of the surviving entity immediately following such transaction); (ii) a merger or consolidation involving such Party as a result of which (A) a Third Party acquires direct or indirect beneficial ownership of more than fifty percent (50%) of the voting power of the surviving entity immediately after such merger or consolidation and (B) the voting securities of such Party outstanding immediately prior to such merger or consolidation, or any securities into which such voting securities have been converted or exchanged, cease to represent more than 50% of the combined voting power of the surviving entity or the parent of the surviving entity immediately following such merger or consolidation; or (iii) a sale, exclusive license or other transfer of all or substantially all of the assets of such Party in one transaction or a series of related transactions to a Third Party.

"*Contract*" means, with respect to any Person, any legally binding written or oral contracts, agreements, indentures, bonds, loans, leases, subleases, licenses, sublicenses, instruments, notes and arrangements to which such Person is a party or by which any of its properties or assets are subject.

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC thereunder.

"***GAAP***" means accepted accounting principles generally accepted in the United States of America.

"***Governmental Authority***" means any national, international, federal, state, provincial or local government, or political subdivision thereof, or any multinational organization or any authority, agency or commission entitled to exercise any administrative, executive, judicial,

legislative, police, regulatory or taxing authority or power, and any court or tribunal (or any department, bureau or division thereof, or any governmental arbitrator or arbitral body).

"***HSR Act***" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

"***Material Adverse Effect***" shall mean any change, event or occurrence that, individually or in the aggregate with any other changes, events or circumstances, has had or would reasonably be expected to have (i) a material adverse effect on the business, financial condition, assets or results of operations of Precision, taken as a whole, or (ii) a material adverse effect on Precision's ability to perform its obligations hereunder or consummate the transactions contemplated hereby. In the case of (i), none of the following (individually or in the aggregate) shall be deemed to be a Material Adverse Effect, and none of the following (individually or in the aggregate) will be taken into account for purposes of (i) above: (A) changes in conditions in the United States or global economy or capital or financial markets generally, including changes in interest or exchange rates; (B) changes in general legal, regulatory, political, economic or business conditions, or changes in GAAP or interpretations thereof; (C) the announcement or pendency of the transactions contemplated by this Agreement and the Development and License Agreement, or the announcement of the identity of either Party; (D) any change in the trading prices or trading volume of the securities of Precision, in and of themselves (with the underlying reason for such change may be taken into account for purposes of (i) above, unless excluded by another clause of this definition); (E) acts of war, sabotage or terrorism, or any escalation or worsening of any such acts of war, sabotage or terrorism, (F) earthquakes, hurricanes, floods or other natural disasters, (G) pandemics or other health crises, including the COVID-19 pandemic, (H) any action taken by either Party contemplated by this Agreement or the Development and License Agreement or with the other Party's written consent; provided, that, with respect to clauses (A), (B), (E), (F) and (G), that such change, event or circumstance does not have or would not reasonably be expected to have a materially disproportionate and adverse effect on Precision relative to other companies in the biotechnology or biopharmaceutical industries.

"***Material Contract***" means all Contracts in effect as of the Execution Date that are required to be filed as exhibits by Precision in the SEC Documents pursuant to Items 601(b)(4) and 601(b)(10) of Regulation S-K promulgated by the SEC (excluding, for the avoidance of doubt, this Agreement and the Development and License Agreement).

"***Nasdaq***" means The Nasdaq Stock Market LLC.

"***Permitted Transferee***" means an Affiliate of Lilly; provided, however, that no such Person shall be deemed a Permitted Transferee for any purpose under this Agreement unless: (a) the Permitted Transferee, prior to or simultaneously with any disposition of Shares to such Affiliate, shall have agreed in writing to be subject to and bound by the terms of this Agreement as though it were "Lilly" hereunder, and (b) Lilly acknowledges that it continues to be bound by the terms of this Agreement.

"***Person***" means any corporation, limited or general partnership, limited liability company, joint venture, trust, unincorporated association, governmental body, authority, bureau or agency, any other entity or body, or an individual.

"***Preferred Stock***" means shares of Precision's preferred stock, par value $0.0001 per share.

"***SEC***" means the United States Securities and Exchange Commission or any successor entity.

"***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations of the SEC thereunder.

"***Tax***" or "***Taxes***" shall mean all federal, state, local, and foreign income, excise, gross receipts, gross income, ad valorem, profits, gains, property, capital, sales, transfer, use, payroll, employment, severance, withholding, duties, intangibles, franchise, backup withholding, value- added, and other taxes imposed by a Governmental Authority, together with all interest, penalties and additions to tax imposed with respect thereto.

"***Tax Return***" shall mean a report, return or other document (including any amendments thereto) required to be supplied to a Governmental Authority with respect to Taxes.

"***Third Party***" means any Person other than Lilly or Precision (or its respective Affiliates).

Exhibit 10.9

LEASE AGREEMENT BY AND BETWEEN

VENABLE TENANT, LLC, as Landlord

AND

PRECISION BIOSCIENCES, INC., as Tenant

TABLE OF CONTENTS

1. Defined Terms. Capitalized words and phrases used in this Lease have the following meanings:

1.01 **Additional Rent** - all sums other than Base Annual Rent payable by Tenant to Landlord pursuant to the terms of this Lease, including, but not limited to, Tenant's Proportionate Share of Operating Expenses.

1.02 **Applicable Laws** – collectively, any local, state or Federal laws, statutes, rules, regulations, ordinances, and court or judicial orders and decrees.

1.03 **Audit Notice** - a written notice that Tenant wishes to examine itself or to employ a nationally-recognized consulting firm (on a capped contingency fee basis) or an independent certified public accounting firm (on an hourly rate basis) reasonably acceptable to Landlord, to inspect and audit Landlord's books and records in order to confirm the accuracy of the Statement.

1.04 **Base Annual Rent** - a base annual rental equal to the product of (x) the Base Rate multiplied by (y) the Net Rentable Area.

1.05 **Base Annual Rent Escalation** – the increase in the CPI with a floor of two and one-half percent (2.5%) and a ceiling of three percent (3%).

1.06 **Base Rate** - Seventeen and 85/100 Dollars ($17.85) per rentable square foot for the first twelve (12) months following the Commencement Date, and thereafter increased by the Base Annual Rent Escalation.

1.07 **Building** – the Dibrell A Warehouse Building at 302 East Pettigrew Street, Durham, North Carolina.

1.08 **Commencement Date** - the later to occur of: (i) October 1, 2010, or (ii) completion of the Tenant Improvements as evidenced by the issuance of a certificate of occupancy by the City of Durham and certification of substantial completion by the Tenant's architect.–

1.09 **Common Areas** - the driveways, parking areas, pedestrian sidewalks, common conference rooms, kitchen areas, lobbies, stairways, entranceways, bathrooms and canteens, if any, provided by Landlord as a convenience for use in common by Landlord and all tenants of the Building as an appurtenance to the Premises, each building in the Project, and the Project.

1.010 **Controllable Expenses** - all Operating Expenses, excluding utilities (e.g., electricity, gas, water and sewer), property taxes, and insurance, for which Landlord has an opportunity to select vendors and negotiate rates with the selected vendors, as reasonably determined by Landlord.

1.011 **CPI** - shall mean an amount determined by multiplying the Base Annual Rent by a fraction, the denominator of which is the Revised Consumer Price Index for All Urban Consumers – New Series (1982-1984 = 100) U.S. City Average, All Items, as published by the Bureau of Labor Statistics, U.S. Department of Labor (the "Price Index"), for the first month of the First Lease Year, and the numerator of which is said Price Index for the next to last month of the Lease Year just concluding. In the event that the United States Bureau of Labor Statistics shall discontinue the issuance of the Price Index, then the rental adjustment provided for herein shall be made on the basis of changes in the most comparable and recognized cost of living index then issued and available, which is published by the United States Government.

1.012 **Force Majeure** - delays beyond the control of Landlord or Tenant, including, but not limited to, permitting, availability of materials, acts of God, Tenant Delays, and inclement weather.

1.013 **Guarantor-** N/A.

1.014 **Hazardous Material** - any hazardous or toxic substance, pollutant, contaminant, gas, toxic mold, or petroleum product defined as such in (or for purposes of) Hazardous Material Laws.

1.015 **Hazardous Material Laws-** collectively, the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, any so-called "Superfund" or "Superlien", law, the Toxic Substances Control Act, as amended, or any other Federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic or dangerous waste, substance or material, as now or at any time hereafter in effect, or any other hazardous, toxic or dangerous, waste, substance or material, gas or petroleum product.

1.016 **Land** - certain land in the County of Durham, City of Durham, State of North Carolina, upon which the Building and Project are located and which is more particularly described in Exhibit A.

1.017 **Landlord** – Venable Tenant, LLC, a North Carolina limited liability company.

1.018 **Landlord Party** – collectively, the Landlord and its agents, employees, officers, invitees, licensees and independent contractors.

1.019 **Lease** – this Lease Agreement.

1.020 **Lease Year** - the first twelve (12) months following the Rent Commencement Date (said first twelve (12) month period will be the first "Lease Year") and each successive twelve-month period during the Term following the expiration of the first Lease Year.

1.021 **Master Lease** - that Master Lease dated July 11, 2006, pursuant to which the Prime Tenant leased the Building and the Land from the Prime Landlord.

1.022 **Net Rentable Area** - Eight Thousand Two Hundred Seventy-Four (8,274) rentable square feet, per BOMA measurement standards.

1.023 **Operating Expenses** - any and all reasonable charges, fees, costs, and expenses actually incurred by Landlord in connection with the management, operation, ownership, maintenance, security, servicing, insuring, and repair of the Building or Project, and will include, without limitation, the following:

(1) Premiums, deductibles, and other charges for insurance;
(2) Real Estate Taxes;
(3) Management fees and personnel costs (including all fringe benefits, workers' compensation insurance premiums and payroll taxes);
(4) Costs of service, access control, and maintenance contracts;
(5) Maintenance, repair, and replacement expenses and supplies;
(6) Depreciation/amortization for capital repairs or expenditures made by Landlord to reduce operating expenses if Landlord reasonably estimates (and documents) that the annual reduction in Operating Expenses will exceed such depreciation or to comply with legal, insurance, or governmental requirements (or repair/maintenance requirements under the Lease);
(7) Charges for janitorial, window, day porter, and cleaning services and supplies;
(8) Any business, professional, or occupational license tax payable by Landlord or other tax or surcharge (or alternative payment or fee levied, charged, or assessed by a governmental entity in addition to or in lieu of a tax, license, or fee);
(9) Reasonable reserves for such replacements, repairs, and contingencies that would be treated as Operating Expense under this Lease;

(10) Sales, use, and personal property taxes payable in connection with tangible personal property and services purchased;
(11) Accounting and audit fees relating to the determination of Operating Expenses (and of Tenant's Proportionate Share thereof) and the preparation of statements required by tenant leases and legal fees (except as provided below);
(12) Expenses incurred in connection with any concierge services;
(13) The rental value of any management office;
(14) Special assessments, fees, charges, levies, penalties, service payments, excises, assessment charges and costs for transit, transit encouragement traffic reduction programs, or any similar purpose;
(15) All costs of operating maintaining, repairing and replacing improvements in any Common Areas; and
(16) Any other reasonable expense actually incurred by Landlord in maintaining, repairing, or operating the Building or the Project.

The following costs and expenses will be excluded from Operating Expenses for the Building and the Project:
(1) Costs in connection with any structural repair or major change in the Building;
(2) Costs, including permit, license, and inspection costs, associated with alterations or improvements of the Premises, the premises of other tenants or occupants of the Building or Project, or incurred in renovating or otherwise improving, decorating, painting or redecorating vacant space for tenants or other occupants of the Building or Project;
(3) Depreciation of the Building or Project, fixtures or equipment;
(4) Interest, points, fees, and principal payments on mortgages and other debt costs, if any, or amortization on any mortgage or mortgages or any other debt instrument encumbering the Building or Project or the Land;
(5) Costs for which Landlord is reimbursed by its insurance carrier, any tenant's carrier, any tenant, any warrantor, or any other third party, to the extent of the reimbursement and not including deductibles;
(6) Any bad debt loss, rent loss, reserves for bad debts or rent loss, or legal fees incurred in collecting rent or other obligations from other Building or Project tenants;
(7) The cost of services provided to certain tenants of the Building or Project beyond those provided to all Building or Project tenants, and costs incurred by Landlord in respect of breaches of other leases in the Building or Project;
(8) Costs associated with the operation of the business of the person or entity which constitutes Landlord, as distinguished from the costs of operation of the Building or Project, including accounting and legal matters, costs of defending any lawsuits with any mortgagee, costs of selling, syndicating, financing, mortgaging or hypothecating any of Landlord's interest in the Building or Project, costs of any disputes between Landlord and its employees, disputes of Landlord with Building or Project management, and outside fees paid in connection with disputes with other tenants and salaries, wages or other compensation above the level of property manager;
(9) Any expenditures which under normal accounting rules should be treated as capital expenditures, except depreciation/amortization for such capital repairs or expenditures made by Landlord for the purpose of reducing Operating Expenses of the Building or Project as set forth above;

(10) Costs of repairs or replacements caused by the exercise of any condemnation rights by any public or quasi-public authority;
(11) Charitable and political contributions, advertising, marketing, and promotional expenditures, including costs of staging special events (unless applied for the benefit of all tenants or the Building or Project as a whole, or as necessary to provide service in accordance with a first-class standard, e.g., expenses for an annual Building or Project holiday party);
(12) Marketing costs and other costs and expenses incurred in connection with lease, sublease and/or assignment negotiations and transactions with present or prospective tenants or other occupants of the Building or Project;
(13) Property management fees in excess of 4% of gross rental receipts;
(14) Costs representing amounts paid to an affiliate of Landlord for services or materials which are in excess of the amounts which would have been paid in the absence of such relationship; and
(15) Any costs, fines, or penalties incurred because Landlord violated any Applicable Law.

1.024 **Parking** – non-exclusive use of twenty (20) parking spaces.

1.025 **Permitted Use –** general office and laboratory use for a biotechnology company (or for any other legal use with Landlord's prior written consent which Landlord may withhold in its reasonable discretion.

1.026 **Premises - certa**in premises known as Dibrell A-100, a floor plan of which is attached hereto and made a part hereof as Exhibit B.

1.027 **Premises Specifications** – the specifications to which the Premises are to be constructed as described in Exhibits C and D.

1.028 **Prime Landlord** - Pettigrew Street Partners, LLC.

1.029 **Prime Tenant** - Venable Investor, LLC.

1.030 **Project** – The Venable Center.

1.031 **Real Estate Taxes** - any and all taxes (including special assessments) that are payable within a particular calendar year, including all taxes imposed on the Project and the Land. Real Estate Taxes will include, without limitation, (i) all real estate taxes, rates, and assessments (including general and special assessments, if any), ordinary and extraordinary, foreseen and unforeseen, which are imposed upon Landlord or assessed against the Project or the Land, (ii) personal property taxes applicable to the personalty of Landlord, whether used by Landlord or its agent, related to or used in the management or operation of the Project, (other than such taxes based upon Landlord's net income), (iii) any other present or future taxes or charges that are imposed upon Landlord or assessed against the Project or the Land which are in the nature of or in substitute for real estate taxes, including any tax levied on or measured by the gross rents payable by tenants of the Project, any public safety fee or similar charge, any transit, sales, rental, use, receipts, or occupancy tax or fee, and any assessment imposed in connection with business improvement or similar districts, (iv) public space rentals, including but not limited to vault rentals, and (v) all reasonable costs and expenses actually incurred by Landlord, including without limitation reasonable attorneys' fees and consultants' fees and court costs, in connection with reviewing, protesting, or seeking a reduction or abatement of, or defending or otherwise participating in any challenge to, real estate taxes, but only if (i) Tenant approves such protest; or (ii) to the extent said protest or reduction is ultimately successful.

If the levy will be levied or imposed on the Project, and/or Land and/or Landlord, in substitution for real estate taxes and/or personal property taxes presently levied or imposed on immovables in North Carolina, and including also without limitation any Project dues or assessments, any taxes on rents, or alternative which may be enacted by the taxing municipality to pay for municipal services or as a money raising action, whether temporary or permanent, then any such new tax or levy will be included within the amount of Real Estate Taxes of which Tenant will pay its Proportionate Share. Real Estate Taxes will not include, nor will Tenant be obligated to pay pursuant to this Lease, such taxes as capital gains, corporation, unincorporated business, income, profit, excess profit, inheritance, transfer, recordation, estate, gift or franchise taxes, or any fines, penalties and/or interest on late payments of any Real Estate Taxes (unless such late payment is caused by Tenant's failure to make timely payment of any installments of its Proportionate Share of increases in Real Estate Taxes, in which case Tenant will be solely liable to reimburse Landlord for the entirety of any such fine, penalty and/or interest).

1.032 **Renewal Term** –two (2), three (3) year options to renew at the lesser of the (i) then escalated Base Annual Rate, or (ii) ninety five (95%) percent of the then current market rental rate for comparable laboratory space in downtown Durham, as reasonably determined by Landlord.

1.033 **Rent** – collectively, the Base Annual Rent and the Additional Rent.

1.034 **Rent Abatement –** the first five (5) months of the Term.

1.035 **Rent Commencement Date –** the date which is the first day following expiration of the Rent Abatement period.

1.036 **Security Deposit** –the equivalent of six (6) months Base Annual Rent, Seventy-Three Thousand Eight Hundred Forty-Five and 45/100 dollars ($73,845.45) in the form of a Letter of Credit to be held by Landlord as security for the performance by Tenant of all obligations imposed on Tenant pursuant to the Lease.

1.037 **Statement** - a written statement submitted within one hundred and twenty (120) days after the end of each calendar year by Landlord to Tenant showing (i) Tenant's actual Proportionate Share of the amount by which Operating Expenses incurred during the preceding calendar year exceed the Operating Expenses for the Base Year, (ii) the amount thereof paid by Tenant, and (iii) the balance due or the overpayment.

1.038 **Sublease** – that sublease dated July 11, 2006, pursuant to which the Landlord has leased the entirety of the Building and the Land from the Prime Tenant.

1.039 **Tenant** - Precision BioSciences, Inc.

1.040 **Tenant Delay** – any verifiable act or omission by Tenant, or a Tenant Party that proximately results in a delay hereunder (as reasonably documented by Landlord).

1.041 **Tenant's Forecast Operating Expenses** - a written statement of Landlord's reasonable estimate of Tenant's Proportionate Share of Operating Expenses for each calendar year (or portion thereof) during the Term or Renewal Term presented to Tenant prior to the beginning of each calendar year. Operating Expenses for 2010 are estimated to be $3.91 per rentable square foot.

1.042 **Tenant Improvements** – the improvements constructed to prepare the Premises for occupancy by Tenant as described in Exhibit D.

1.043 **Tenant Improvement Allowance –** Fifty dollars **(**$50.00) per rentable square foot for a total of Four Hundred Thirteen Thousand Seven Hundred Dollars ($413,700.00). The Tenant Improvement Allowance shall be used to fund (listed in order of payment):

Landlord Design Oversight (5% of Construction and Design Costs), Design Fees, Permit Fees, Construction Contingency (5% of Construction Costs), Construction Payment and Performance Bonds, and Construction Costs.

1.044 **Tenant Improvement Overage** - all costs for the Tenant Improvements minus the Tenant Improvement Allowance.

1.045 **Tenant Party** - collectively, the Tenant and its agents, employees, officers, invitees, licensees and independent contractors.

1.046 **Tenant's Proportionate Share** - a percentage which represents the ratio that the number of rentable square feet of the Premises bears to (i) the rentable square footage of the Building for invoices associated specifically with the Building (e.g., building common area janitorial, common area utilities, termite treatment, etc.) which is 16.01409% or (ii) the rentable square footage of the Project for invoices associated with the Project (e.g. property taxes, insurance premiums, landscaping, security, snow/ice removal, etc.) which is 9.63404%. Tenant's Proportionate Share for any partial calendar year during the Lease Term will be determined by multiplying the amount of Tenant's Proportionate Share of increases in Operating Expenses for the full calendar year by a fraction, the numerator of which is the number of days during such calendar year falling within the Lease Term or Renewal Term and the denominator of which is three hundred sixty-five (365) Tenant shall have the right to confirm the measurement of the Premises and its Proportionate Share, and receive appropriate Rent and Tenant Improvement Allowance adjustments, increases, and/or refunds, to the extent Tenant discovers an error and provides evidence of same to Landlord for reasonable confirmation by Landlord.

1.047 **Term** – sixty-five (65) months.

1.048 **Termination Date** – that date which is sixty-five (65) months after the Commencement Date.

2. Recitals. This Lease is made and entered into as of the 5th day of April, 2010, by and between the Landlord and the Tenant. The parties hereto acknowledge that Landlord has leased the entirety of the Building and the Land from the Prime Tenant pursuant to the Sublease and that the Prime Tenant has leased the Building and the Land from the Prime Landlord pursuant to the Master Lease. Upon the execution of this instrument, Landlord will sublease the Premises to Tenant. While the transaction effected hereby would be a sublease, and the Landlord and Tenant are respectively, sublandlord and subtenant, for ease of reference, this instrument is referred to as a Lease, and the parties referred to as Landlord and Tenant, and Landlord hereby confirms that it has authority to sublease the Premises to Tenant. Now therefore, in consideration of the foregoing and the mutual covenants provided herein, the parties hereto agree as follows:

3. Premises. In consideration of the obligation of Tenant to pay rent as herein provided, and in consideration of the other terms, provisions and covenants hereof, Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the Premises for the Permitted Use. The Premises are comprised of the Net Rentable Area in the Building situated on the Land in the County of Durham, City of Durham, State of North Carolina, more particularly described on Exhibit A, attached hereto and incorporated herein by reference, together with all rights, privileges, easements, appurtenances and immunities belonging to or in any way pertaining to the Premises. Except as provided herein (and subject to latent defects not readily apparent

through visual inspection and identified “punchlist” items, which Landlord shall repair within a reasonable amount of time), Tenant shall lease the Premises “as is” with no representations or warranties made by Landlord as to the condition of the Premises To the best of its knowledge, Landlord represents and warrants that as of this date, the Premises are in material compliance with all Applicable Laws, and are in good condition and repair subject to reasonable wear and tear. In addition, Landlord shall use all reasonable efforts to insure that as of the Commencement Date (modified as provided herein), the Premises will be in material compliance with all Applicable Laws and are in good condition and repair. To the best of Landlord's knowledge, Applicable Laws and any recorded restrictive covenants permit the Premises to be used for the Permitted Use.

The Building is part of the Project and consists of a total of Eighty-Five Thousand Six Hundred and Twenty-Two (85,622) rentable square feet with the Building being comprised of Fifty One Thousand Six Hundred Sixty-Seven (51,667) rentable square feet. Landlord hereby represents and warrants to Tenant that the foregoing representations regarding rentable square feet are consistent with the definition of rentable area calculated pursuant to Building Owners and Managers Association Standards. A floor plan of the Premises is attached hereto and made a part hereof as Exhibit B. As an appurtenance to the Premises, Tenant, its employees and invitees will have the nonexclusive right to use the Common Areas at the Building.

Within five business days of the Commencement Date, Tenant will, upon demand of Landlord, execute and deliver to Landlord a letter of acceptance of delivery of the Premises (subject to latent defects not readily apparent through visual inspection and identified “punchlist” items, which Landlord shall repair within a reasonable amount of time), acknowledging the Commencement and Termination Dates of this Lease.

Except for any items the cost of which is paid out of the Tenant Improvement Allowance, Landlord shall perform, at its sole cost and expense, all work detailed on Exhibit C hereto. The upfit of the Premises, will be performed by Landlord in accordance with the Premises Specifications in the Work Letter, if applicable attached hereto and made a part hereof Exhibit D.

Subject to reasonable rules and regulations as Landlord may from time to time prescribe and subject to rights of ingress and egress of other tenants of the Project, Tenant and its invitees will have the right to the non-exclusive usage of twenty (20) parking spaces. Landlord will not be responsible for enforcing Tenant’s parking rights against any third parties.

Tenant is granted a non-exclusive right to use, in common with the other tenants and users of the Project, all of the Common Areas. Landlord shall have exclusive control and management responsibility of the Common Areas. Landlord may, from time to time, alter the Common Areas, install kiosks, planters, fountains, sculptures, signs, and other structures within the Common Areas provided however that any such alterations shall not materially and adversely interfere with Tenant’s use or enjoyment of the Premises or decrease Tenant’s parking spaces. Landlord shall have the right to establish, modify, and enforce reasonable rules and regulations with respect to the Common Areas and to grant to individual tenants the right to conduct retail sales within the Common Areas. Landlord makes no representation or warranty concerning

the size of the Common Areas and may, in the future, reduce the size of the Common Areas in its reasonable discretion, provided however that such reduction shall not materially and adversely interfere with Tenant's use or enjoyment of the Premises, and shall result in a commensurate reduction in Tenant's Proportionate Share.

Landlord hereby grants to Tenant a continuing right of first refusal to lease vacant and available space in the Building (the "Additional Space") under the terms and conditions as provided below:

(i) Subordinate to other tenants at the Project with pre-existing First Right of Refusal, and so long as there is no event of default by Tenant hereunder beyond any applicable grace and/or cure period, Landlord will notify Tenant when it has all or a portion of the Additional Space for lease to a third party (the "Third Party") and the terms and conditions upon which it is willing to lease such space ("Landlord's Notice").
(ii) Tenant shall provide written notice to Landlord, as to Tenant's decision to lease or not to lease the Additional Space within five (5) business days after Landlord's Notice is received. If Tenant does provide to Landlord notice to lease the Additional Space, Landlord and Tenant will execute a lease amendment adding the Additional Space to the Premises within twenty (20) days after Landlord's receipt of Tenant's notice of intent to lease on all the same terms provided to the Third Party. If Tenant does not provide written notice to Landlord within five (5) business days after receipt of the Landlord's Notice, Tenant will have been deemed to have waived its right to lease the Additional Space and Landlord shall be free to enter into a lease with the Third Party. Should all or any portion of the Additional Space become vacant thereafter, Tenant shall again have the right of first refusal provided herein.
(iii) The rights provided to Tenant in this Section are personal to the Tenant and may not be assigned in connection with an assignment of this Lease, subletting of the Premises or otherwise, except for any Permitted Transferee (as hereinafter defined).

4. Term. The Term of the Lease will begin on the Commencement Date and end on the Termination Date, unless sooner terminated or extended pursuant to the provisions hereof. The Commencement Date and Termination Date will be extended at the option of Landlord due to Force Majeure. Landlord shall use commercially reasonable measures to ensure that the Commencement Date is no later than October 1, 2010. In the event that the Commencement Date is later than February 1, 2011 for reasons other than a Tenant Delay or Force Majeure, and provided there is no default or event of default by Tenant hereunder, Tenant shall, by written notice to Landlord on or prior to February 6, 2011 (time being of the essence), have the right to terminate this Lease and all of its obligations hereunder (as of the date of giving such notice), and the parties hereto shall have no further obligation to each other hereunder.

Provided there is no default or event of default by Tenant hereunder at the time such rights are exercised or when a Renewal Term will commence, Tenant will have the option to extend the term of this Lease for two (2) Renewal Terms each of three (3) Lease Years by providing Landlord written notice of its desire to do so at least one hundred and eighty (180) days prior to the end of the then current term hereof. The date of the commencement of the Renewal Term will be the day after the expiration of the then current term of the Lease (unless sooner terminated as provided herein). All terms and conditions of this Lease will be in effect during

the Renewal Term, except that (i) the Base Annual Rent will be the lesser of (a) ninety-five percent (95%) of the then market rate for comparable laboratory space in downtown Durham, as determined in accordance with this Section 4, or (b) the increase in the CPI with a floor of two and one-half percent (2.5%) and a ceiling of three percent (3%) but in no event shall Base Annual Rent be less than that paid the previous Lease Year, and (ii) upon the exercise of the right to renew hereunder, a right of Tenant to renew or extend the term hereof will have lapsed. Failure of Tenant to comply strictly with the provisions of this subparagraph will render the rights of Tenant in this subparagraph null and void. The rights granted to Tenant in this subparagraph are personal to Tenant and will not inure to the benefit of any successor or assign of Tenant, except for any Permitted Transferee.

The market rate shall mean the fair market base rent, without deduction for the cash value of free rent and leasehold improvements, which renewing, non-equity tenants are then receiving in connection with a lease for comparable space in the Durham, North Carolina area. Promptly following receipt by Landlord of Tenant's renewal notice, Landlord shall notify Tenant of the amount that, in Landlord's reasonable opinion, represents the market rate during the Renewal Term. Within fifteen (15) days of such notice, (a) if Tenant agrees, Tenant shall notify Landlord that Tenant so agrees that the Base Annual Rent therein provided constitutes the market rate, or (b) if Tenant disagrees, Tenant shall specify what Base Annual Rent, in Tenant's opinion, constitutes the market rate, or (c) if Tenant does not respond, Tenant shall be deemed to agree. In the event Tenant agrees, then the Base Annual Rent set forth in Landlord's said notice shall be deemed the market rate. In the event Tenant disagrees as provided in clause (b) above, the following procedure shall be used in determining the market rate: The parties shall use due diligence to attempt to agree upon the market rate within seven (7) business days following the foregoing fifteen (15) day period, but, if they do not so agree, then at the request of either party to the other (the "Initial Request"), the parties shall jointly choose a real estate broker (who shall have had at least ten (10) years experience as a broker in commercial office leasing in the Durham, North Carolina area) and who has not been employed by either party, whose decision shall be final and binding. If the parties do not agree upon such a third party broker and notify in writing the other thereof within seven (7) business days of the Initial Request, then within six (6) additional business days each party shall choose a real estate broker (having the foregoing credentials) and notify in writing the other thereof, and the joint decision of such real estate brokers regarding the market rate shall be final and binding (or, failing such notice, or if such choice is made, failing notice to the other within such six (6) additional business day period, the decision of one such real estate broker timely chosen and noticed shall be final and binding). If the two (2) real estate brokers timely chosen and noticed do not agree within seven (7) business days of the end of the six (6) business day period mentioned above during which they were chosen, then they shall choose a third such real estate broker (having the foregoing credentials) within five (5) business days, and the decision of such third real estate broker regarding the market rate shall be final and binding.

5. Rent. Beginning on the Rent Commencement Date and continuing thereafter throughout the Term, Tenant will pay the Rent in monthly installments in advance, without demand, deduction or offset, in lawful money of the United States commencing on the Rent Commencement Date, and continuing on the first day of each and every month thereafter until the Termination Date. Rent payments for any fractional calendar month at the end, or the

beginning of the term of the Lease, will be prorated. In the event Tenant fails to pay any installment of Rent hereunder within ten days of the due date of such installment, Tenant will pay to Landlord on demand a late charge in an amount equal to four percent (4%) of such installment. The provision for such late charge will be in addition to all of Landlord's other rights and remedies hereunder or at law and will not be construed as liquidated damages or as limiting Landlord's remedies in any manner. Commencing with the second Lease Year hereunder, Base Annual Rent will increase on each anniversary of the Rent Commencement Date by the Base Annual Rent Escalation over the Base Annual Rent paid the previous Lease Year.

Commencing January 1 of the year following the Commencement Date and continuing thereafter for each calendar year during the Term, Landlord will present to Tenant Tenant's Forecast Operating Expenses. Tenant will pay without deduction, offset, or counter claim, and otherwise in the same manner as Base Annual Rent on the first day of each calendar month during the Term, an amount equal to one twelfth (1/12) of Tenant's Forecast Operating Expenses as Additional Rent. From time to time during any calendar year, Landlord may revise Tenant's Forecast Operating Expense and adjust Tenant's monthly payments to reflect Landlord's such revisions. Promptly after the full execution of this Lease (and delivery to Tenant of a copy thereof), Tenant shall pay Landlord the first month's Rent due hereunder.

Notwithstanding the foregoing, and provided there is no default or event of default hereunder by Tenant, Base Annual Rent (but not Operating Expenses) shall be abated hereunder for the first five (5) months after the Commencement Date (the "Rent Abatement"). Tenant will be responsible for its Proportionate Share of the Operating Expenses for the Building as well as its utilities and janitorial services.

6. Operating Expenses. The accounting of the Operating Expenses will be performed in accordance with Generally Accepted Accounting Principles. For the purpose of calculating the Operating Expenses, no Controllable Expense will increase more than five percent (5%) over the charge paid by Tenant the previous Lease Year.

If the average occupancy rate of the Building Rentable Area will be less than ninety-five percent (95%) during any calendar year, or if any tenant is separately paying for (or does not require) electricity, janitorial, or other services furnished to its premises, then, for purposes of calculating Operating Expenses, the Operating Expenses for such period that vary with the level of occupancy of the Building or Project will be increased by the additional costs and expenses that Landlord reasonably estimates would have been incurred if the average occupancy rate had been ninety-five percent (95%) for such period. In no event will the Project tenants be required to pay, in the aggregate, more than 100% of the actual Operating Expenses of the Building or Project for any calendar year, and Tenant will not be required to pay more than one hundred percent (100%) of its Proportionate Share of the total increase in Operating Expenses actually incurred for the calendar year, with such actual Operating Expenses to be determined and payments reconciled through the process described above. At Tenant's written request, Landlord will provide information sufficient to disclose or quantify adjustments made to each category of Operating Expenses increased pursuant to the provisions of this Section. For the purpose of this Section, the term "Building" will be deemed to include the roof of the

Building and any extensions therefrom, courtyards, sidewalks, landscaping, and all other areas, facilities, improvements, and appurtenances relating to any of the foregoing; provided, however, that Operating Expenses for the Building will not include Operating Expenses for the Project.

Within 120 days after the end of each calendar year, Landlord will submit to Tenant the Statement showing (i) the actual Tenant's Proportionate Share of the amount by which Operating Expenses incurred during the preceding calendar year exceed the Tenant's Forecast Operating Expenses, (ii) the amount thereof paid by Tenant, and (iii) the balance due or the overpayment. If there is a balance due, Tenant will pay the balance due as Additional Rent within thirty (30) days following receipt of such Statement. If the Statement indicates an overpayment, then Landlord will credit the net overpayment toward Tenant's next estimated payment(s) pursuant to this Section or if at the end of the Term, will refund such excess to Tenant. Tenant or its designated representative, at its sole expense, will have the right once per calendar year during the Term to audit Landlord's books and records relating to the Operating Expenses for the immediately preceding calendar year. This audit must take place on a mutually agreeable date during reasonable business hours at Landlord's office at the address stated above and only after Tenant has given Landlord at least fourteen (14) calendar days prior written notice of the date and time Tenant desires to commence such audit. If Tenant elects to audit Landlord's books and records, Tenant will have the right to perform an audit of the Operating Expenses for the immediately preceding two (2) calendar years, such audit to be conducted by a reputable accounting firm reasonably approved by Landlord. If any such audit reveals an error by Landlord resulting in an overcharge to Tenant, then Landlord will promptly reimburse Tenant for the amount erroneously charged to Tenant. Likewise, if any such audit reveals an error resulting in Tenant being undercharged, then Tenant will promptly reimburse Landlord for the amount of such deficiency. If any audit performed by Tenant reveals that the Operating Expenses in total have been overstated by more than five percent (5%), Landlord will pay and/or reimburse Tenant for the cost of the audit not to exceed Two Thousand, Five Hundred Dollars ($2,500.00).

7. Utilities and Services.

(a) Landlord shall furnish connections for each utility to the Premises to include electricity, water and sewer, and telephone as specified in Exhibit C. Landlord shall not be liable in any respect for damages to person, property or otherwise due to the interruption in any utility to the Building, nor be construed as an eviction of Tenant, nor work an abatement of rent, nor relieve Tenant from fulfillment of any covenant or agreement hereof nor give rise to any right or remedy by Tenant unless caused by the gross negligence or willful misconduct of Landlord. Landlord shall provide conduit and boxes for phone and data at the Premises. Tenant shall bear the costs and be responsible for pulling cable for phone and data from the Demarcation closet (telephone closet) and providing cabling and jacks.

(b) Landlord shall provide the following services to Common Areas of the Building:

(i) Common Area Cleaning (M, W, T, F): (Restrooms, Halls, Stairs, Lobby, Elevator and Entrance):

Clean and restock restrooms on 1st and 2nd floors
Clean elevator
Sweep stairwell and spot mop for spills
Vacuum carpet
Dust mop hard surface floors and spot mop to remove spills
Clean entrance glass doors and sills
Dust security desk and Lobby furniture; and
Once Weekly: Dust and damp wipe stairwell railings.

(ii) Lights on throughout Common Areas throughout the business day and parking lot illuminated every night
(iii) Security guard on duty Monday through Friday 8-5
(iv) HVAC to condition Common Areas during each business day with override after-hours (HVAC annual service contracts included in Operating Expenses)
(v) Landscaping every 7-10 days with day porter services to patrol, weed and clean site three times week
(vi) Fire alarm and controlled access door system monitored 24/7 (contract paid through Operating Expenses)
(vii) Elevator preventative maintenance contract and service; and
(viii) Routine maintenance of common areas including, but not limited to, bulb replacements, door adjustments, HVAC adjustments, plumbing repairs, etc.

8. Direct Tenant Expenses. Tenant will arrange for the provision of service and shall pay directly to each service provider all charges for all electricity, gas, and other utilities, janitorial, telephone and internet/data used on or from the Premises, together with any taxes, penalties, surcharges or the like pertaining thereto.

9. Security Deposit. Promptly after the full execution of the Lease (with a copy thereof delivered to Tenant), Tenant will provide Landlord with an amount equal to six (6) months of the Base Annual Rent, Seventy-Three Thousand Eight Hundred Forty-Five and 45/100 dollars ($73,845.45) to be held as Security Deposit. Provided that Landlord reasonably approves the form and substance of such, Tenant may provide a Letter of Credit in lieu of cash. Any such Letter of Credit shall be irrevocable, unconditional, payable to the order of Landlord, from an issuer reasonably approved by Landlord, in place for the Term of the Lease and any Renewal Terms hereof, and be for the full amount of the Security Deposit. Landlord will not be required to apply all or any portion of the Security Deposit with respect to any particular violation or default by Tenant but Landlord may apply all or any portion (as reasonably required to effect a cure) of the Security Deposit to any violation, breach, or default by Tenant hereunder. Landlord will be entitled to hold the Security Deposit in an account maintained by Landlord for such funds from all tenants of Landlord. Any interest paid on such an account will become a part of the Security Deposit, accrue to the benefit of the Tenant (less any customary bank fees or charges for maintaining such account), and be delivered to Tenant upon termination of this Lease provided that the Security Deposit and interest thereon have not been applied by Landlord to an event of default hereunder. Tenant will reimburse Landlord for such portions

of the Security Deposit as Landlord will from time to time apply with respect to any violation, breach, or default by Tenant hereunder promptly upon written notice of such application by Landlord. Any portion of the Security Deposit which has not been appropriated by Landlord in accordance with the provisions hereof will be returned to Tenant within thirty (30) days after the termination of this Lease.

If Landlord conveys Landlord's interest under this Lease, the Security Deposit, or any part thereof not previously applied, shall be released by Landlord to Landlord's grantee (to the extent not applied to any default by Tenant hereunder), and if so released, Tenant agrees to look solely to such grantee for the proper application and return thereof in accordance with the Lease provided that Tenant receives written notice of such conveyance. Tenant agrees that Tenant will not assign, and that neither Landlord, nor its successors and assigns, will be bound by any such assignment, encumbrance or pledge, attempted assignment, attempted pledge, or attempted encumbrance of the Security Deposit.

Any mortgagee or ground lessor will not be responsible to Tenant for the return or application of the Security Deposit, whether or not it succeeds to the position of Landlord hereunder, unless the security deposit will have been received in hand by such mortgagee or ground lessor.

Any unperformed obligations of Landlord or Tenant under this Section will survive the termination of the Lease, for whatever reason, or any extension or renewal hereof.

Notwithstanding the foregoing and provided there is no default or event of default hereunder by Tenant (or if Tenant has committed a default or event of default more than one (1) time in any twelve (12) month period, then regardless of whether same has been cured), Landlord shall reduce the Security Deposit by the equivalent of one (1) month's Base Annual Rent, Twelve Thousand Three Hundred Seven and 58/100 dollars ($12,307.58) every three (3) months during the Lease Term commencing upon the later of (i) the satisfactory repayment of Tenant's loan as reported on Precision BioSciences, Inc. Balance Sheet dated January 8, 2010, or (ii) December 31, 2011, until such time that the equivalent of one (1) month's Base Annual Rent, Twelve Thousand Three Hundred Seven and 58/100 dollars ($12,307.58), remains as Security Deposit. With the third reduction of the Security Deposit, if paid as aforesaid, Landlord shall remit to Tenant the net interest that has accrued on the Security Deposit. Landlord shall provide Tenant written notice of any reduction in the Security Deposit and within five (5) business days thereafter, Tenant will be responsible for the re-issuance of an approved Letter of Credit each time that Security Deposit is eligible for reduction and until Tenant provides a re-issued Letter of Credit, Landlord shall have the right to use and draw upon the currently provided Letter of Credit.

10. Maintenance and Repairs. Landlord will maintain all Common Areas and Systems serving the Common Areas, the roof, downspouts, gutters, foundation, and the exterior walls (and any structural interior walls or other structural elements) of the Building in good repair, reasonable wear and tear excepted. Tenant will repair, replace and pay for, any damage to the foregoing caused by the negligence or misconduct of Tenant or any Tenant Party, or caused by Tenant's default hereunder. The term "walls" as used herein will not include windows, glass or plate glass, doors, special store fronts or office entries. Tenant will promptly give Landlord

written notice of defect or need for repairs, after which Landlord will have reasonable opportunity to repair same or cure such defect. Landlord's liability with respect to any defects, repairs or maintenance for which Landlord is responsible under any of the provisions of this Lease will be limited to the cost of such repairs or maintenance or the curing of such defect.

Tenant will at its own cost and expense maintain, repair and replace the entirety of the Premises (except those for which Landlord is expressly responsible under the terms of this Lease) in as good condition as received (ordinary wear and tear excepted), promptly making all necessary repairs and replacements, including, but not limited to, heating, ventilation, cooling, plumbing, telecommunications, electrical and any other systems (the "Systems") within or serving the Premises, lighting fixtures, ballasts and bulbs, windows and window treatments, windows, glass and plate glass, doors, any special office entry, interior walls, finish work, and floors and floor coverings within or serving the Premises unless any such damage is caused by parties other than Tenant or a Tenant Party. Landlord shall insure that the Systems will be in good working order and condition upon the Commencement Date. Landlord shall assign to Tenant all warranties that are legally assignable, and if not assignable, shall cooperate with Tenant to enforce such warranties. Landlord agrees to assign, to the extent legally assignable, any and all manufacturers' warranties for the Tenant Improvements, directly to the Tenant, which warranties shall include, but not be limited to, warranties for the Systems, which shall be the standard warranties available from the manufacturers. Additionally, Landlord acknowledges and agrees that any replacements made to any Systems, or any material components thereof (during the last 24 months of the then-existing Lease Term), shall be made by Landlord, and amortized over its useful life, and charged as a capital expense under the Operating Expense formula.

Subject to compliance with any notice and right to cure provisions contained in this Lease, if Tenant shall fail to fulfill its obligations under this Section, the Landlord may enter upon the area of the Building or the Premises as required to perform the obligations of the Tenant, and will be entitled to reimbursement from the Tenant for its actual costs and expenses in conducting such obligations. The Tenant will reimburse the Landlord for its actual costs and expense promptly upon demand made by the Landlord. The provisions of this subparagraph will not be interpreted to obligate the Landlord to perform obligations of the Tenant.

Tenant will not damage any demising wall of the Building, or disturb the integrity and support provided by any demising wall and will, at its sole cost and expense, promptly repair any damage or injury to any demising wall caused by Tenant or any Tenant Party.

11. Alterations. Except for the Tenant Improvements, Tenant will not make any alterations, additions or improvements to the Premises (including, but not limited to, roof and wall penetrations without the prior written consent of Landlord (not to be unreasonably withheld, or delayed). Tenant may, without the consent of Landlord, but at its own cost and expense and in a good workmanlike manner, erect such shelves, bins, machinery, movable lab benches, equipment, trade fixtures (defined as any fixtures used by Tenant in its specific business and not paid for by Landlord) and other non-structural interior improvements as it may deem advisable, without altering the basic character or structure of the Premises or improvements and without overloading or damaging the Premises or Building, and in each case complying

with all Applicable Laws. Tenant will not make any alterations, additions or improvements to the Premises which will contravene Landlord's policies insuring against loss or damage by fire or other hazards, including but not limited to commercial general liability, or which will prevent Landlord from securing such policies in companies reasonably acceptable to Landlord. If any such alterations, additions or improvements cause the rate of fire or other insurance on the Premises by companies acceptable to Landlord to be increased beyond the minimum rate from time to time applicable to the Premises for permitted uses thereof (as reasonably documented by Landlord), Tenant will pay as Additional Rent the amount of any such increase promptly upon demand by Landlord. Within thirty (30) days receipt of reasonable documentation from Landlord following the completion of any alteration, addition, or improvement at the Premises by Tenant that requires the prior consent of Landlord, Landlord will be reimbursed for any reasonable outside consultant or design professional costs actually incurred by Landlord to review any plans or supervise construction work (not to exceed the lesser of $1,500.00 or 5% of Tenant's "hard" construction costs). No such reimbursement will be required for any alteration, addition or improvement that does not require the consent of Landlord.

Any and all alterations, additions, improvements, partitions and fixtures erected by Tenant will be the property of Landlord and will remain at the Premises upon termination of the Lease or upon earlier vacating of the Premises. All shelves, bins, machinery, trade fixtures, and other interior non-structural improvements installed by Tenant will remain the personal property of Tenant and may be removed by Tenant prior to the termination of this Lease provided such removal may be accomplished without damage to the Premises or Building that cannot be repaired by Tenant as set forth in this subparagraph. Prior to vacating the Premises, Tenant will repair any damage to the Premises or Building as a result of any alteration, addition, improvement, or repair to the Premises, or the removal of personal property or trade fixtures by Tenant, or any Tenant Party. Should Tenant fail to conduct any such repair within ten (10) days of written notice from Landlord, Landlord may, at its option, perform same, and Tenant will remit payment to Landlord for the actual cost and expense incurred by Landlord in effecting such repair promptly upon demand.

Tenant will have no authority, express or implied, to create or place any lien or encumbrance of any kind or nature whatsoever upon, or in any manner to bind, the interest of Landlord in the Premises or to charge the rentals payable hereunder for any claim in favor of any person dealing with Tenant, including those who may furnish materials or perform labor for any construction or repairs, and each such claim will affect and each such lien will attach to, if at all, only the leasehold interest granted to Tenant by this instrument. Tenant covenants and agrees that it will pay or cause to be paid all sums legally due and payable by it on account of any labor performed or materials furnished in connection with any work performed on the Premises at the request of Tenant on which any lien is or can be validly and legally asserted against its leasehold interest in the Premises or the improvements thereon and that it will save and hold Landlord harmless from any and all loss, cost or expense based on or arising out of asserted claims or liens against the leasehold estate or against the right, title and interest of Landlord in the Premises or under the terms of this Lease.

12. Assignment and Subletting. Tenant may assign this Lease in its entirety or sublease

all or any portion of the Premises without the consent of Landlord to (i) any entity resulting from a merger or consolidation with Tenant, (ii) any entity succeeding to all or substantially all of the business and assets of Tenant, or (iii) any company or professional corporation or association affiliated with, owned by, or under common corporate control with Tenant (each a "Permitted Transferee"); provided, however, that the financial capacity of the Permitted Transferee must be at least equal to that of the Tenant on the date of transfer and the transfer must not be effected by Tenant as a sham transaction or a means to circumvent the intent of this Section or adversely affect the liability of Tenant hereunder. Except as herein otherwise provided, Tenant may not assign or encumber this Lease or its interest in the Premises arising under this Lease, and may not sublet any part or all of the Premises without the prior consent of Landlord, which consent Landlord will not unreasonably withhold, or delay. For the purpose of the preceding sentence, the word "assign" will be defined and deemed to include the sale or other transfer of a controlling percentage (hereafter defined) of capital stock of Tenant other than to an affiliate or subsidiary or the sale of at least fifty-one percent (51%) of the value of the assets of Tenant. The phrase "controlling percentage" means the ownership of, and the right to vote, stock possessing at least fifty-one percent (51%) of the total combined voting power of all classes of Tenant's capital stock issued, outstanding and entitled to vote for the election of directors, or such lesser percentage as is required to provide actual control over the affairs of the corporation. Acceptance of Rent by Landlord after any non-permitted assignment will not constitute approval thereof by Landlord. Notwithstanding any contrary provision contained herein, in no event will any assignment by Tenant of all or any interest in this Lease or any subletting of all or any part of the Premises result in Tenant being released from its obligations hereunder.

In no event will this Lease be assignable by operation of any law except as provided herein, and Tenant's rights hereunder may not become, and will not be listed by Tenant as an asset under any bankruptcy, insolvency or reorganization proceedings. Tenant is not, may not become, and will never represent itself to be an agent of Landlord, and Tenant acknowledges that Landlord's title is paramount, and that it can do nothing to affect or impair Landlord's title.

If this Lease will be assigned or the Premises or any portion thereof sublet by Tenant at a rental that exceeds the rentals to be paid to Landlord hereunder, then sixty-five percent (65%) of such excess (after reduction for any expenses incurred by Tenant in conjunction with such assignment or subletting) will be due to the Landlord, upon actual receipt by Tenant.

If Tenant desires to enter into any sublease of all or any portion of the Premises or assign its interest in this Lease, Landlord will have the option to exclude from the Premises the space proposed to be sublet by Tenant or if an assignment is proposed, the entire Premises. Such exclusion or recapture by Landlord will be effective as of the proposed commencement date of the sublease or assignment. Landlord may exercise said option by giving Tenant written notice within ten (10) business days after receipt by Landlord of Tenant's request for consent to the proposed sublease or assignment. If Landlord exercises said option, Tenant will surrender possession of such space to Landlord on the effective date of exclusion or recapture of such space and neither party hereto will have any future rights or liabilities with respect to said space under this Lease. Effective as of the date of exclusion of any portion of the Premises

covered by this Lease pursuant to this paragraph, (i) the Base Annual Rent will be reduced in the same proportion as the number of square feet of Net Rentable Area contained in the portion of the Premises so excluded bears to the number of square feet of Net Rentable Area contained in the Premises immediately prior to such exclusion, and (ii) the Net Rentable Area of the Premises will be decreased by the number of square feet of Net Rentable Area contained in the portion of the Premises so excluded, for all purposes under this Lease.

Landlord and Tenant acknowledge and agree that the foregoing provisions have been freely negotiated by the parties hereto and that Landlord would not have entered into this Lease without Tenant's consent to the terms of this Section.

13. Insurance. Landlord agrees to maintain standard fire and extended coverage insurance for the Building (including the Tenant Improvements) in an amount not less than the replacement cost, insuring against special causes of loss, including, the perils of fire, and lightning, such coverages and endorsements to be as defined, provided and limited in the standard bureau forms prescribed by the insurance regulatory authority for the State of North Carolina. Subject to the provisions of this Lease, such insurance will be for the sole benefit of Landlord and under its sole control.

If the Premises should be damaged or destroyed by any peril covered by the insurance to be provided by Landlord according to this section, Tenant will give prompt written notice thereof to Landlord. This Lease will not terminate (except as specifically provided herein), and Landlord will, at its sole cost and expense, thereupon proceed with reasonable diligence to rebuild and repair the Premises to substantially the condition in which they existed prior to such damage, except that Landlord will not be required to rebuild, repair or replace any part of the partitions, fixtures, additions and other improvements which may have been placed in, on or about the Premises by Tenant (other than the Tenant Improvements). If the Premises are untenantable for the normal conduct of Tenant's business in whole or in part following such damage, the rent payable hereunder during the period in which they are untenantable will be reduced proportionately. If such repair work is not completed within one hundred eighty (180) days of such casualty, and provided there is no default or event of default hereunder by Tenant (or if Tenant has committed a default or event of default more than one (1) time in any twelve (12) month period, then regardless of whether same has been cured), then Tenant shall have the right to terminate this Lease upon written notice to Landlord (prior to actual completion of said work).

Landlord shall maintain contractual and comprehensive general liability insurance, including public liability and property damage, with a minimum combined single limit of liability of two million dollars ($2,000,000.00) for personal injuries or deaths of persons occurring in or about the Building and Premises.

Notwithstanding anything herein to the contrary, in the event the holder of any indebtedness secured by a mortgage or deed of trust covering the Premises requires that the insurance proceeds be applied to such indebtedness, and Landlord is unable to rebuild as confirmed by Landlord in writing to Tenant, then either Landlord or Tenant will have the right to terminate this Lease by delivering written notice of termination to the other party within fifteen (15) days

after such requirement is made by any such holder, whereupon all rights and obligations hereunder thereafter accruing will cease and terminate.

Each of Landlord and Tenant hereby waives all rights to recover against each other or against any other tenant or occupant of the Building, or against the officers, directors, shareholders, partners, joint venturers, employees, agents, customers, invitees, or business visitors of each other or of any other tenant or occupant of the Building, for any loss or damage arising from any cause covered by any insurance required to be carried by each of them pursuant to this Lease, or any other insurance actually carried by either of them. Landlord and Tenant will cause their respective insurers to issue waiver of subrogation rights endorsements to all policies of insurance carried in connection with the Building or the Premises or the contents of either of them, and any cost for the issuance of such endorsements will be borne by the original insured under such policies.

The obligation of Landlord in this Section to repair and restore the Premises and the Building as provided herein, does not include an obligation of Landlord to repair the fixtures, equipment, or personal property of Tenant, which Tenant will insure for its benefit, and Tenant will have the obligation to repair and restore in the event of a casualty or other loss.

The period of time within which repair and restoration of the Premises must be completed will be extended due to delays occasioned by Force Majeure.

Tenant will procure and maintain, at its expense, (i) special form property insurance insuring against special causes of loss covering Tenant’s personal property, equipment, trade fixtures and any improvements performed by Tenant (specifically excluding the Tenant Improvements) in the Premises; and (ii) a policy or policies of commercial general liability insurance applying to Tenant’s operations and use of the Premises, providing a minimum limit of $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate, naming Landlord and Landlord’s property manager as additional insureds. Tenant will maintain the foregoing insurance coverages in effect commencing on the earlier to occur of the Commencement Date and the date Tenant takes possession of the Premises, and continuing to the end of the Lease Term.

The insurance requirements set forth in this Section are independent of the waiver, indemnification, and other obligations under this Lease and will not be construed or interpreted in any way to restrict, limit or modify the waiver, indemnification and other obligations or to in any way limit any party's liability under this Lease. In addition to the requirements set forth in this section, (i) the insurance required of Tenant under this Lease must be issued by an insurance company with a rating of no less than A-VIII in the current Best's Insurance Guide or that is otherwise reasonably acceptable to Landlord, and (ii) the company issuing the coverage must be authorized to conduct the business of insurance in the state in which the Building is located; (iii) the insurance must be primary insurance for all claims thereunder and provide that any liability insurance carried by Landlord, Landlord's property manager, and Landlord's lenders is strictly excess, secondary, and noncontributing with any insurance carried by Tenant; (iv) Tenant must insure that its insurance company shall endeavor to provide at least thirty (30) days prior written notice of cancellation or non-renewal of a policy to Landlord and Landlord's lenders; and (v) Tenant shall provide Landlord a copy of any notice of

cancellation or non-renewal of a policy immediately upon receipt by Tenant. Tenant will deliver to Landlord a legally enforceable certificate of insurance on all policies procured by Tenant in compliance with Tenant's obligations under this Lease on or before the date Tenant first occupies any portion of the Premises, at least ten (10) days before the expiration date of any policy and upon the renewal of any policy. Landlord will have the right to approve all deductibles and self-insured retentions under Tenant's policies, which approval will not be unreasonably withheld, or delayed.

14. Condemnation. If the whole or any substantial portion of the Premises should be taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof, and the taking would prevent or materially interfere with the use of the Premises by Tenant for the purposes provided herein as mutually and reasonably determined by Landlord and Tenant, each party hereto will have the right to terminate this Lease by notice to the other party hereto within forty-five (45) days after the date of such taking and the Rent will be abated during the unexpired portion of this Lease, effective when the physical taking of the Premises will occur. If this Lease is not terminated in accordance with the foregoing, this Lease will remain in full force and effect as to the portion of the Premises remaining, except that the Rent will be reduced in the proportion that the taken floor area of the Premises bears to the total floor area of the Premises as reasonably determined by Landlord.

If a portion of the Premises will be taken for any public or quasi-public use under any governmental law, ordinance or regulation, or by right of eminent domain, or by private purchase in lieu thereof, and there is no material interference with the use by Tenant of the Premises as reasonably determined, this Lease will remain in full force and effect as to the portion of the Premises remaining, except that the Rent will be reduced in the proportion that the taken floor area of the Premises bears to the total floor area of the Premises.

In the event of any such taking or private purchase in lieu thereof, Landlord will be entitled to receive and retain all awards as may be awarded in any condemnation proceedings with Tenant hereby expressly waiving all claim thereto other than those specifically awarded Tenant for a taking of Tenant's personal property, loss of business and moving expenses.

15. Default. The following events will be deemed to be events of default by Tenant under this Lease:

(a) Tenant will fail to pay any installment of the Rent herein reserved, or payment with respect to taxes hereunder, or any other payment or reimbursement to Landlord required herein, within five (5) days of when due; provided, however, on one occasion during each calendar year of the term of this Lease, it shall not be an event of default hereunder if Tenant makes full payment within five (5) days after receipt of written notice from Landlord.

(b) Tenant will become insolvent, or will make a transfer in fraud of creditors, or will make an assignment for the benefit of creditors.

(c) Tenant will file a petition under any section or chapter of the Bankruptcy Reform Act, as amended or under any similar law or statute of the United States or any state thereof; or

Tenant will be adjudged bankrupt or insolvent in proceedings filed against Tenant thereunder.
(d) A receiver or trustee will be appointed for all or substantially all of the assets of Tenant.
(e) Tenant will desert or vacate all or a portion of the Premises, and cease paying Rent at the Premises.
(f) Tenant will fail to yield up immediate possession of the Premises to Landlord upon termination of this Lease.
(g) Tenant will fail to comply with any term, provision or covenant of this Lease (other than the provisions of subparagraphs (a), (b), (c), (d), (e) and (f) of this Section 15), and will not cure such failure within thirty (30) days after written notice thereof to Tenant or such additional period of time as will be reasonably granted by Landlord if Tenant is acting in good faith and with diligence to complete such cure.

Upon the occurrence of any event of default in the preceding section hereof, Landlord will have the option to pursue any remedy at law or in equity, including, but not limited to, one or more of the following remedies without any separate notice or demand whatsoever:

(a) Terminate this Lease, in which event Tenant will immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearage in Rent, enter upon and take possession of the Premises and expel and remove Tenant and any other person who may be occupying the Premises or any part thereof, by any legal means necessary without being liable for prosecution or any claim of damages therefore; secure the Premises against unauthorized entry; and Tenant agrees to pay to Landlord on demand the amount of all loss and damage which Landlord may suffer by reason of such termination, whether through inability to relet the Premises on satisfactory terms or otherwise.

(b) Enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying such Premises or any part thereof, by any legal means necessary without being liable for prosecution and receive the Rent thereof; secure the Premises against unauthorized entry; store any property located on the Premises at the expense of the owner thereof and Tenant agrees to pay to Landlord on demand any deficiency that may arise by reason of such reletting. In the event Landlord is successful in reletting the Premises at a rental in excess of that agreed to be paid by Tenant pursuant to the terms of this Lease, Landlord and Tenant each mutually agree that Tenant will not be entitled, under any circumstances, to such excess rental, and Tenant does hereby specifically waive any claim to such excess rental.

(c) Enter upon the Premises, by any legal means necessary without being liable for prosecution or any claim for damages therefore, secure the Premises against unauthorized entry, remove all property of Tenant from the Premises and store it at the cost and expense of Tenant, and do whatever Tenant is obligated to do under the terms of this Lease; and Tenant agrees to reimburse Landlord on demand for any expenses which Landlord may incur in thus effecting compliance with Tenant’s obligations under this Lease, and Tenant further agrees that Landlord will not be liable for any damages resulting to Tenant from such action, whether caused by the negligence of Landlord or otherwise.

(d) Subject to the obligation of Landlord to mitigate its damages under Applicable Law, accelerate and demand the payment of all Rent and other charges due and payable hereunder over the term of this Lease to an amount equal to the aggregate sum which at the time of such termination represents the excess, if any, of the present value of the aggregate Rent which would have been payable after the termination date had this Lease not been terminated, including, without limitation, the amount projected by Landlord as Rent for the remainder of the Lease Term, over the then present value of the then aggregate fair rent value of the Premises for the balance of the Lease Term, such present worth to be computed in each case on the basis of the lesser of: (i) the rate on a United States Treasury bill with a maturity date equal to the termination date of the Lease, or (ii) five percent (5%) per annum discount from the respective dates upon which such Rent would have been payable hereunder had this Lease not been terminated.

Landlord's failure to perform or observe any of its Lease obligations after a period of thirty (30) days or the additional time, if any, that is reasonably necessary to promptly and diligently cure the failure after receiving written notice from Tenant is a Landlord Default. The notice shall reasonably detail the nature and extent of the failure and identify the Lease provision(s) containing the obligation(s). If Landlord commits a Landlord Default, Tenant may pursue any remedies given in this Lease or under Applicable Law.

Pursuit of any of the foregoing remedies will not preclude pursuit of any of the other remedies herein provided or any other remedies provided by law or equity, nor will pursuit of any remedy herein provided constitute a forfeiture or waiver of any Rent due to Landlord hereunder or of any damages accruing to Landlord by reason of the violation of any of the terms, provisions and covenants herein contained. No act or thing done by Landlord or its agents during the term hereby granted will be deemed a termination of this Lease or an acceptance of the surrender of the Premises, and no agreement to terminate this Lease or accept a surrender of the Premises will be valid unless in writing signed by Landlord. No waiver by Landlord or Tenant of any violation or breach of any of the terms, provisions and covenants herein contained will be deemed or construed to constitute a waiver of any other violation or breach of any of the terms, provisions and covenants herein contained. Landlord's acceptance of the payment of rental or other payments hereunder after the occurrence of an event of default will not be construed as a waiver of such default, unless Landlord so notifies Tenant in writing, and no receipt of money by Landlord from Tenant after the termination of this Lease or after service of any notice or after the commencement of any suit or after final judgment for possession of the Premises will reinstate, continue or extend the term of this Lease or affect any such termination, notice, suit or judgment, unless Landlord so notifies Tenant in writing. Forbearance by Landlord or Tenant to enforce one or more of the remedies herein provided upon an event of default will not be deemed or construed to constitute waiver of such default or of said party's right to enforce any such remedies with respect to such default or any subsequent default.

Notwithstanding any provision contained in this Lease to the contrary, should either party institute any legal proceeding against the other for breach of any provision herein contained and prevail in such action, such other party shall reimburse the prevailing party for the

expenses of such prevailing party, including, without limitation, its reasonable attorneys' fees actually incurred at standard and reasonable billing rates.

16. Holding Over and Termination. Tenant will upon the termination of this Lease by lapse of time or otherwise, yield up immediate possession to Landlord without the requirement of notice by Landlord to Tenant of the termination of this Lease, nor any grace or cure period should Tenant fail to yield up immediate possession to Landlord. Unless the parties hereto will otherwise agree in writing, if Landlord agrees in writing that Tenant may hold over after the expiration or termination of this Lease, the hold over tenancy will be subject to termination by Landlord at any time upon thirty (30) days advance written notice, or by Tenant at any time upon not less than thirty (30) days advance written notice, and all of the other terms and provisions of this Lease will be applicable during that period, except that Tenant will pay Landlord from time to time upon demand, as rental for the period of any hold over, an amount equal to one and one-half (1-1/2) the Base Annual Rent plus Additional Rent in effect on the Termination Date, computed on a daily basis for each day of the hold over period. No holding over by Tenant, whether with or without consent of Landlord, will operate to extend this Lease except as otherwise expressly provided. The preceding provisions of this Section 16 will not be construed as Landlord's consent for Tenant to hold over.

Upon the termination of this Lease for whatever reason, Tenant will quit and immediately surrender the Premises to Landlord, broom clean, in as good order and condition as received with all repairs and maintenance required by Tenant hereunder having been performed, ordinary wear and tear excepted, and Tenant will remove its personal property from the Premises in accordance with this Lease. Should any of the personal property or trade fixtures of Tenant remain upon the Premises after the Termination Date, all such property will be deemed abandoned by Tenant, and Landlord may remove same at the cost and expense of Tenant with no liability to Tenant therefore, and Tenant hereby releases Landlord from all liability therefore.

17. Compliance with Laws. The Premises will be used only for the Permitted Use. Landlord acknowledges that Tenant will be using the Premises as a laboratory for a biotechnology company and is aware that with respect to such usage, Tenant may bring a pre-approved list of Hazardous Materials onto the Premises. Tenant will conduct no activity that will result in the discharge of harmful gases, effluents or other wastes or toxic substances beyond the Premises or in violation of Applicable Laws. Outside storage, including, without limitation, trucks and other vehicles, is prohibited without Landlord's prior written consent. Tenant will at its sole cost and expense obtain any and all licenses and permits necessary for its use of the Premises. Tenant will promptly comply with all governmental orders and directives for the correction, prevention, and abatement of nuisances connected with or arising from Tenant's use of the Premises, all at Tenant's sole expense. During the Term, Landlord shall comply with all Applicable Laws regarding the Premises and Building, except to the extent Tenant must comply under this Section 17. Except as to pre-existing defects, violations or conditions, Tenant shall comply with all Applicable Laws: (i) regarding the physical condition of the Premises, but only to the extent the Applicable Laws pertain to the particular manner in which Tenant uses the Premises; or (ii) that do not relate to the physical condition of the Premises but relate to the lawful use of the Premises and with which only the occupant

can comply, such as laws governing maximum occupancy, workplace smoking, and illegal business operations, such as gambling. Tenant will not permit any objectionable or unpleasant odors, smoke, dust, gas, noise or vibrations to emanate from the Premises, nor take any other action which would constitute a nuisance, disturb or endanger any other tenants of the Building, or unreasonably interfere with the quiet enjoyment by any tenant of the Building. Without Landlord's prior written consent (not to be unreasonably withheld, or delayed), Tenant will not receive, store or otherwise handle any product, material or merchandise which is explosive, inflammable, combustible, corrosive, caustic or poisonous (except as provided herein). Tenant will not permit the Premises to be used for any purpose or in any manner (including, without limitation, any method of storage) which would render the insurance thereon void or the insurance risk more hazardous or cause the State Board of Insurance or other insurance authority to disallow any sprinkler credits. Tenant will give notice to Landlord promptly upon the known occurrence of any accident in the Premises or upon Tenant's discovery of any defects thereon or in any fixtures or equipment located therein or upon the occurrence of any emergency in the Premises, Building, or Project. Tenant will be permitted to use and store at the Premises in compliance with Hazardous Material Laws and the provisions hereof commercially reasonable quantities of (i) generally available standard office and janitorial supplies that may contain chemicals categorized as Hazardous Material, and (ii) such other substances that are required in the ordinary course of Tenant's business conducted on the Premises. Tenant, at its expense, in its use of the Premises and in making any alterations, renovations, or modifications of the Premises will comply with all Applicable Laws relating to the use, condition and occupancy of the Premises.

Tenant agrees that it will not release, discharge, place, hold, or dispose of any Hazardous Material on, under or at the Premises, in the Building, or on the Land, and that it will not use the Premises, the Building, the Land, or any other portion thereof as a site for the treatment, storage (except in accordance with this Section 17), or disposal (whether permanent or temporary) of any Hazardous Material. Tenant further agrees that it will not cause or allow any asbestos to be incorporated into any improvements or alterations which Tenant makes or causes to be made to the Premises, or the Building.

Tenant hereby agrees to indemnify, defend (with counsel reasonably approved by Landlord) and hold harmless Landlord of from and against any and all losses, liabilities, damages, injuries, costs, expenses and claims of any and every kind whatsoever (including without limitation, court costs and attorneys' fees at all tribunal levels) which at any time and from time to time may be paid, incurred or suffered by, or asserted against Landlord for, with respect to, or as a direct or indirect result of any breach or default by Tenant of the provisions of this Section 17. The provisions of and undertakings and indemnification set forth in this Section will survive the termination or expiration of this Lease, for any reason, and will continue to be the liability, obligation and indemnification of Tenant, binding upon Tenant forever. The provisions of the preceding sentence will govern and control over any inconsistent provision of this Lease.

Tenant will provide Landlord with a list of any and all Hazardous Materials released, discharged, placed, held, or disposed of on the Premises, and certification to Landlord of compliance by Tenant with all Applicable Laws, concurrently with the execution of this

Lease which shall be attached hereto and made a part as Exhibit G, and thereafter, within ten (10) business days of a request therefore by Landlord (which Landlord shall not request more than four times in any calendar year).

Landlord hereby represents and warrants, to the best of Landlord's actual knowledge, that no Hazardous Materials exist on, under, in or about the Premises as of the Commencement Date except as disclosed in the Phase I Environmental Site Assessment obtained by Landlord for the Building (the "Report"). Tenant shall have the right to review the Report at the offices of Landlord upon written notice to the Landlord. Landlord shall indemnify, defend and hold harmless Tenant from and against any and all Claims which at any time and from time to time may be paid, incurred or suffered by or assessed against Tenant as a direct or indirect result of the presence of any Hazardous Materials in, on or under the Premises, Building or Project prior to the Commencement Date or after the termination of this Lease so long as such presence was not due to an act or omission of Tenant or a Tenant Party.

18. Inspection. Landlord and Landlord's agents and representatives will have the right to enter and inspect the Premises at any reasonable time during business hours, for the purpose of ascertaining the condition of the Premises, in order to make such repairs as may be required or permitted to be made by Landlord to the Building or any adjacent space, under the terms of this Lease, or in order to show the Premises to any prospective purchaser or lender; provided that (i) except in the case of an emergency, Landlord has given Tenant a written or verbal notice of the intent to enter at least two (2) business days in advance of the entry, (ii) such entry and any related inspection or repairs do not unreasonably interfere with Tenant's business operations, (iii) Landlord complies with Tenant's reasonable security measures and protocols which are detailed on Exhibit F (as Tenant shall be entitled to reasonably update), attached hereto, and Tenant provides Landlord protective gear, and (iv) Landlord is accompanied by a representative of Tenant at all times, except in an emergency. During the period that is six (6) months prior to the end of the term hereof (and subject to the same access caveats listed above), Landlord and Landlord's agents and representatives will have the right to enter the Premises at any reasonable time during business hours for the purpose of showing the Premises to any prospective tenant and will have the right to erect on the Premises a suitable sign indicating the Premises are available. Tenant will schedule with Landlord (at Landlord's request) at least sixty (60) days prior to vacating the Premises a time mutually agreeable to the parties hereto for a joint inspection of the Premises prior to vacating. In the event of Tenant's failure to reasonably arrange such joint inspection, Landlord's inspection at or after Tenant's vacating the Premises will be conclusively deemed correct for purposes of determining Tenant's responsibilities for repairs and restoration.

19. Tenant Property. Upon reasonable request, so long as Tenant is not in default under this Lease, Landlord agrees to execute, within twenty (20) days following written request, any commercially reasonable document reflecting the subordination of any such Landlord's interest to Tenant's lender(s) and in such event Tenant shall pay Landlord's reasonable and actual "out-of-pocket" costs therefore.

20. [INTENTIONALLY DELETED.]

21. Rules and Regulations. Tenant, at its expense, will comply with the Rules and Regulations of the Building attached hereto and made a part hereof as Exhibit E, as reasonably modified by Landlord from time to time and such other Rules and Regulations adopted by Landlord during the Lease Term and Tenant will use all commercially reasonable efforts to cause all Tenant Parties to do so. Provided, however, that (a) such rules and regulations do not increase the Rent payable hereunder; (b) such rules and regulations do not unreasonably and materially interfere with Tenant's conduct of its business or Tenant's use and enjoyment of the Premises for the Permitted Use; (c) Landlord provides reasonable advance written notice thereof; and (d) such rules and regulations are uniformly enforced in a non-discriminatory manner. All such additions or changes to Rules and Regulations will be sent by Landlord to Tenant in writing and shall become effective ten (10) days thereafter. In the event of a conflict between the rules and regulations and the terms of this Lease, the terms of this Lease will control.

22. Assignments by Landlord. Landlord will have the right to transfer and assign, in whole or in part, all its rights and obligations hereunder and in the Building and Project, and in such event and upon its transferee's assumption of Landlord's obligations thereafter accruing hereunder, no further liability or obligation will thereafter accrue against Landlord hereunder (provided that any such successor in interest expressly assumes the obligations of Landlord hereunder, in writing). Upon request by Landlord, Tenant agrees to execute a certificate certifying such facts as Landlord may reasonably require in connection with any such assignment by Landlord. This paragraph shall not affect Landlord's liability for matters arising prior to the transfer of the Building including the Security Deposit.

23. Quiet Enjoyment. Landlord represents and warrants that it has full right and authority to enter into this Lease and that Tenant, upon paying the rental herein set forth and performing its other covenants and agreements herein set forth, will peaceably and quietly have, hold and enjoy the Premises for the term hereof without hindrance or molestation from Landlord or any other lawful claimant to ownership or possession of the Premises, subject to the terms and provisions of this Lease.

24. Liability. Tenant specifically agrees to look solely to Landlord's (or its successors') interest in the Building (including rental income and insurance/condemnation proceeds) for the recovery of any judgment (or other judicial decree) from Landlord. Landlord (or if Landlord is a limited liability company, its members, or if Landlord is a corporation, its directors, officers or any successors in interest) shall never be personally liable for any such judgment. In no event shall Landlord be liable under this Lease for any consequential or punitive damages except to the extent caused by the gross negligence or willful misconduct of Landlord. This exculpation of liability to be absolute and without exception whatsoever.

Landlord will not be liable to Tenant or any Tenant Party, or to any other person whomsoever, for any damage to property on or about the Premises belonging to Tenant or any other person, due to any cause whatsoever, unless caused by the gross negligence or willful or intentional misconduct of Landlord.

Tenant hereby covenants and agrees that it will at all times indemnify, defend (with counsel reasonably approved by Landlord) and hold safe and harmless Landlord (including, without limitation, its trustees and beneficiaries if Landlord is a trust), and the Landlord Parties from any loss, liability, claims, suits, costs, expenses, including without limitation reasonable attorney's fees and damages, both real and alleged, incurred by Landlord or a Landlord Party arising out of or resulting from the negligence or misconduct of Tenant, a breach by Tenant of any provision of this Lease, or the conduct by Tenant of its business in the Building.

Landlord hereby covenants and agrees that it will at all times indemnify, defend (with counsel reasonably approved by Tenant) and hold safe and harmless Tenant, and the Tenant Parties from any loss, liability, claims, suits, costs, expenses, including without limitation reasonable attorney's fees and damages, both real and alleged, incurred by Tenant or a Tenant Party arising out of or resulting from the operation by Landlord of the Building, the negligence or misconduct of Landlord, or a breach by Landlord of any provision of this Lease.

25. Mortgages. Tenant accepts this Lease subject and subordinate to any mortgage(s) and/or deed(s) of trust now or at any time hereafter constituting a lien or charge upon the Premises or the improvements situated thereon; provided, however, that if the mortgagee, trustee, or holder of any such mortgage or deed of trust elects to have Tenant's interest in this Lease superior to any such instrument, then by notice to Tenant from such mortgagee, trustee or holder, this Lease will be deemed superior to such lien, whether this Lease was executed before or after said mortgage or deed of trust. Tenant will at any time hereafter on demand execute and provide to Landlord within ten (10) business days of a request therefore, any commercially reasonable instruments, releases or other documents which may be reasonably required by any mortgagee or trustee for the purpose of further subjecting and subordinating this Lease to the lien of any such mortgage or deed to trust in form and substance as reasonably required by such mortgagee or trustee. Notwithstanding the foregoing, it shall be a condition precedent to any subordination that Tenant be provided with a written non-disturbance agreement in the form stipulated by Landlord's lender (provided that: (i) Tenant shall be entitled to request of Landlord's lender commercially reasonable revisions to said form at its cost which costs include payment of any attorneys' fees charged to Landlord by Landlord's lender (as reasonably documented by Landlord); and (ii) said form provides that, if the holder of any mortgage or deed of trust shall take title to the Premises through foreclosure or deed in lieu of foreclosure or otherwise, Tenant shall be allowed to continue in possession of the Premises as provided in this Lease so long as Tenant is not in default, beyond any applicable cure period).

26. Signs. Tenant will not be permitted any signage visible from outside of its Premises which has not been approved in writing in advance by Landlord in its reasonable discretion. The cost of or related to any approved signage will be entirely at Tenant's own expense, and all such signage shall be removed by Tenant, at its cost at the end of the term and any damage due to such removal repaired by Tenant prior to vacating the Premises. Landlord shall provide at its expense signage on the entry door to the Premises, and signage on the directory for the Building. Landlord shall provide Tenant its exterior signage criteria prior to the execution of this Lease.

27. Keys and Locks. Landlord, at its expense, shall provide Tenant with forty (40) card keys for access to the Building. Landlord acknowledges that Tenant shall have the right to install its own access control system to the Premises and Tenant shall furnish and provide Landlord with duplicate keys and/or access cards, as applicable, to ensure that Landlord and its representatives can gain access to the Premises when permitted by the terms of this Lease. Upon termination of this Lease, Tenant shall surrender to Landlord all keys to the Premises and give to Landlord the combination of all locks for safes, safe cabinets and vault doors, if any, remaining in the Premises.

28. Brokers. Landlord acknowledges that Cassidy Turley (and its successors and assigns) is acting as the sole agent for Tenant in this transaction and shall be paid a brokerage fee by Landlord pursuant to a separate agreement with Landlord. Tenant confirms that no broker other than Cassidy Turley is assisting Tenant in this matter. Landlord confirms that no broker is assisting Landlord in this matter. Landlord and Tenant covenant to pay, hold harmless and indemnify the other from and against any and all costs, expenses or liability for any compensation, commissions and charges claimed by any other broker or agent, with respect to the transactions contemplated hereby or the negotiation thereof and arising by virtue of the acts of the indemnifying party.

29. Notices. Each provision of this instrument or of any Applicable Law with reference to the sending, mailing, or delivery of any notice by either party, or with reference to the making of any payment by Tenant to Landlord will be deemed to be complied with when and if the following steps are taken:

(a) All Rent and other payments required to be made by Tenant to Landlord hereunder will be payable to Landlord at the address below or at such other address as Landlord may specify from time to time by written notice delivered in accordance herewith. Tenant's obligations to pay Rent and any other amounts to Landlord under the terms of this Lease will not be deemed satisfied until such Rent and other amounts have been actually received by Landlord.

(b) Any notice or document required or permitted to be delivered hereunder will be deemed to be delivered upon actual receipt or refusal thereof, and shall be: (i) sent by standard, commercial overnight delivery service, such as Federal Express, or (ii) sent by Certified or Registered Mail, return receipt requested, postage prepaid, and addressed to the parties hereto at the respective addresses set out below, or at other such addresses as they have heretofore specified by written notice delivered in accordance therewith.

Landlord:
Venable Tenant LLC
c/o Scientific Properties, LLC
280 Mangum Street, Suite 340
Durham, NC 27701

Tenant:
Precision BioSciences, Inc.

104 T. W. Alexander Drive
PO Box 12292
Research Triangle Park, NC 27709
Attention: Todd Melby, Chief Financial Officer/Chief Operations Officer

with a copy to:

Smith, Anderson, Blount, Dorsett,
Mitchell & Jernigan, L.L.P.
Post Office Box 2611
Raleigh, North Carolina 27602-2611
Attention: Michael P. Saber, Esq.

overnight delivery address:
2500 Wachovia Capitol Center
150 Fayetteville Street
Raleigh, North Carolina 27601

30. Miscellaneous.

(a) Words of any gender used in this Lease will be held and construed to include any other gender, and words in the singular number will be held to include the plural, unless the context otherwise requires.

(b) The terms, provisions and covenants and conditions contained in this Lease will apply to, inure to the benefit of, and be binding upon the parties hereto and upon their respective heirs, legal representatives, successors and permitted assigns, except as otherwise herein expressly provided. Landlord will have the right to assign any of its rights and obligations under this Lease. Each party agrees to furnish to the other, promptly upon demand, a resolution, or other appropriate documentation evidencing the due authorization of such party to enter into this Lease.

(c) The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

(d) Tenant agrees from time to time, within ten (10) business days after request of Landlord, to deliver to Landlord, or Landlord's designee, an estoppel certificate stating, to the extent true and to Tenant's actual knowledge, that this Lease is in full force and effect, the date to which Rent has been paid, the unexpired term of this Lease and such other matters pertaining to this Lease as may be reasonably requested by Landlord. It is understood and agreed that Tenant's obligation to furnish such estoppel certificates in a timely fashion is a material inducement for Landlord's execution of this Lease.

(e) This Lease may not be altered, changed or amended except by an instrument in writing signed by both parties hereto.

(f) All obligations of Landlord and Tenant hereunder not fully performed as of the expiration or earlier termination of the term of this Lease will survive the expiration or earlier termination of the term hereof, including, without limitation, all payment obligations concerning the condition of the Premises and all obligations of Tenant as provided in Section 5 hereof.

(g) In the case of a foreclosure or deed in lieu of foreclosure on a mortgage or deed of trust existing prior to the date of this Lease, in the event of a transfer by Landlord of its interest in the Premises, Landlord will be released from all obligations and liabilities under the terms of this Lease arising subsequent to the date of such transfer. In the event a transferee will agree to assume the obligations and liabilities of Landlord under the Lease prior to the date of the transfer, Landlord will be released from all obligations and liabilities under the Lease.

(h) If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws effective during the term of this Lease, then and in that event, it is the intention of the parties hereto that the remainder of this Lease will not be affected thereby, and it is also the intention of the parties to this Lease that in lieu of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added as a part of this Lease a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

(i) Because the Premises are on the open market and are presently being shown, this Lease will be treated as an offer with the Premises being subject to prior lease and such offer subject to the withdrawal or non-acceptance by Landlord or to other use of the Premises without notice, and this Lease will not be valid or binding unless and until accepted by Landlord in writing and a fully executed copy delivered to both parties hereto.

(j) All references in this Lease to "the date hereof" or similar references will be deemed to refer to the last date, in point of time, on which all parties hereto have executed this Lease.

(k) Time is of the essence of this Lease.

(l) Landlord will not be in default in the performance of any of Landlord's obligations hereunder unless and until Landlord will have failed to perform such duties or obligations within thirty (30) days (or such additional time as is reasonably required to correct any such default) after written notice by Tenant to Landlord properly specifying wherein Landlord has failed to perform any such duty or obligation. In cases where there is an imminent threat of harm to person or property at the Premises, or if Tenant cannot conduct its business at the Premises, Landlord shall effect a cure within a reasonable period of time using all reasonable efforts. Should a cure be required and Landlord fail to effect a cure within ten (10) business days after the date after receipt by Landlord from Tenant of written notice with respect to such default, Tenant shall have the right to effect such cure. Except as expressly provided in this Lease to the contrary, Landlord will have no liability for any incidental or consequential damages of Tenant, or anyone claiming by, through or under Tenant, for any reason whatsoever.

(m) This Lease does not create the relationship of partner or joint venturer between Landlord and Tenant.

(n) The laws of the State of North Carolina will govern the interpretation, the validity, performance and enforcement of this Lease.

(o) (i) If Tenant is a corporation, the undersigned officer of Tenant does hereby warrant and certify to Landlord that Tenant is a corporation in good standing and duly organized under the laws of the State of North Carolina, or if chartered in a state other than the State of North Carolina, is a corporation in good standing and duly organized under the laws of such state and is authorized to do business in the State of North Carolina. The undersigned officer of Tenant hereby further warrants and certifies to Landlord that such officer is authorized and empowered to bind the corporation to the terms of this Lease by such officer's signature hereto; (ii) If Tenant is a general or limited partnership, the undersigned general partner of Tenant does hereby warrant and certify to Landlord that Tenant is a general partnership or limited partnership, as the case may be, validly existing under the laws of the State of North Carolina, or if formed in a state other than the State of North Carolina, is a general partnership or limited partnership validly existing under the laws of such state and is authorized to do business in the State of North Carolina. The undersigned general partner of Tenant hereby further warrants and certifies to Landlord that such general partner is authorized and empowered to bind Tenant to the terms of this Lease by such general partner's signature hereto. (iii) Landlord confirms that those persons signing below on its behalf are duly authorized to do so.

(p) The provisions of any Exhibits referenced herein, whether or not attached hereto, are incorporated herein by reference and made a part of this Lease.

(q) Although the printed provisions of this Lease were drafted by Landlord, such fact will not cause this Lease to be construed either for or against Landlord or Tenant.

(r) This Lease may not be recorded. Upon the request and at the expense of Tenant, Landlord will execute a memorandum of this Lease suitable for recording which will omit the financial terms herein but which will identify the Premises, the Parties, and the term of this Lease. Upon the expiration of this Lease, a recorded memorandum of this Lease may be canceled of record by a document executed by Landlord, or its successor in interest for such purpose.

(s) Tenant will provide to Landlord within ninety (90) days of the close of its fiscal year, and thereafter within ten (10 business days of the reasonable request of Landlord, but no more than once per calendar year except during any default or event of default by Tenant when this limitation shall not apply, financial statements of Tenant (consisting of summarized profit and loss statement, balance sheet, and cash flow statement) certified by the chief financial officer of Tenant.

(t) No remedy conferred herein is intended to be exclusive of any other remedy and each and every remedy will be cumulative and will be in addition to every other remedy given hereunder or thereunder or now or hereafter existing at law or in equity or by statute or otherwise.

(u) [INTENTIONALLY DELETED.]

(v) Tenant, its employees, and invitees shall have access to the Premises twenty-four (24) hours a day, seven (7) days a week.

(w) The provisions of this Lease and any information regarding Landlord, including its construction process, and the materials and standards used, will be maintained confidential by Tenant, its agents, employees, officers, and legal and tax advisors.

(x) Tenant shall be responsible for all ad valorem taxes on its personal property and on the value of the leasehold improvements to the extent that such improvements do not constitute fixtures, or additions or improvements to real property (as reasonably documented by Landlord). Tenant, within thirty (30) days of receipt of an invoice, shall also pay to Landlord all sales or use taxes or excise taxes imposed or levied by the State of North Carolina or any other governmental body or agency, if any, against any rent or any other charge or payment required hereunder to be made by Tenant to Landlord.

(y) This Lease does not grant any rights to light, view or air over adjacent property, and any diminution or shutting off of light, view or air by any structure that may be erected adjacent to the Building shall not affect this Lease or impose any obligation or liability upon Landlord.

(z) In coordination with the General Contractor and Landlord's Construction Manager and in compliance with the procedures required for them, Tenant shall be permitted reasonable access to the Premises prior to the Commencement Date for the purposes of taking measurements, making plans, installing trade fixtures, and doing such other work as may be appropriate or desirable to enable Tenant to assume possession of and operate in the Premises; provided, however, that such access does not unreasonably interfere with or delay construction work on the Premises and if Tenant shall unreasonably interfere with or delay construction work on the Premises, Landlord shall have the right to deny the Tenant access to the Premises. Prior to any such entry, Tenant shall comply with all insurance provisions of the Lease. All waiver and indemnity provisions of the Lease shall apply upon Tenant’s entry onto the Premises.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have duly executed this Lease as of the day and year first set forth above.

LANDLORD:

VENABLE TENANT, LLC

By: SCIENTIFIC PROPERTIES, LLC

By: /s/ Barbra Rothschild Date: 7/6/10
Barbra Rothschild, Manager

TENANT:

PRECISION BIOSCIENCES, INC.

By: /s/ Todd Melby Date: 4-2-10
Todd Melby, Chief Financial Officer / Chief Operations Officer

EXHIBIT A

THE LAND

BEGINNING at an existing PK nail in the western right of way of Pettigrew Street (100' public r/w) and the eastern right of way of Roxboro Street, thence running south along said western right of way along the arc of a circular curve with a radius of 2125.0 feet, a chord length of 52.03 feet, subtended by a chord that bears S 42º37'26"E, for an arc length of 52.04 feet to an existing iron pipe, thence continuing along said right of way along the arc of a circular curve with a radius of 2125.0 feet, a chord length of 124.74 feet, subtended by a chord that bears S40º30'08"E, for an arc length of 124.76 feet to an existing PK nail, being the northwestern corner of Durham Foundry & Machine property, thence running along said property S45º24'44"W for a distance of 175.48 feet to an existing iron pipe, thence continuing with said property S41'05'06"E for a distance of 71.0 feet to an iron pipe set, thence continuing with said property N47º22'04"E for a distance of 30.62 feet to an iron pipe set, thence continuing with said property S41º29'07"E for a distance of 60.52 feet to an iron pipe set, thence continuing with said property N52º25'05"E for a distance of 133.09 feet to an existing PK nail in the western right of way of Pettigrew Street, thence running along said right of way along the arc of a circular curve with a radius of 2125.0 feet, a chord length of 81.56 feet, subtended by a chord that bears S33'40'35"E, for an arc length of 81.57 feet to an existing iron pipe, thence running S50º19'45"W for a distance of 151.69 feet to an existing iron pipe, thence running S41º34'48E for a distance of 79.86 feet to an existing iron pipe, thence running along the western 30 foot Ingress/Egress Easement with Hendrick Automotive Group S35º06'35"W for a distance of 119.31 feet to an iron pipe set, thence running with the northern property line of Thomas and Howard of Greensboro N42º54'51"W for a distance of 48.93 feet to an iron pipe set, thence continuing with said property N64º41'55"W for a distance of 246.14 feet to an existing iron rod, thence continuing with said property N64º35'38"W for a distance of 94.86 feet to an existing iron rod in the eastern public right of way of Roxboro Street, thence along said right of way N26º54'18"E for a distance of 99.65 feet to an existing iron rod, thence continuing with said right of way N26º35'12"E for a distance of 39.07 feet to an existing iron pipe, thence continuing with said right of way N29º23'01"E for a distance of 96.73 feet to an existing PK nail, thence continuing with said right of way N28º09'00"E for a distance of 207.93 feet to an iron pipe set, thence running N81º39'58"E for a distance of 14.62 feet to an existing PK nail, the place and point of BEGINNING for the 'Main Parcel' and containing117,484 square feet or 2.697 acres, more or less, and being all of the Main parcel of West Property, as appears on map captioned "As- Built Survey of West Property, Pettigrew Street Partners, L.L.C."

BEGINNING at an iron pipe in the western right of way of Pettigrew Street (100' public r/w) and the northeastern corner of the 'Main Parcel' of West Property, thence running with the right of way of Pettigrew Street along the arc of a circular curve with a radius of 2125.00 feet, a delta angle of 03º09'36" for an arc length of 117.20 feet, subtended by a chord that bears S30º59'49"E to an existing iron pipe, thence running along the Hendrick Automotive Group property S52º56'13"W for a distance of 128.22 feet to an iron pipe set, thence running along the western 30 foot Hendrick Automotive Group Ingress/Egress Easement N45º46'23"W for a distance of 30.37 feet to an existing iron pipe, thence running along the property line of the 'Main Parcel' of West Property N41º34'48"W for a distance of 79.86 feet to an existing iron pipe, thence continuing with said

property line N50º19’45”E for a distance of 151.69 feet to an existing iron pipe, the place and point of BEGINNING for the ‘Hatched Parcel’ and containing 15,963 square feet or 0.366 acres, more or less, and being all of tract 2 West Property, as appears on map captioned “As- Built Survey of West Property, Pettigrew Street Partners, L.L.C.”

EXHIBIT B
FLOOR PLAN

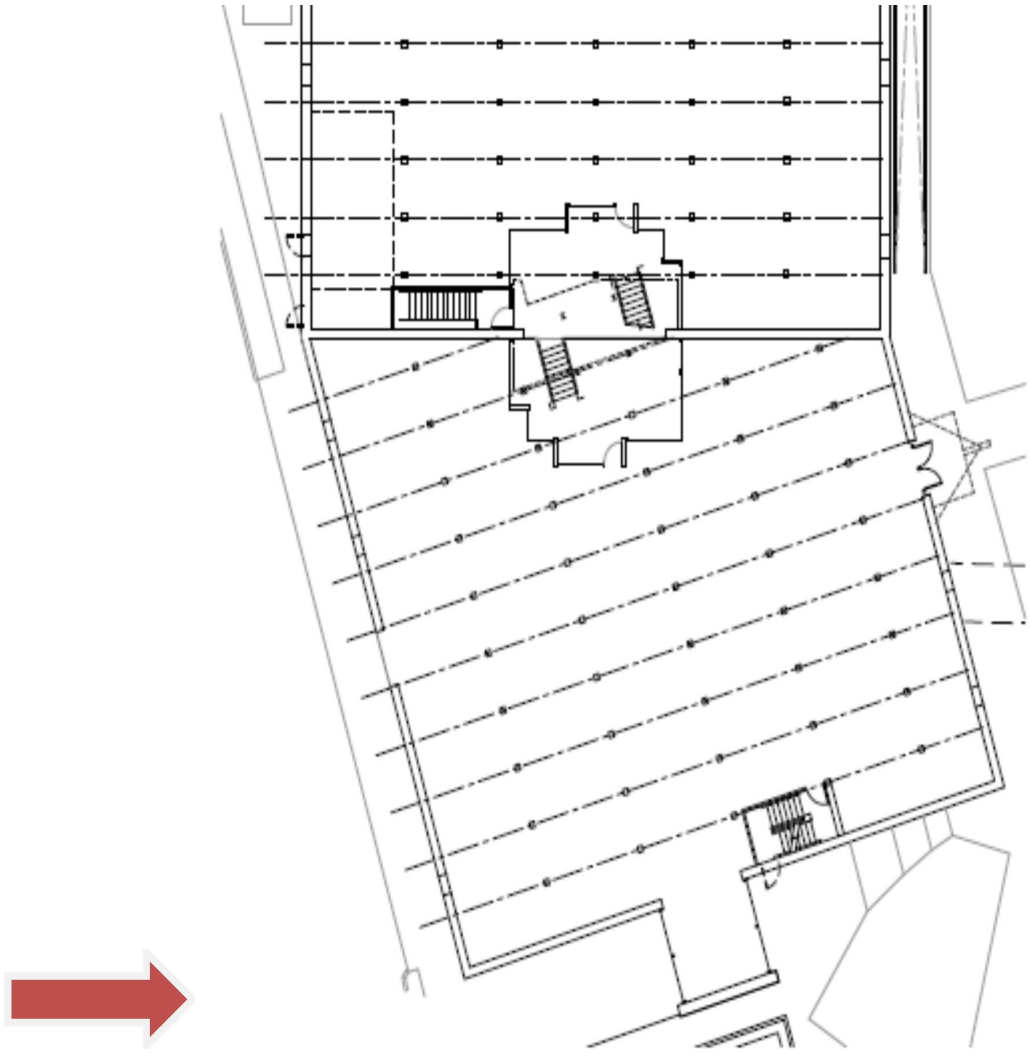


EXHIBIT CPREMISES SPECIFICATIONS

FLOORS

Existing flooring consists of pine planking and or ¾" sub-flooring installed to provide accessibility for plumbing and electrical rough-ins. Additional sub-flooring required to accommodate Tenant Improvements shall be funded from the Tenant Improvement Allowance.

Any demolition of existing flooring required to accommodate Tenant Improvements shall be funded from the Tenant Improvement Allowance.

WALLS, DOORS & WINDOWS

Common area walls shall consist of hollow metal frames, single pane glazing, and gypsum assemblies (painted or wall covering) typical throughout the Venable campus.

All masonry construction/repair is per approved sand blasted and clear finish sealer method. Repairs or replacement of brick as required will be made using existing salvaged brick or new brick to match existing. New mortar is to match existing.

Interior corridor doors opening onto Common Areas will be stained birch veneer doors per the Venable Campus Standard. Landlord reserves the right to substitute alternate commercial grade materials. All door locksets will be coded and/or keyed in accordance with the building requirements. Codes and/or keys are to be delivered to tenant properly tested and/or tagged.

Exterior perimeter windows will be ½" insulated clear glass in black hollow metal and steel frames.

Landlord shall provide for demolition of any existing interior walls.

CEILING

The ceiling is the existing, historic, natural heart pine. Any exposed ceilings will be sealed by Landlord in accordance with best practices.

PLUMBING

All piping and fixtures within the Tenant Improvements shall be funded from the Tenant Improvement Allowance. The Landlord shall provide water and standard DWV to and from the space. Any additional piping (specialty water or waste) shall be installed from the Tenant Improvement space to the closest source/sewer, and this piping would be funding from the Tenant Improvement Allowance.

HVAC

Premises will be conditioned to office load standards by a rooftop Trane (or equivalent) zoned systems thru rated vertical chases (to lower floors only). All rooftop units to include minimum

fresh air settings for anticipated office load occupancy levels. HVAC controls to be located in tenant space with single zone distribution. Additional cooling or ventilation requirements will be funded from the Tenant Improvement Allowance. HVAC distribution within the tenant space and additional control zones shall be funded from the Tenant Improvement Allowance.

ELECTRICAL CAPACITY

Building load is calculated on approximately 2 watts per square foot for the base building and approximately 2 watts per square foot for usable tenant space per typical office demand. Electrical service and meter shall be provided to a subpanel within the tenant space. The subpanel, circuit distribution (conductors and raceways), and fixtures shall be funded from the Tenant Improvement Allowance. Voice and Data Conduits will be provided within interior walls and will be funded from the Tenant Improvement Allowance. The Tenant shall contract directly with a voice/data contractor who will provide and pull cables to the Building Telecommunications Room. The Tenant's voice/data contractor will provide and terminate devices and related equipment. The voice/data contractor and any security work shall not be funded from the Tenant Improvement Allowance.

FIRE

Wet pipe sprinkler system based on ordinary hazard NFPA 13 design with upright heads.
Adjustment of sprinkler heads specific to Tenant Improvements shall be funded from the Tenant Improvement Allowance.

A building standard fire alarm and security system shall be installed and funded from the Tenant Improvement Allowance.

[END OF EXHIBIT C]

EXHIBIT D

WORK LETTER

This Exhibit D sets forth the rights and obligations of Landlord and Tenant with respect to the construction of the improvements to the Premises as described on the Plans ("Tenant Improvements"). This Exhibit contemplates that the following work will be performed, as further described herein, all subject to the prior review and approval by Landlord: (i) preparation of a space plan by the Architect; (ii) final design and engineering and preparation of plans, specifications, and working drawings by the Architect (collectively, the "Plans"); (iii) preparation by the general contractor of Landlord (the "General Contractor") of an estimate of the cost of the Tenant Improvements; (iv) submission to, and approval of Plans by, appropriate governmental authorities; and (v) construction and installation of the Tenant Improvements by the Landlord pursuant to the Plans on or prior to the Commencement Date, subject to Force Majeure and any Tenant Delay.

1. Allowance/Payment of Construction Costs.

(a) Landlord shall construct the Tenant Improvements in accordance with a milestone schedule (the "Schedule"), a copy of which shall be provided to Tenant for Tenant's reasonable approval prior to commencement of construction of the Tenant Improvements. Landlord and Tenant shall prepare and mutually and reasonably approve a budget (the "Budget") for the costs to construct the Tenant Improvements (the "Construction Costs") which shall be attached hereto as Exhibit D-3. The Budget does not include any amounts for furniture, fixtures (other than lighting), equipment, voice/data systems, or personal property of Tenant, which items will be paid for by Tenant separately at its expense. The Budget includes a Construction Contingency which shall be 5% of the Construction Costs. Any unspent Construction Contingency will accrue to the Tenant. Change Orders (as hereinafter defined) shall be funded from increases in the Contract (as hereinafter defined). Landlord agrees to fund a portion of the Construction Costs through the provision of the Tenant Improvement Allowance. The Tenant Improvement Allowance shall be used for items specifically outlined in the Budget and mutually agreed upon by both Landlord and Tenant. The Tenant Improvement Allowance shall be used only for construction, design, and management costs related to fixed improvements to the Building that are part of the Tenant Improvements. The Tenant Improvement Allowance may not be used to offset any Rent payments owed to Landlord by Tenant. Any costs incurred due to a Tenant Delay shall be charged against the Tenant Improvement Allowance; provided, however, Tenant shall be given two (2) days' notice and opportunity to cure any Tenant Delay (including payment by Tenant of any costs associated with such cure such as higher shipping charges) before any costs are charged against the Tenant Improvement Allowance. Landlord and Tenant acknowledge and agree that the Construction Costs will be in excess of the Tenant Improvement Allowance, and all costs for the Tenant Improvements in excess of the Tenant Improvement Allowance shall be borne by Tenant. Therefore, Tenant has agreed to place into an escrow account maintained with Landlord (the "Escrow Account") an amount equal to the Construction Costs as specified in the Budget minus the Tenant Improvement Allowance (the "Tenant Improvement Overage"). Landlord shall establish the Escrow Account as a separate, interest bearing account in an FDIC insured institution. set forth below, Landlord shall have the authority to make periodic deductions from the Escrow Account as payment for the Construction Costs and the Escrow Account shall be funded in full by

Tenant prior to Landlord's issuance of a Notice to Proceed to the General Contractor. Failure by Tenant to deposit the Tenant Improvement Overage into the Escrow Account within five (5) business days after a request from Landlord hereunder shall be a Tenant Delay and a default in payment hereunder. Tenant shall receive all interest that accrues under the Escrow Account.

(b) The Tenant Improvement Allowance and Tenant Improvement Overage shall be disbursed by Landlord upon satisfaction of the following conditions precedent: (i) Landlord shall have received applications for payment certified by the Architect, accompanied by evidence of the portion of the Tenant Improvements that have been completed per the Plans, invoices and paid receipts for all such work completed, and copies of executed lien waivers from those persons providing such work; and (ii) all information and documentation provided to Landlord must be in form and substance reasonably approved by Landlord. Upon Tenant's request, Landlord shall provide Tenant an opportunity to review such information and documentation.

(c) Provided the aforesaid conditions are met, Landlord shall pay the Construction Costs at monthly intervals based upon design and construction billing cycles. Each monthly payment of the Construction Costs shall be paid as follows: fifty percent (50%) of such payment shall be paid from the Tenant Improvement Allowance and the remaining fifty percent (50%) of such payment shall be paid from the Tenant Improvement Overage through the Escrow Account. Within thirty (30) days after the Commencement Date, Landlord shall prepare and submit to Tenant a final statement that illustrates the total cost to construct the Tenant Improvements and the amount paid from and remaining with respect to each of the Tenant Improvement Overage as held in the Escrow Account, and the Tenant Improvement Allowance. If such statement indicates that Landlord has paid less than the total amount of the Tenant Improvement Allowance, then Landlord shall pay Tenant an amount equal to the Tenant Improvement Allowance minus the total amount previously paid by Landlord within ten (10) days of the date of such statement. If such statement reflects that the amount deposited into Escrow Account by Tenant as the Tenant Improvement Overage was greater than the amount required to be paid by Tenant, then Tenant shall be entitled to a prompt refund of any such amounts.

(d) Unless otherwise specified in the Plans, materials used for the Tenant Improvements at the Building shall be good quality, new, and customary for the type of upfit contemplated in this Lease and in facilities comparable to the Building and readily available in the market where the Building is located, all as reasonably determined by Landlord.

(e) During construction of the Tenant Improvements, Landlord shall provide weekly written progress reports to Tenant necessary for Tenant to review work schedules, costs, expenses and construction issues regarding the construction of the Tenant Improvements. The parties will hold periodic meetings, at mutually agreed upon times and locations, to discuss the progress of the construction of the Tenant Improvements. The General Contractor will provide an updated Budget, Schedule, and RFI log every two weeks during construction of the Tenant Improvements. The General Contractor and Landlord reserve the right to cure self imposed delays in the Schedule.

(f) Should a default or event of default occur by Tenant hereunder prior to the Commencement Date, Landlord shall have the right to cease all construction of the Tenant Improvements, and pursue all of its rights and remedies hereunder, or available at law or in equity for any such default or event of default.

2. Space Planning, Design and Working Drawings. Tenant shall engage Integrated Design (the "Architect") to prepare the Plans. After execution of this Lease, Tenant may seek reimbursement from the Tenant Improvement Allowance for fees paid to the Architect. The Architect's fees shall be paid from the Tenant Improvement Allowance by Landlord upon receipt and approval by Landlord of invoices and lien waivers for work performed. Belk Architecture or another architect with historic tax credit expertise (the "Landlord's Architect") shall review the Plans to insure compliance with the requirements of State and Federal law for historic tax credits and all the costs for such review shall be borne by Landlord. If the Landlord's Architect identifies any changes that must be made to the Plans solely for the purposes of complying with requirements for historic tax credits, the costs of designing and constructing such changes shall be borne by Landlord provided there has been no material deviation from the Plans attached as Exhibit D-1. Tenant shall review and respond to any request for approval of the draft plans or final Plans (by U.S. Mail, facsimile, or email) within five (5) business days after a request from either the Architect or Landlord. Any modifications of the Plans sought by Tenant shall be reviewed and subject to the approval of Landlord prior to the modification of the Plans. All communication by Tenant to Landlord with respect to the Tenant Improvements shall be in writing. Tenant shall designate an Authorized Representative to work with Landlord with respect to the Tenant Improvements, and Landlord shall not be obligated to respond to any instructions, approvals, changes, or other communications from anyone claiming to act on Tenant's behalf other than Tenant's Authorized Representative. Review and approval by Landlord of the Plans shall not be construed as any statement by Landlord as to the compliance of the Plans with Applicable Laws.

3. Construction of Tenant Improvements. Landlord shall obtain all state and local licenses, permits and approvals (whether governmental or non-governmental) required to construct the Tenant Improvements and for Tenant's occupancy of the Premises. Landlord shall provide access to the General Contractor for Construction of the Tenant Improvements and to the extent such access requires entry through space occupied by other tenants, Landlord shall provide for such access at its sole cost and expense. The Landlord shall engage, subject to Tenant's reasonable approval, a general contractor to construct the Tenant Improvements (the "General Contractor"). The General Contractor shall construct and install the Tenant Improvements in accordance with the Plans which expense shall be deducted from the Tenant Improvement Allowance. The Tenant Improvements shall be delivered via Associated General Contractors (AGC) Guaranteed Maximum Price Contract (the "Contract") with Liquidated Damages of $500.00 per day for each day of delay in achieving in substantial completion beyond the date specified in the Contract, which date shall be no later than October 1, 2010, and a payment and performance bond. Any Liquidated Damages (less cost of collection) paid to Landlord shall accrue to the Tenant; provided, however, any paid Liquidated Damages for any Tenant Delay shall accrue to Landlord. The General Contractor shall obtain at least three (3) bids for all major trade work at the Premises. Landlord will work with the General Contractor to complete the Tenant Improvements by the Commencement Date. All contracts with vendors and subcontractors for construction of the Tenant Improvements will be negotiated by the General Contractor. All work performed in connection with the construction of the Premises shall be performed in a good and workmanlike manner, in accordance with all Applicable Laws and the final approved Plans. If materials are not readily available, require quick ship charges, or require substitution, the Tenant will be given notice and the opportunity to select alternate materials. Landlord shall insure that the Architect conducts a periodic review (a minimum of once every two weeks) of the progress of construction to ensure compliance with the Plans. Tenant may from time to time request in writing changes to

the Plans (a "Change Order"), subject to Landlord's consent, which shall not be unreasonably withheld. Landlord shall cause Contractor to provide an estimate of any change in the Construction Cost and/or Schedule. Tenant shall have the right to elect whether or not to proceed with the Change Order within five (5) business days after receipt of such estimate. Upon such approval by Tenant, or confirmation by Landlord that the Change Order will not result in any change in cost and/or Schedule, Landlord shall implement the Change Order as part of the Tenant Improvements.

Tenant acknowledges that the following items may result in changes to the Budget and/or Schedule:

(i) Municipal or other governmental inspectors require changes to the Premises such as code compliance changes. In such event, Landlord will notify Tenant of the required changes, but the increased cost of such changes, if any, and any delay associated with such changes shall be the responsibility of Tenant.

(ii) Change Orders approved by Tenant. Any increased costs and delays due to such approved Change Orders shall be the responsibility of Tenant. Any delays caused by such approved Change Orders shall not delay the Commencement Date of the Lease. Landlord shall not charge Tenant any administrative fees in respect of any Change Orders. Tenant shall have five (5) business days to review and approve all Change Orders and any additional review time by Tenant shall be a Tenant Delay.

(iii) If materials are not readily available, require quick ship charges, or require substitution, provided Landlord shall identify any such materials within ten (10) days of final approval of the Plans, and in any such case, Tenant will be given notice and the opportunity to select alternate materials.

(iv) Any Tenant Delay.

4. Repairs and Corrections. Landlord shall require of the General Contractor and any subcontractor constructing the Tenant Improvements no less than a one year express repair and/or replacement warranty covering such work. All manufacturers' and builders' warranties with respect to the Tenant Improvements shall be assigned to Tenant to the extent possible and necessary to assist Tenant in effecting any of Tenant's repair obligations under the Lease without recourse to Landlord. Landlord agrees to enforce for the benefit of Tenant any warranties or guarantees issued in connection with construction of the Tenant Improvements. Tenant shall repair or correct any defective work or materials installed by Tenant or any contractor other than the General Contractor (except subcontractors engaged by the General Contractor), or any work or materials that prove defective as a result of any act or omission of Tenant or any Tenant Party, provided that selection of materials by Tenant is not such an act or omission, and provided further that work and materials done or installed by the General Contractor or its vendors and subcontractors is not such an act or omission. For purposes of this Section, Landlord will not be considered to be Tenant's agent, invitee, licensee, subtenant, customer, client, or guest.

5. Punchlist. Landlord shall provide Tenant with written notice when Landlord believes that substantial completion of the Tenant Improvements has been achieved. Promptly following delivery of such notice, Tenant's Representative and Landlord's Representative shall jointly

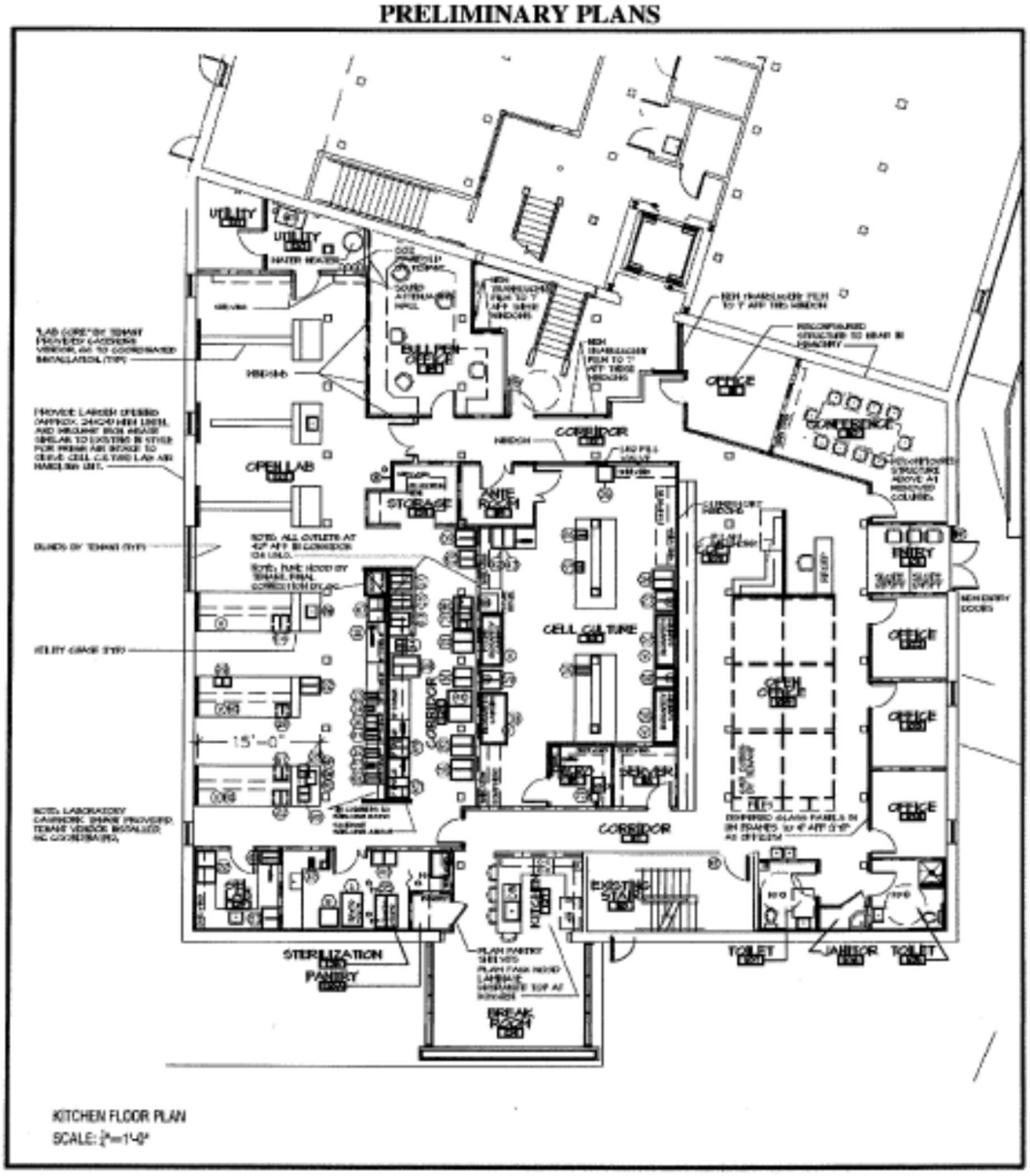
inspect the Tenant Improvements, and, Landlord and Tenant shall mutually and reasonably prepare a punchlist of items remaining with respect to the Tenant Improvements that require repair or completion (the "Punchlist"). Pursuant to its Contract with Landlord, General Contractor shall make all repairs and completions noted on the Punchlist with respect to the Tenant Improvements within forty-five (45) days (extended for Force Majeure and any Tenant Delay) after receipt of the Punchlist, with any Liquidated Damages paid by the General Contractor for a delay in completion of the Punchlist accruing to the benefit of Tenant. Landlord acknowledges and represents that the Contract will include liquidated damages for delays in final completion (including completion of Punchlist items) in the amount of at least $150.00 per calendar day of delay in completing the Punchlist repairs beyond the time provided in this paragraph.

6. Move-In by Tenant. Tenant shall schedule its move into the Premises with Landlord prior to occupying any portion of the Premises.

7. Tenant Representative. Whenever Landlord or any contractor responsible for the Tenant Improvements shall need to communicate with Tenant about the Tenant Improvement related matters, including Change Orders, Landlord or such contractor shall contact Todd Melby at todd.melby@precisionbiosciences.com or (330) 329-4015.

8. Landlord Representative. Whenever Tenant or any contractor responsible for the Tenant Improvements shall need to communicate with Landlord about the Tenant Improvement related matters, including Change Orders, Tenant or such contractor shall contact Steven Hess at steven.hess@scientificproperties.com, or (919) 600-3435.

EXHIBIT D-1
PRELIMINARY PLANS



Integrated Design
ARCHITECTS • ENGINEERS • PLANNERS
1111 Oberlin Road
Raleigh, NC 27605
Tel: 919.832.6656
Fax: 919.839.2255
www.id-aep.com

JOB CODE: VENPB
DATE: 26MAR2010

DRAWING NUMBER
CC-10

INTERIOR COMPLETION FOR:
PRECISION BIOSCIENCES
THE VENABLE CENTER - DIBRELL BUILDING
302 E. PETTIGREW STREET, SUITE 100A, DURHAM, NC
VENABLE CENTERS HISTORIC WAREHOUSE BUILDING, SOUTH BAY

EXHIBIT D-2

FINAL PLANS

[TO BE ATTACHED UPON THE MUTUAL AND REASONABLE APPROVAL OF LANDLORD AND TENANT]

EXHIBIT E

RULES AND REGULATIONS

1. Building holidays are New Year's Day, Martin Luther King, Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

2. The sidewalks, common areas, and public portions of the Building and Project, such as entrances, passages, courts, elevators, vestibules, stairways, corridors or halls, and the streets, alleys or ways surrounding or in the vicinity of the Building or Project will not be obstructed by Tenant, even temporarily, or encumbered by Tenant or used for any purpose other than ingress to and egress from the Premises.

3. No awnings or other projections will be attached to the outside walls of the Building.

4. No sign, advertisement, notice or other lettering will be exhibited, inscribed, painted or affixed by Tenant on any part of the outside of the Premises or Building unless approved by Landlord (in accordance with the Lease). Signs on entrance doors will, at Tenant's expense, be inscribed, painted or affixed for each tenant by sign makers reasonably approved by Landlord. In the event of the violation of the foregoing by Tenant, Landlord may remove same without notice to Tenant or any liability therefore, and may charge the expense incurred by such removal to Tenant.

5. The sashes, sash doors, skylights, windows, heating, ventilating and air conditioning vents and doors that reflect or admit light and air into the halls, passageways or other public places in the Building will not be covered or obstructed by Tenant.

6. No show cases or other articles will be put in front of or affixed to any part of the exterior of the Building, nor placed in the public halls, corridors, or vestibules without the prior written consent of Landlord.

7. The bathrooms and plumbing fixtures will not be used for any purposes other than those for which they were designed, and no sweepings, rubbish, rags, or other substances will be thrown therein. All damages resulting from any misuse of the bathrooms or fixtures will be the responsibility of Tenant.

8. Tenant will not in any way deface any part of the Premises or the Building.

9. No vehicles or animals of any kind, except leashed animals, and animals assisting disabled persons or used for laboratory purposes, will be brought into or kept in or about the Premises or in the Building except that vehicles may be parked and stored in designated areas; provided, however, only animals assisting disabled persons shall be allowed in areas of the Building other than the Premises, Landlord shall have no liability to Tenant or any Tenant Party with respect to the presence of animals at the Project as permitted by Tenant or any Tenant Party, and Tenant shall indemnify, defend and hold harmless Landlord of, from and against all loss, liability cost, or expense incurred by Landlord or any Landlord Party due to the presence of animals at the Project as permitted by Tenant or a Tenant Party. No cooking will be done or permitted by Tenant on the Premises except in conformity with all Applicable Laws and then

only in the area designated as a kitchen, if any, on the Premises of Tenant which is to be primarily used by Tenant's employees for preparing their food and beverages while within the Premises. Tenant will not cause or permit any unusual or objectionable odors to be produced upon or permeate from the Premises.

10. All desks will be serviced by chairs with rollers that are equipped with floor mats underneath each chair in carpeted areas.

11. No space in the Building will be used for the sale of merchandise, goods, or property of any kind at auction except in the ordinary course of business of Tenant.

12. Tenant will not make, or permit to be made, any unseemly or disturbing noises or unreasonably disturb or interfere with occupants of the Building or neighboring buildings or premises or those having business with them, whether by the use of any musical instrument, radio, talking machine, unmusical noise, whistling, singing, or in any other way. Tenant will not throw anything out of the doors, windows or skylights or down the passageways.

13. Except in accordance with the Lease, neither Tenant, nor any Tenant Party will at any time bring or keep upon the Premises any inflammable, combustible or explosive fluid, or chemical substance, other than reasonable amounts of cleaning fluids or solvents required in the normal operation of Tenant’s business offices and reasonable amounts of butane or similar “cigarette” lighters.

14. No additional locks or bolts of any kind will be placed upon any of the doors, walls, access-ways, or windows by Tenant, nor will any changes be made in existing locks or the mechanism thereof, without the prior written approval of Landlord and unless and until a duplicate key or access card, as applicable, is delivered to Landlord. Tenant will, upon the termination of its tenancy (i) return to Landlord all keys for the Premises and for any area of the Building, or common areas, either furnished to, or otherwise procured by Tenant, (ii) restore the locks, walls, access-ways, windows, and doors to their original condition on the date of this Lease by removing any security measures installed by Tenant, repairing any damage to the Premises or to the Building as a result of the restoration and removal, and (iii) in the event of the loss of any keys furnished to Tenant by Landlord, Tenant will pay to Landlord the cost thereof.

15. Tenant will not overload any floor.

16. Tenant will not occupy or permit any portion of the Premises to be used for the possession, storage, manufacture or sale of liquor, narcotics, or tobacco in any form.

17. Tenant will be responsible for all persons for whom it issues passes and/or keys and will be liable to Landlord for all acts of such persons.

18. The Premises will not be used for lodging or sleeping.

19. The requirements of Tenant will be attended to only by Landlord or the property manager of the Premises.

20. Canvassing, soliciting, and peddling in the Building are prohibited and Tenant will cooperate to prevent the same.

21. All paneling, and other wood products not considered furniture will be of fire retardant materials.

22. No smoking is permitted in the Premises, in the Building, on the Project or on the Land.

23. No weapons concealed or visible are permitted in the Premises, in the Building, or on the Land.

24. In the event the Premises constitute an outdoor patio, exterior generator area, or any open area adjacent to the Premises or on the Land designated under the Lease for the exclusive use of Tenant, Tenant will use furniture and other equipment in any such areas in form, coloring, substance, design and quality subject to the prior approval of Landlord (not to be unreasonably withheld, or delayed). In addition, any outdoor patio, exterior generator area, or other open area must be screened on all sides using materials in form, substance, coloring, design, and quality are subject to the prior approval of Landlord (not to be unreasonably withheld, or delayed), and must be designed and constructed in accordance with plans and specifications that are subject to the prior approval of Landlord (not to be unreasonably withheld, or delayed).

Whenever the above rules conflict with any of the rights or obligations of Tenant pursuant to the provisions of the Lease, the provisions of the Lease will govern. Landlord will not be responsible to Tenant or liable for the non-observance or violation of any of these Rules and Regulations by any other tenant.

EXHIBIT F

TENANT SECURITY PROCEDURES

Precision BioSciences Security Protocol:

Guests:

Invited guests are welcome at Precision BioSciences. All guests must sign into the guest log at the front desk when entering the premises. They will receive a visitor pass from the Executive Assistant which is to be displayed at all times while in the premises. During their visit, guests must be escorted at all times. While in lab areas, all guests must wear lab coats and safety glasses. Photographs or videos are not allowed unless permission has been granted by an employee. Cell phone use is to be restricted to areas outside of the laboratories and preferably in an office or the conference room.
Upon exit, guests must sign out and return the visitor pass.

EXHIBIT G

LIST OF HAZARDOUS MATERIALS

EXHIBIT G

Number	Item	Amount	Section	Class	Location
1	Ethanol	Sgal	Flammable Liquid	Class IB	Open Lab
2	Isopropanol		Flammable Liquid	Class IB	Open Lab
3	2-Mercaptoethanol	100ml	Combustible Highly Toxic	Class IIIA	Open Lab
4	Acetic Acid	2L	Combustible Corrosive	Class II	Open Lab
5	Adenine	20g	Toxic		Open Lab
6	Buffer N3	4gal?	Combustible	Class II	Open Lab
7	Buffer PB	4gal?	Combustible	Class II	Open Lab
8	Buffer PM	2gal?	Combustible	Class II	Open Lab
9	Buffer QBT	0.5gal?	Combustible	Class II	Open Lab
10	Buffer QC	0.5gal?	Combustible	Class II	Open Lab
11	Buffer QF	0.5gal?	Combustible	Class II	Open Lab
12	Butane		Flammable Gas Aerosol		
13	Coomassle Stain	1L	Flammable Liquid	Class IB	Open Lab
14	Dimethyl Sulfoxide	200ml	Combustible	Class IIIB	Open Lab
15	Formaldehyde	500ml	Combustible Toxic	Class IIIA	Open Lab
16	Hydrochioric Acid	2L	Corrosive		
17	Imidazole	25g	Toxic Corrosive		
18	Methanol	4L	Flammable Liquid	Class IB	Open Lab
19	Phenol	250ml	Combustible Toxic	Class IIIA	Open Lab
20	Phenol-Chloroform	50ml	Combustible Toxic	Class IIIA	Open Lab
21	Protein G-Sepharose	5ml	Combustible	Class II	Open Lab
22	Sodium Acetate (3M)	100ml	Combustible	Class IIIB	Open Lab
23	Sodium Dodecyl Sulfate	30g	Flammable Liquid Toxic		Open Lab
24	Sodium Hydroxide	650g/10ml	Corrosive		Open Lab
25	Triton X-100	500ml	Combustible	Class IIIB	Open Lab
26	Xylene Cyanide	5g	Combustible	Class IIIB	Open Lab

FIRST AMENDMENT TO THE LEASE AGREEMENT

THIS FIRST AMENDMENT TO LEASE AGREEMENT (the "Amendment") is made and entered into as of the 19th day of August, 2011 by and between VENABLE TENANT, LLC, a North Carolina limited liability company (the "Landlord"), and PRECISION BIOSCIENCES, INC., a Delaware Corporation (the "Tenant").

WITNESSETH:

WHEREAS, pursuant to that certain Lease Agreement dated April 5, 2010 by and between Landlord and Tenant (the "Lease"), Tenant leased certain premises located in the Dibrell A Warehouse Building at 302 East Pettigrew Street, Durham, North Carolina (the "Building") and consisting of approximately 8,274 rentable square feet, as more particularly described in the Lease (the "Premises"); and

WHEREAS, the parties desire to modify the Lease as provided herein.

NOW, THEREFORE, in consideration of cash in hand paid and the promises and the provisions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby agree to amend and modify the Lease as follows:

1. Roof Access.

(a) Tenant has requested and Landlord has agreed that Tenant, its agents, employees, and independent contractors (all of the foregoing, together with Tenant shall be referred to herein collectively, as the "Tenant Parties" or each as a "Tenant Party") may have access to the roof of the Building (the "Roof") provided that Tenant complies with the following terms and conditions:

(i) Tenant shall maintain insurance against loss or damage to person (including death) or property due to any act or omission of any Tenant Party in connection with the access of the Roof and conduct of work thereon;

(ii) The sole purpose for access by a Tenant Party to the Roof is the repair, maintenance and replacement of HVAC units, and/or generators owned by Tenant and located on the Roof;

(iii) To the extent caused by a Tenant Party's access to the Roof or conduct of work thereon, Tenant shall promptly repair any damage to the Roof, or any property of Landlord or of any other tenant of the Building located thereon caused by Tenant Party. Landlord reserves the right to make said repairs, at the sole expense of the Tenant, if Tenant repairs do not occur in a timely fashion or in the event other Tenants of the building are negatively impacted as a result of the repair timing and Tenant shall remit payment to the Landlord of its actual and reasonable costs incurred in effecting any such repairs within ten business days after demand made by Landlord and documentation of Landlord's costs provided to Tenant therefore;

(iv) Landlord shall have the right to limit access by Tenant to the Roof in the event of an emergency or other circumstance that requires such limitation;

(v) No act or omission by a Tenant Party shall result in penetration of the membrane of the Roof; and

(vi) Tenant shall comply with all Applicable Laws (as defined in the Lease) in connection with its access to the Roof and conduct of work thereon.

(b) Notwithstanding any provision of this Amendment to the contrary, if any Tenant Party shall fail to comply with the terms and conditions stated herein, Landlord may terminate the right of Tenant to access the Roof upon ten (10) days prior written notice to Tenant specifying the reason for such termination.

(c) Tenant acknowledges on behalf of each Tenant Party that there are no walls, railings, barriers, or other structures on the edges of the Roof (defined as the "Roof Condition"), and understands the potential danger and risk associated with its entry thereon, and Tenant acknowledges that Tenant is not aware of any obligation Landlord has to modify the Roof Condition existing as of this date.

(d) Landlord shall not be liable and Tenant hereby remises, releases and forever discharges Landlord, and its owners, directors, members, shareholders, members, managers, affiliates, partners, officers, insurers, agents (including, but not limited to, the property manager of Landlord, Scientific Properties, LLC), accountants, employees, attorneys, and assigns of and from any and all claims resulting from a Tenant Party's breach of the terms of this Amendment. Tenant shall indemnify, defend and hold Landlord harmless from and against any and all loss, liability, damages (including, but not limited to personal injury, death, or property damage), costs, expenses, and attorneys' fees incurred by Landlord arising from (i) any breach by a Tenant Party of this Amendment; or (ii) any entry by a Tenant Party upon the Roof, unless any such loss, liability, damages (including, but not limited to, personal injury, death or property damage) is due to a breach by Landlord of this Amendment.

2. Acknowledgement. Landlord acknowledges and agrees that nothing in this Amendment shall limit Landlord's obligation to maintain and repair the Roof and the Building pursuant to Sections 7 and 10 of the Lease for any maintenance and/or repairs not resulting from damage by a Tenant Party.

3. Severability. In the event any term, covenant or condition of this Amendment, the Lease, or any amendments thereto shall to any extent be invalid or unenforceable, the remainder shall not be affected thereby and each term, covenant or condition shall be valid and enforceable to the full extent permitted by law.

4. Successors and Assigns. This Amendment shall apply to, inure to the benefit of, and be binding upon the parties hereto and upon their respective heirs, legal representatives, successors and permitted assigns, except as otherwise provided herein.

5. Authority of Parties. Each party hereto hereby certifies that it is authorized to enter into this Amendment, and that those persons signing below on its behalf are authorized to do so.

6. Full Force and Effect. Except as modified hereby, the Lease is hereby reaffirmed, unmodified and in full force and effect.

7. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the State of North Carolina.

8. Mutual Acknowledgment of Non-Existence of Claims. Except as provided herein, Landlord and Tenant acknowledge and agree that as of the day hereof there are no known claims by either party against the other party hereto arising from the relationship as Landlord and Tenant, respectively, pursuant to the Lease, as amended.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have hereunto executed this Amendment as of the day and year first above written.

LANDLORD:

VENABLE TENANT, LLC

By: SCIENTIFIC PROPERTIES, LLC

By: /s/ Barbra B. Rothschild
Barbra B. Rothschild, Manager

TENANT:

PRECISION BIOSCIENCES, INC.

By: /s/ Todd Melby
Print Name: Todd Melby
Its: CFO/COO

SECOND AMENDMENT TO THE LEASE AGREEMENT

THIS SECOND AMENDMENT TO THE LEASE AGREEMENT (the "Amendment") is made and entered into as of July 13, 2015 by and between VENABLE TENANT, LLC, a North Carolina limited liability company (the "Landlord"), and PRECISION BIOSCIENCES, INC., a Delaware corporation (the "Tenant").

WITNESSETH:

WHEREAS, pursuant to that certain Lease Agreement dated April 5, 2010, as amended by that certain First Amendment to Lease Agreement dated August 19, 2011, by and between Landlord and Tenant, Tenant leased certain premises known as Suite 100 in the Dibrell A Building at 302 East Pettigrew Street, Durham, NC (the Lease Agreement and all amendments thereto shall be referred to herein collectively as the "Lease"); and

WHEREAS, Tenant has requested and Landlord has agreed to modify the Lease as provided herein.

NOW, THEREFORE, in consideration of cash in hand paid and the promises and the provisions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Definition of Terms. All capitalized terms contained herein and not otherwise defined shall be defined as provided in the Lease.

2. Term.

(a) The term of the Lease currently expires on February 28, 2016. Landlord has agreed to extend the term of the Lease for a period of sixty-five (65) months (the "Extended Term") for a revised Termination Date of July 31, 2021.

(b) During the Extended Term, the Premises shall be leased by Tenant "as is" except as expressly provided herein, and subject to Landlord's continuing Lease obligations (such as repair and maintenance).

3. Premises.

(a) Tenant has requested and Landlord has agreed to an expansion of the Premises (collectively, the "Expansion Space") to include the addition of (i) approximately 8,427 rentable square feet on the second floor of the Building known as Suite 200, and (ii) approximately 2,863 rentable square feet known as Suite 30 in the building known as the Receiving Room. A floor plan of the Expansion Space is attached hereto and made a part hereof as Exhibit A.

(b) The term of the Lease for the Expansion Space shall commence upon the date that the Expansion Space is substantially complete (as evidenced by a certificate of occupancy issued by the City of Durham and certification of substantial completion by the Architect), which it is estimated shall occur on September 1, 2015 (the "Expansion Commencement Date"), and shall

terminate on the revised Termination Date. On the Expansion Commencement Date, the term "Premises" under the Lease shall include the Expansion Premises, and the term "Building" shall be deemed to include the Receiving Room Building. Notwithstanding the foregoing, upon Tenant's request and within a reasonable timeframe thereafter, Landlord shall advise Tenant if a portion of the Expansion Space (the "Early Portion") may be occupied by Tenant before the entirety of the Expansion Space is completed and Tenant shall advise Landlord if it desires to occupy the Early Portion. Early occupancy of the Early Portion shall not trigger the Expansion Commencement Date or the Expansion Rent Abatement (as defined herein) and for such occupancy, Tenant shall pay an equitable portion of the Base Rent based upon the then current rate for the Premises, and any other charges for the Early Portion (including increased charges for Operating Expenses based upon the increased Tenant's Proportionate Share), with Landlord and Tenant negotiating reasonably and in good faith to determine such charges based on the square footage of the Early Portion and the number of days Tenant occupies the Early Portion for the conduct of its business prior to the actual Expansion Commencement Date at which time, Tenant shall pay the Base Rent set forth in the Landlord's Notice (as defined herein).

(c) Effective upon the Expansion Commencement Date, Tenant's Proportionate Share of the Dibrell A Warehouse Building shall be 32.32431 percent, Tenant’s Proportionate Share of the Receiving Room / Prizery Building shall be 8.41119 percent, and Tenant’s Proportionate Share of the Project shall be 22.82741 percent.

4. Upfit of Expansion Space. Landlord shall provide an allowance to Tenant for its use in the upfit of the Expansion Space in an amount of up to $250,000 (the "Upfit Allowance"). The Upfit Allowance may be used by Tenant for permitting, construction, architectural and engineering costs, including, costs for cable and information technology. The manner in which Upfit Allowance is to be provided and details of construction of the upfit for the Expansion Space shall proceed per the terms of the Work Letter attached hereto and made a part hereof as Exhibit B.

5. Base Rent.

(a) Commencing upon the Expansion Commencement Date, Base Rent shall be due and payable for the portion of the Premises located in the (i) Dibrell Building of approximately 16,539 rentable square feet (Suites A-100 and A-200) at the rate of $18.50 per rentable square feet, triple-net, with a Base Annual Rent Escalation of 2.75 percent each Lease Year, and (ii) Receiving Room Building (Suite RR-30) of approximately 2,863 rentable square feet at the rate of $21.25 per rentable square feet, full service, with a Base Annual Rent Escalation of 2.75 percent each Lease Year.

(b) Provided there is no event of default under the Lease then in effect, commencing with the Expansion Commencement Date, Base Rent under the Lease shall be abated for a period of five months (the “Expansion Rent Abatement”).

6. Base Year. The Base Year for the purposes of calculating Additional Rent attributable to increases in Operating Expenses for the Receiving Room, Suite 30 shall be 2016.

7. Operating Expenses. During the Extended Term, Tenant shall continue to pay Tenant's Proportionate Share of Operating Expenses as provided in the Lease, and amended hereby for the portion of the Expansion Space located in the Dibrell Building. During 2015 and the Base Year of 2016, Tenant will not pay for Operating Expenses attributable to Suite RR-30, as the Base Rent for the Receiving Room space is a full-service rate with a 2016 base stop. In subsequent Lease Years, , Tenant will be charged for increases in Operating Expenses attributable to Suite RR-30 over and above the Base Year 2016.

8. Direct Tenant Expenses. Tenant will arrange for the provision of service and shall pay directly to each service provider all charges as follows:

a. Suites A-100 and A-200: all electricity, gas, and other utilities; janitorial, telephone and internet/data used on or from the Premises together with any taxes, penalties, surcharges, or the like pertaining thereto

b. Suite RR-30: all telephone and internet/data used on or from the Premises together with any taxes, penalties, surcharges, or the like pertaining thereto

9. Security Deposit. Section 9 of the Lease is hereby deleted and the following new Section 9 inserted in lieu thereof:

Promptly upon the full execution of this Amendment (with delivery of a copy thereof to Tenant), Tenant shall deposit the amount required to increase the Security Deposit under the Lease to $123,269.08, four months Base Rent for the Premises on the Expansion Commencement Date. Provided there is no default or event of default by Tenant under the Lease, the Security Deposit shall be reduced to (i) three months Base Rent on the first anniversary of the Expansion Commencement Date, and (ii) one month Base Rent on the second anniversary of the Expansion Commencement Date. Landlord will not be required to apply all or any portion of the Security Deposit with respect to any particular violation or default by Tenant but Landlord may apply all or any portion (as reasonably required to effect a cure) of the Security Deposit to any violation, breach, or default by Tenant hereunder. Landlord will be entitled to hold the Security Deposit in an account maintained by Landlord for such funds from all tenants of Landlord. Any interest paid on such an account will become a part of the Security Deposit, accrue to the benefit of the Tenant (less any customary bank fees or charges for maintaining such account), and be delivered to Tenant upon termination of this Lease provided that the Security Deposit and interest thereon have not been applied by Landlord to an event of default hereunder. Tenant will reimburse Landlord for such portions of the Security Deposit as Landlord will from time to time apply with respect to any violation, breach, or default by Tenant hereunder promptly upon written notice of such application by Landlord. Any portion of the Security Deposit which has not been appropriated by Landlord in accordance with the provisions hereof will be returned to Tenant within thirty (30) days after the termination of this Lease.

If Landlord conveys Landlord's interest under this Lease, the Security Deposit, or any part thereof not previously applied, shall be released by Landlord to Landlord's grantee (to the extent not applied to any default by Tenant hereunder), and if so released, Tenant agrees to look solely to such grantee for the proper application and return thereof in accordance with the Lease provided that Tenant receives written notice of such conveyance. Tenant agrees that Tenant will not assign, and that neither Landlord, nor its successors and assigns, will be bound by any such assignment, encumbrance or pledge, attempted assignment, attempted pledge, or attempted encumbrance of the Security Deposit.

Any mortgagee or ground lessor will not be responsible to Tenant for the return or application of the Security Deposit, whether or not it succeeds to the position of Landlord hereunder, unless the security deposit will have been received in hand by such mortgagee or ground lessor.

Any unperformed obligations of Landlord or Tenant under this Section will survive the termination of the Lease, for whatever reason, or any extension or renewal hereof.

10. Right of Refusal. Landlord hereby grants to Tenant a one-time right of first refusal to lease space in the Project (the "Refusal Space") under the terms and conditions as provided below:

(i) So long as there is no default (beyond any applicable grace and/or cure period) or event of default by Tenant under the Lease, Landlord will notify Tenant when it has all or a portion of the Refusal Space offered for lease to a third party (the "Third Party") and the terms and conditions upon which Landlord is willing to lease such space ("Landlord's Notice") .

(ii) Tenant shall provide written notice to Landlord, as to Tenant's decision to lease or not to lease the Refusal Space within ten (10) business days after Landlord's Notice is received. If Tenant does provide to Landlord notice to lease the Refusal Space, Landlord and Tenant will negotiate in good faith to agree upon an amendment to the Lease to add the Refusal Space within ten (10) business days after Landlord's receipt of Tenant's notice of intent to lease on all the same terms provided to the Third-Party. If Tenant does not provide written notice to Landlord within ten (10) business days after receipt of the Landlord's Notice, Tenant will have been deemed to have waived its right to lease the Refusal Space and Landlord shall be free to enter into a lease with the Third Party (upon substantially the same terms and conditions listed in Landlord's Notice), and Tenant shall have no further rights with respect to that particular Refusal Space within the Project.

Once Landlord has offered a specific portion of the Refusal Space to Tenant, and Tenant has not leased such specific portion under the terms and conditions provided in this Section, Tenant shall have no further right to such specific portion; provided, however, the balance of the Refusal Space that has not been offered to Tenant under this section remains subject to Tenant's Right of First Refusal provided herein.

The rights provided to Tenant in this Section (i) are subject to the pre-existing rights of other tenants of the Building as described on Exhibit C, attached hereto and made a part hereof, and (ii) shall not inure to the benefit of any subtenant of all or a portion of the Premises.

11. Option to Extend. Tenant shall have the option to extend the term of the Lease for one period of five Lease Years (the "Renewal Term") provided that Tenant shall give written notice to Landlord of its desire to exercise its right to the Renewal Term at least one hundred and eighty days prior to the end of the then current term; failing which the rights of Tenant under this Section shall be null and void and of no further force and effect. During the Renewal Term, the terms of the Lease shall continue in full force and effect, including, that Base Rent shall continue to increase by the Base Rent Escalation. During the Renewal Term, the Premises shall be leased by Tenant "as is," subject to Landlord's continuing Lease obligations (such as repair and maintenance).

12. Parking. With its lease of the Expansion Space, Tenant shall have the non-exclusive right to the use of up to forty-five (45) parking spaces at the Project.

13. Keys to Premises. Tenant shall be provided one key and/or fob for each of its employees (now or hereafter employed) for use at the Premises. Landlord shall have the right to charge a reasonable fee for replacement of any lost key or fob.

14. Brokerage. Tenant and Landlord each warrants and represents to the other that it has had no dealings with any real estate broker or agent in connection with this Lease other than DTZ, the "Tenant Broker," and Landlord agrees to pay a fee to the Tenant Broker pursuant to separate written agreement. Tenant and Landlord each covenants to pay, hold harmless, and indemnify the other from and against any and all costs, expenses, liabilities (including reasonable attorneys' fees), causes of action, claims or suits in connection with any compensation, commission, fee, or charges claimed by any other real estate broker or agent with respect to this Lease or the negotiation thereof, arising out of any act of said party.

15. Severability. In the event any term, covenant or condition of this Amendment, the Lease, or any amendments thereto shall to any extent be invalid or unenforceable, the remainder shall not be affected thereby and each term, covenant or condition shall be valid and enforceable to the full extent permitted by law.

16. Successors and Assigns. This Amendment shall apply to, inure to the benefit of, and be binding upon the parties hereto and upon their respective heirs, legal representatives, successors and permitted assigns, except as otherwise provided herein.

17. Authority of Parties. Each party hereto hereby certifies that it is authorized to enter into this Amendment, and that those persons signing below on its behalf are authorized to do so.

18. Full Force and Effect. Except as modified hereby, the Lease remains unmodified and in full force and effect.

19. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the State of North Carolina.

20. Mutual Acknowledgment of Non-Existence of Claims. Except as provided herein, Landlord and Tenant acknowledge and agree that as of the day hereof there are no known claims by either party against the other party hereto arising from the relationship as Landlord and Tenant, respectively, pursuant to the Lease, as amended.

21. Effective Date. The provisions of this Amendment shall be effective as of the day and year first written above.

22. Rights of Tenant. Tenant shall have no options to renew or extend the term of the Lease, rights to expand the Premises or rights of refusal except as expressly provided in this Amendment.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have hereunto executed this Amendment as of the day and year first above written.

TENANT:

PRECISION BIOSCIENCES, INC.

By: /s/ Matthew Kane
Print Name: Matthew Kane
Title: CEO
Date: June 20, 2015

LANDLORD:

VENABLE TENANT, LLC

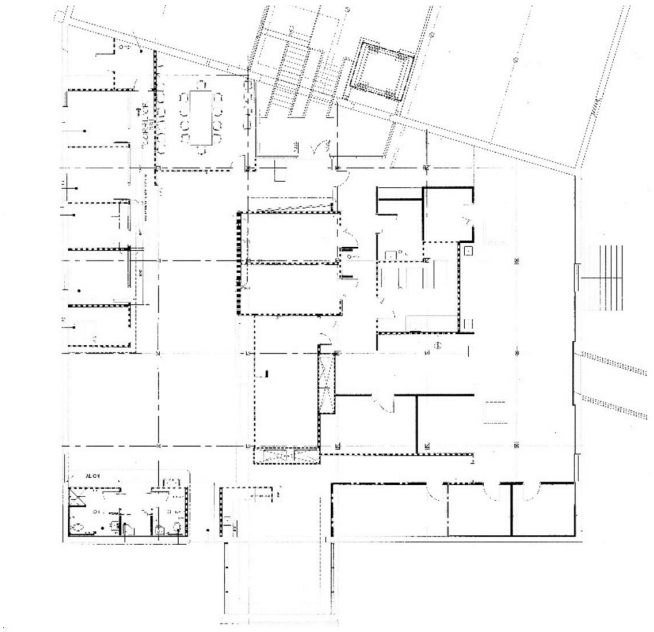
By: SCIENTIFIC PROPERTIES, LLC

By: /s/ Barbra Rothschild
Barbra Rothschild, Manager
Date: 20 June, 2015

EXHIBIT A

FLOOR PLAN

Suite A-200



Receiving Room Suite-30

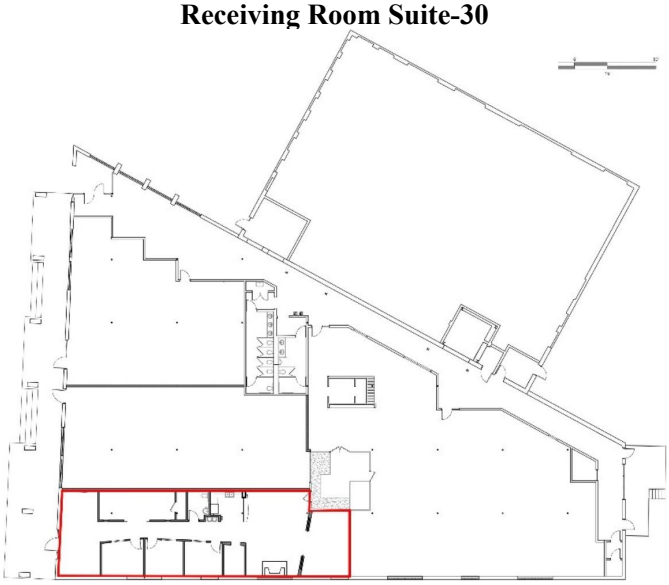


EXHIBIT B

WORK LETTER

This Exhibit B sets forth the rights and obligations of Landlord and Tenant with respect to the construction of the improvements to the Expansion Space Premises as described on the Plans ("Tenant Improvements"). This Exhibit contemplates that the following work will be performed, as further described herein, all subject to the prior review and approval by Landlord: (i) preparation of a space plan by the Architect; (ii) final design and engineering and preparation of plans, specifications, and working drawings by the Architect (collectively, the "Plans"); (iii) preparation by the general contractor of Landlord (the "General Contractor") of an estimate of the cost of the Tenant Improvements; (iv) submission to, and approval of Plans by, appropriate governmental authorities; and (v) construction and installation of the Tenant Improvements pursuant to the Plans on or prior to the Commencement Date, subject to Force Majeure and any Tenant Delay.

1. Allowance/Payment of Construction Costs.

(a) Landlord and Tenant shall mutually-approve and select a General Contractor to construct the Tenant Improvements in accordance with a milestone schedule (the “Schedule”), a copy of which shall be reasonably approved by Landlord and Tenant prior to commencement of construction of the Tenant Improvements. Landlord acknowledges and agrees that Clancy & Theys is deemed approved as a potential Contractor, should Tenant so choose. Landlord and Tenant shall prepare and mutually and reasonably approve a budget (the “Budget”) for the costs to construct the Tenant Improvements (the “Construction Costs”). The Budget will not include any amounts for furniture, fixtures (other than lighting), equipment, or personal property of Tenant, which items will be paid for by Tenant separately at its expense. The Budget shall include a Construction Contingency which shall be 5% of the Construction Costs. Any unspent Construction Contingency will accrue to the Tenant. Change Orders (as hereinafter defined) shall be funded from increases in the Contract (as hereinafter defined). Landlord agrees to fund a portion of the Construction Costs through the provision of the Upfit Allowance of $250,000. The Upfit Allowance shall be used for items specifically outlined in the Budget and mutually agreed upon by both Landlord and Tenant. The Upfit Allowance shall be used only for construction, design, and management costs related to fixed improvements to the Building that are part of the Tenant Improvements. The Upfit Allowance may not be used to offset any Rent payments owed to Landlord by Tenant. Any costs incurred due to a Tenant Delay shall be charged against the Upfit Allowance; provided, however, Tenant shall be given two (2) days’ notice and opportunity to cure any Tenant Delay (including payment by Tenant of any costs associated with such cure such as higher shipping charges) before any costs are charged against the Upfit Allowance. Landlord and Tenant acknowledge and agree that the Construction Costs will be in excess of the Upfit Allowance, and all costs for the Tenant Improvements in excess of the Upfit Allowance shall be borne by Tenant. Therefore, Tenant has agreed to place into an escrow account maintained with Landlord (the "Escrow Account") an amount equal to the Construction Costs as specified in the Budget minus the Upfit Allowance (the “Tenant Improvement Overage”). Landlord shall establish the Escrow Account as a separate, interest bearing account in an FDIC insured institution. set forth below, Landlord shall have the authority to make periodic deductions from the Escrow Account as payment for the Construction Costs and the Escrow Account shall be funded in full by Tenant prior to Landlord’s issuance of a Notice to Proceed to the General Contractor. Failure by Tenant

to deposit the Tenant Improvement Overage into the Escrow Account within five (5) business days after a request from Landlord hereunder shall be a Tenant Delay and a default in payment hereunder. Tenant shall receive all interest that accrues under the Escrow Account.

(b) The Upfit Allowance and Tenant Improvement Overage shall be disbursed by Landlord upon satisfaction of the following conditions precedent: (i) Landlord shall have received applications for payment certified by the Architect, accompanied by evidence of the portion of the Tenant Improvements that have been completed per the Plans, invoices and paid receipts for all such work completed, and copies of executed lien waivers from those persons providing such work; and (ii) all information and documentation provided to Landlord must be in form and substance reasonably approved by Landlord. Upon Tenant's request, Landlord shall provide Tenant an opportunity to review such information and documentation.

(c) Provided the aforesaid conditions are met, Landlord shall pay the Construction Costs at monthly intervals based upon design and construction billing cycles. Each monthly payment of the Construction Costs shall be paid as follows: fifty percent (50%) of such payment shall be paid from the Upfit Allowance and the remaining fifty percent (50%) of such payment shall be paid from the Tenant Improvement Overage through the Escrow Account. Within thirty (30) days after the Commencement Date, Landlord shall prepare and submit to Tenant a final statement that illustrates the total cost to construct the Tenant Improvements and the amount paid from and remaining with respect to each of the Tenant Improvement Overage as held in the Escrow Account, and the Upfit Allowance. If such statement indicates that Landlord has paid less than the total amount of the Upfit Allowance, then Landlord shall pay Tenant an amount equal to the Upfit Allowance minus the total amount previously paid by Landlord within ten (10) days of the date of such statement. If such statement reflects that the amount deposited into Escrow Account by Tenant as the Tenant Improvement Overage was greater than the amount required to be paid by Tenant, then Tenant shall be entitled to a prompt refund of any such amounts.

(d) Unless otherwise specified in the Plans, materials used for the Tenant Improvements at the Building shall be good quality, new, and customary for the type of upfit contemplated in this Lease and in facilities comparable to the Building and readily available in the market where the Building is located, all as reasonably determined by Landlord.

(e) During construction of the Tenant Improvements, Landlord and Tenant or their agents shall, on a weekly basis review work schedules, costs, expenses and construction issues regarding the construction of the Tenant Improvements. The parties will hold periodic meetings, at mutually agreed upon times and locations, to discuss the progress of the construction of the Tenant Improvements. The General Contractor will provide an updated Budget, Schedule, and RFI log every two weeks during construction of the Tenant Improvements. The General Contractor and Landlord reserve the right to cure self imposed delays in the Schedule.

(f) Should a default or event of default occur by Tenant hereunder prior to the Commencement Date, Landlord shall have the right to cease all construction of the Tenant Improvements, and pursue all of its rights and remedies hereunder, or available at law or in equity for any such default or event of default.

2. Space Planning, Design and Working Drawings. Tenant shall engage Integrated Design (the "Architect") to prepare the Plans. Tenant may include fees previously paid to the Architect in the approved Budget. Any Architect's fees reimbursed to Tenant from the Upfit Allowance shall be paid from the Upfit Allowance by Landlord upon receipt and approval by Landlord of invoices and lien waivers for work performed. If the Architect used by Tenant is not qualified with respect to compliance of the Plans with historic tax credit laws, statutes and regulations, Belk Architecture or another architect with historic tax credit expertise shall review the Plans to insure compliance with the requirements of State and Federal law for historic tax credits and all the costs for such review shall be borne by Landlord. Tenant shall review and respond to any request for approval of the draft plans or final Plans (by U.S. Mail, facsimile, or email) within five (5) business days after a request from either the Architect or Landlord. Any modifications of the Plans sought by Tenant shall be reviewed and subject to the approval of Landlord prior to the modification of the Plans. All communication by Tenant to Landlord with respect to the Tenant Improvements shall be in writing. Tenant shall designate an Authorized Representative to work with Landlord with respect to the Tenant Improvements, and Landlord shall not be obligated to respond to any instructions, approvals, changes, or other communications from anyone claiming to act on Tenant's behalf other than Tenant's Authorized Representative. Review and approval by Landlord of the Plans shall not be construed as any statement by Landlord as to the compliance of the Plans with Applicable Laws.

3. Construction of Tenant Improvements. Landlord shall, via the General Contractor, obtain all state and local licenses, permits and approvals (whether governmental or non-governmental) required to construct the Tenant Improvements and for Tenant's occupancy of the Expansion Space. Landlord shall provide access to the General Contractor for Construction of the Tenant Improvements and to the extent such access requires entry through space occupied by other tenants, Landlord shall provide for such access at its sole cost and expense. The Landlord shall engage, subject to Tenant's reasonable approval, a general contractor to construct the Tenant Improvements (the "General Contractor"). The General Contractor shall construct and install the Tenant Improvements in accordance with the Plans which expense shall be deducted from the Upfit Allowance. The Tenant Improvements shall be delivered via Associated General Contractors (AGC) Guaranteed Maximum Price Contract (the "Contract") with Liquidated Damages of $500.00 per day, and a payment and performance bond. Any Liquidated Damages (less cost of collection) paid to Landlord shall accrue to the Tenant; provided, however, any paid Liquidated Damages for any Tenant Delay shall accrue to Landlord. The General Contractor shall obtain at least three (3) bids for all major trade work at the Expansion Space. Landlord will work with the General Contractor to complete the Tenant Improvements by the Commencement Date. All contracts with vendors and subcontractors for construction of the Tenant Improvements will be negotiated by the General Contractor. All work performed in connection with the construction of the Expansion Space shall be performed in a good and workmanlike manner, in accordance with all Applicable Laws and the final approved Plans. If materials are not readily available, require quick ship charges, or require substitution, the Tenant will be given notice and the opportunity to select alternate materials. Landlord shall insure that the Architect conducts a periodic review (a minimum of once every two weeks) of the progress of construction to ensure compliance with the Plans. Tenant may from time to time request in writing changes to the Plans (a "Change Order"), subject to Landlord's consent, which shall not be unreasonably withheld. Landlord shall cause Contractor to provide an estimate of any change in the Construction Cost and/or Schedule. Tenant

shall have the right to elect whether or not to proceed with the Change Order within five (5) business days after receipt of such estimate. Upon such approval by Tenant, or confirmation by Landlord that the Change Order will not result in any change in cost and/or Schedule, Landlord shall implement the Change Order as part of the Tenant Improvements. Landlord acknowledges that Tenant may hire the General Contractor and/or any subcontractors to perform other work items (in accordance with the terms and conditions of the Lease) within the original Premises concurrently with the Tenant Improvements, provided such work does not require changes to the Schedule.

Tenant acknowledges that the following items may result in changes to the Budget and/or Schedule:

(i) Municipal or other governmental inspectors require changes to the Expansion Space such as code compliance changes. In such event, Landlord will notify Tenant of the required changes, but the increased cost of such changes, if any, and any delay associated with such changes shall be the responsibility of Tenant.

(ii) Change Orders approved by Tenant. Any increased costs and delays due to such approved Change Orders shall be the responsibility of Tenant. Any delays caused by such approved Change Orders shall not delay the Commencement Date of the Lease. Landlord shall not charge Tenant any administrative fees in respect of any Change Orders. Tenant shall have five (5) business days to review and approve all Change Orders and any additional review time by Tenant shall be a Tenant Delay.

(iii) If materials are not readily available, require quick ship charges, or require substitution, provided Landlord shall identify any such materials within ten (10) days of final approval of the Plans, and in any such case, Tenant will be given notice and the opportunity to select alternate materials.

(iv) Any Tenant Delay.

4. Repairs and Corrections. Landlord shall require of the General Contractor and any subcontractor constructing the Tenant Improvements no less than a one year express repair and/or replacement warranty covering such work. All manufacturers' and builders' warranties with respect to the Tenant Improvements shall be assigned to Tenant to the extent possible and necessary to assist Tenant in effecting any of Tenant's repair obligations under the Lease without recourse to Landlord. Landlord agrees to enforce for the benefit of Tenant any warranties or guarantees issued in connection with construction of the Tenant Improvements. Tenant shall repair or correct any defective work or materials installed by Tenant or any contractor other than the General Contractor (except subcontractors engaged by the General Contractor), or any work or materials that prove defective as a result of any act or omission of Tenant or any Tenant Party, provided that selection of materials by Tenant is not such an act or omission, and provided further that work and materials done or installed by the General Contractor or its vendors and subcontractors is not such an act or omission. For purposes of this Section, Landlord will not be considered to be Tenant's agent, invitee, licensee, subtenant, customer, client, or guest.

5. Punchlist. Landlord shall provide Tenant with written notice when Landlord believes that substantial completion of the Tenant Improvements has been achieved. Promptly following delivery of such notice, Tenant's Representative and Landlord's Representative shall jointly inspect the Tenant Improvements, and, Landlord and Tenant shall mutually and reasonably prepare a punchlist of items remaining with respect to the Tenant Improvements that require repair or completion (the "Punchlist"). Pursuant to its contract with Landlord, General Contractor shall make all repairs and completions noted on the Punchlist with respect to the Tenant Improvements within forty-five (45) days (extended for Force Majeure and any Tenant Delay) after receipt of the Punchlist with any Liquidated Damages paid by the General Contractor for a delay in completion of the Punchlist accruing to the benefit of Tenant.

6. Move-In by Tenant. Tenant shall schedule its move into the Expansion Space with Landlord prior to occupying any portion of the Expansion Space.

7. Tenant Representative. Whenever Landlord or any contractor responsible for the Tenant Improvements shall need to communicate with Tenant about the Tenant Improvement related matters, including Change Orders, Landlord or such contractor shall contact Todd Melby at todd.melby@precisionbiosciences.com or (330) 329-4015.

8. Landlord Representative. Whenever Tenant or any contractor responsible for the Tenant Improvements shall need to communicate with Landlord about the Tenant Improvement related matters, including Change Orders, Tenant or such contractor shall contact David.Green@scientificproperties.com, or (919) 605-0804.

EXHIBIT C

TENANTS WITH SUPERIOR RIGHTS OF REFUSAL

1. Cumming Construction Management, Inc. (first floor of Prizery Building); and
2. Roivant Sciences, Inc. (continuous “right of offer” for contiguous space on second floor of Prizery Builidng).

THIRD AMENDMENT TO THE LEASE AGREEMENT

THIS THIRD AMENDMENT TO THE LEASE AGREEMENT (the "Amendment") is made and entered into as of January 12, 2016 by and between VENABLE TENANT, LLC, a North Carolina limited liability company (the "Landlord"), and PRECISION BIOSCIENCES, INC., a Delaware corporation (the "Tenant").

WITNESSETH:

WHEREAS, pursuant to that certain Lease Agreement dated April 5, 2010 by and between Landlord and Tenant, as amended by that certain First Amendment to Lease Agreement dated August 19, 2011, Tenant leased certain premises known as Suite 100 in the Dibrell A Building at 302 East Pettigrew Street, Durham, NC (the Lease Agreement and all amendments thereto shall be referred to herein collectively as the "Lease"); and

WHEREAS, Landlord and Tenant have amended the Lease by Second Amendment to Lease Agreement dated July 13, 2015 (the "Second Amendment");

NOW, THEREFORE, in consideration of cash in hand paid and the promises and the provisions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. Definition of Terms. All capitalized terms contained herein and not otherwise defined shall be defined as provided in the Lease.

2. Rent Abatement Payment. Landlord and Tenant have agreed that in consideration of the payment by Landlord to Tenant of $51,023.00, Tenant hereby waives and releases any and all right Tenant may have for any further abatement of Rent (Landlord having already waived Tenant's Rent obligation for January, 2016) as described in the Second Amendment with respect to the portion of their Premises located in Suite A-100 in the Dibrell Building at the Project. For purposes of clarity, Landlord and Tenant acknowledge and agree that the Expansion Commencement Date (as such term is defined in the Second Amendment) shall be January 1, 2016.

3. Dibrell Building. Notwithstanding any provision in the Second Amendment to the contrary, Landlord and Tenant hereby confirm and agree that the total rentable square footage leased by Tenant in the Dibrell Building is 16,701 rentable square, consisting of Suite A-100 of 8,274 rentable square feet, and Suite A-200 of 8,427 rentable square feet.

4. Brokerage. Tenant and Landlord each warrants and represents to the other that it has had no dealings with any real estate broker or agent in connection with this Amendment. Tenant and Landlord each covenants to pay, hold harmless, and indemnify the other from and against any and all costs, expenses, liabilities (including reasonable attorneys' fees), causes of action, claims or suits in connection with any compensation, commission, fee, or charges claimed by any real estate broker or agent with respect to this Amendment or the negotiation thereof, arising out of any act of said party.

4. Severability. In the event any term, covenant or condition of this Amendment, the Lease, or any amendments thereto shall to any extent be invalid or unenforceable, the remainder shall not be affected thereby and each term, covenant or condition shall be valid and enforceable to the full extent permitted by law.

5. Successors and Assigns. This Amendment shall apply to, inure to the benefit of, and be binding upon the parties hereto and upon their respective heirs, legal representatives, successors and permitted assigns, except as otherwise provided herein.

6. Authority of Parties. Each party hereto hereby certifies that it is authorized to enter into this Amendment, and that those persons signing below on its behalf are authorized to do so.

7. Full Force and Effect. Except as modified hereby, the Lease remains unmodified and in full force and effect.

8. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the State of North Carolina.

9. Mutual Acknowledgment of Non-Existence of Claims. Except as provided herein, Landlord and Tenant acknowledge and agree that as of the day hereof there are no known claims by either party against the other party hereto arising from the relationship as Landlord and Tenant, respectively, pursuant to the Lease, as amended.

10. Effective Date. The provisions of this Amendment shall be effective as of the day and year first written above.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have hereunto executed this Amendment as of the day and year first above written.

TENANT:

PRECISION BIOSCIENCES, INC.

By: /s/ Todd Melby
Print Name: Todd Melby
Title: CFO/COO
Date: January 18, 2016

LANDLORD:

VENABLE TENANT, LLC

By: SCIENTIFIC PROPERTIES, LLC,
its managing member

By: /s/ Garril Kueber
Garril Kueber, Limted Manager / CEO
Date: January 18, 2016

FOURTH AMENDMENT TO LEASE AGREEMENT

THIS FOURTH AMENDMENT TO LEASE AGREEMENT (this "Amendment") is made as of the 30th day of September, 2016 by and between **VENABLE CENTER, LLC**, a North Carolina limited liability company ("Landlord"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("Tenant"), with respect to the following recitals:

(a) Landlord is the current owner of a group of interconnected buildings situated at 302 East Pettigrew Street, Durham, North Carolina known collectively as "Venable Center" (the "Project"), which comprises Dibrell A ("Dibrell A"), Dibrell B ("Dibrell B"), the Receiving Room (the "Receiving Room") and the Prizery (the "Prizery"). The first and second floors of the Prizery are shown in more detail on **Exhibit B** attached hereto and incorporated herein by reference.

(b) Pursuant to that certain Lease Agreement dated April 5, 2010, as modified by a First Amendment to Lease Agreement dated August 19, 2011 and by a Second Amendment to the Lease Agreement dated July 13, 2015 (the "Second Amendment") and by a Third Amendment to the Lease Agreement dated January 12, 2016 (collectively, the "Lease"), Landlord (as successor to Venable Tenant LLC) leases to Tenant certain office space in the Project (the "Current Premises") consisting of approximately 16,701 square feet of rentable area in Dibrell A (Suite A-100 = 8,274 RSF; Suite A-200 = 8,427 RSF, collectively referred to herein as the "Current DA Premises") and 2,863 square feet of rentable area in the Receiving Room (referred to herein as the "Current RR Premises"), as more particularly described in the Lease;

(c) The term of the Lease is currently scheduled to expire July 31, 2021.

(d) Landlord and Tenant have agreed to extend the term of the Lease, to add certain space to the premises demised under the Lease, and to make certain other modifications to the Lease as set forth hereinbelow;

(e) All capitalized terms used in this Amendment that are not otherwise defined herein shall have the meanings ascribed to such terms in the Lease.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. The Term of the Lease is hereby extended through July 31, 2024 (the "Expiration Date").

2. Effective as of the respective Expansion Dates set forth below, Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the following additional premises in the Project, as outlined on Exhibit A attached hereto:

(a) approximately 11,621 Rentable Square Feet ("RSF") located in the Receiving Room (the "RR Expansion Premises"). The Expansion Date for the RR Expansion Premises shall be the 150th day following the date that Landlord delivers possession of the RR Expansion Premises to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order), which delivery date is anticipated to be September 15, 2016 (resulting in an anticipated Expansion Date of February 15, 2017);

(b) approximately 7,494 RSF located on the 2nd floor of the Prizery (the "PR Second Floor Expansion Premises"), as shown on **Exhibit B**. Tenant acknowledges that certain portions of the PR Second Floor Expansion Premises are currently vacant and other portions of the PR Second Floor Expansion Premises are currently occupied by various tenants. Landlord shall deliver possession of each portion of the PR Second Floor Expansion Premises to Tenant as such portion of the PR Second Floor Expansion Premises is vacant and available to be delivered to Tenant (but, so long as Tenant does not commence the conduct of business in any portion of the PR Second Floor Expansion Premises, such partial delivery shall not trigger commencement of the term with respect to the same, nor commencement of the Base Rent "clock," as Tenant will be unable to commence its construction activities until the full floor is delivered in accordance with this Amendment; however, if Tenant commences the conduct of business in any portion of the PR Second Floor Expansion Premises, then the term will commence with respect to all portions of the PR Second Floor Expansion Premises that have been delivered to Tenant). Landlord agrees to endeavor in good faith to terminate or relocate the existing tenants of the PR Second Floor Expansion Premises, so as to deliver possession of each portion of the PR Second Floor Expansion Premises to Tenant as promptly as practicable. The Expansion Date with respect to the entire PR Second Floor Expansion Premises (unless occurring sooner with respect to portions of the PR Second Floor Expansion Premises pursuant to the foregoing provisions of this Section 2(b)) shall be the thirtieth (30th) day following the date that possession of the entire PR Second Floor Expansion Premises is delivered to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order);

(c) approximately 7,416 RSF on the first floor of Dibrell B (the "DB First Floor Expansion Premises"). Tenant acknowledges that the DB First Floor Expansion Premises is currently occupied by a tenant whose lease term expires June 30, 2019, but that such current tenant may be induced to vacate the DB First Floor Expansion Premises sooner than such scheduled lease expiration date. Tenant will take possession of the DB First Floor Expansion Premises as soon as such space is vacant and available. The Expansion Date for the DB First Floor Expansion Premises shall be the 90th day following the date that Landlord delivers possession of the DB First Floor Expansion Premises to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order). Rent shall be paid on the same terms (on a per square foot basis) as the RR Expansion Premises;

(d) approximately 7,416 RSF on the second floor of Dibrell B (the "DB Second Floor Expansion Premises"). Tenant acknowledges that the DB Second Floor Expansion Premises is currently occupied by a tenant whose lease term expires June 30, 2019. Landlord will use best efforts to cause the current tenant of the DB Second Floor Expansion

Premises to vacate such space as soon as possible; provided that Landlord shall not be obligated to offer such current tenant any payment or other economic inducement to vacate such space prior to the expiration of such current tenant's lease term. Tenant will take possession of the DB Second Floor Expansion Premises as soon as such space is vacant and available. The Expansion Date for the DB Second Floor Expansion Premises shall be the 30th day following the date that Landlord delivers possession of the DB Second Floor Expansion Premises to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order). Rent shall be paid on the same terms (on a per square foot basis) as the PR Second Floor Expansion Premises;

3. Base Rent with respect to each Expansion Premises shall be as set forth in the following tables:

RR Expansion Premises (11,621 SF)

Months Following RR Expansion Premises Expansion Date	Annual Base Rent per Rentable Square Foot (NNN)	Monthly Rent
1 - 12	$19.25	$18,642.02
13 - 24	$19.78	$19,155.29
25 - 36	$20.32	$19,678.23
37 - 48	$20.88	$20,220.54
49 - 60	$21.46	$20,782.23
61 - 72	$22.05	$21,353.59
73 - 84	$22.65	$21,934.64
85 - Expiration Date	$23.28	$22,544.74

PR Second Floor Expansion Premises (or respective portions thereof) (7,494 SF)

Months Following PR Second Floor Expansion Premises Expansion Date	Annual Base Rent per Rentable Square Foot (FS)	Monthly Rent
1 - 12	$25.00	$15,612.50
13 - 24	$25.69	$16,043.41
25 - 36	$26.39	$16,480.56
37 - 48	$27.12	$16,936.44
49 - 60	$27.87	$17,404.82
61 - 72	$28.63	$17,879.44
73 - 84	$29.42	$18,372.79
85 - Expiration Date	$30.23	$18,878.64

Landlord and Tenant agree to reasonably document (via e-mail or otherwise in writing) the relevant Expansion Date for each of the Expansion Premises, for the avoidance of confusion or misunderstanding.

DB First Floor Expansion Premises (7,416 SF)

Months Following RR Expansion Premises Expansion Date*	Annual Base Rent per Rentable Square Foot (NNN)	Monthly Rent
1 - 12	$19.25	$11,896.50
13 - 24	$19.78	$12,224.04
25 - 36	$20.32	$12,557.76
37 - 48	$20.88	$12,903.84
49 - 60	$21.46	$13,262.28
61 - 72	$22.05	$13,626.90
73 - 84	$22.65	$13,997.70
85 - Expiration Date	$23.28	$14,387.04

DB Second Floor Expansion Premises (7,416 SF)

Months Following PR Second Floor Expansion Premises Expansion Date*	Annual Base Rent per Rentable Square Foot (FS)	Monthly Rent
1 - 12	$25.00	$15,450.00
13 - 24	$25.69	$15,876.42
25 - 36	$26.39	$16,309.02
37 - 48	$27.12	$16,760.16
49 - 60	$27.87	$17,223.66
61 - 72	$28.63	$17,693.34
73 - 84	$29.42	$18,181.56
85 - Expiration Date	$30.23	$18,682.14

*Base Rent with respect to the DB First Floor Expansion Premises and the DB Second Floor Expansion Premises shall commence to accrue only as of the respective Expansion Dates applicable to each of such spaces. From and after the respective Expansion Date applicable to each of such spaces, Base Rent shall be payable in the amounts set forth in the foregoing tables (and any rental amounts shown in the foregoing tables as being in effect during the periods preceding such Expansion Dates shall be relevant only for the purpose of determining the applicable escalated rental amounts due from and after such Expansion Dates). The purpose of measuring the periods in the foregoing tables from the Expansion Dates applicable to the RR Expansion Premises and the PR Second Floor Expansion Premises is so that the Base Rent per rentable square foot in effect from time-to-time with respect to the DB First Floor Expansion Premises will be the same as the Base Rent per rentable square foot in effect with respect to the RR Expansion Premises, and the Base Rent per rentable square foot in effect from time-to-time with respect to the DB Second Floor Expansion Premises will be the same as the Base Rent per rentable square foot in effect with respect to the PR Second Floor Expansion Premises.

Notwithstanding anything in the foregoing to the contrary, provided no Event of Default then exists under the Lease, Landlord agrees to grant Tenant an abatement of the Base Rent due with respect to each of the Expansion Premises, in an amount as set forth herein. With respect to the RR Expansion Premises and the PR Second Floor Expansion Premises, the rental abatement shall be five (5) monthly installments of the Base Rent. With respect to each Expansion Premises having an Expansion Date later than February 1, 2017 (other than the RR Expansion Premises and the PR Second Floor Expansion Premises), the rental abatement shall be the product of (i) five (5) monthly installments of the Base Rent multiplied by (ii) a fraction, the numerator of which is the number of full calendar months remaining in the Term of this Lease as of the Expansion Date applicable to such Expansion Premises and the denominator of which is eighty-nine (89). Such abatement shall be applied to the monthly installments of Base Rent that would otherwise be due for the months commencing with January 2018; provided that, with respect to any Expansion Premises whose Expansion Date occurs later than January 1, 2018, the abatement period shall be the first full and partial calendar months following the Expansion Date applicable to such Expansion Premises.

4. Effective as of the Expansion Date for the RR Expansion Premises (which date is referred to herein as the "RR Adjustment Date"), the Base Rent with respect to the Current RR Premises shall be converted to a "triple-net" rental rate, and Tenant shall pay, with respect to the Current RR Premises, its Proportionate Share of all Operating Expenses from and after the Expansion Date for the RR Expansion Premises. Effective as of the RR Adjustment Date, the Base Rent with respect to the Current RR Premises shall be as set forth in the following table:

Current RR Premises (2,863 SF)

Period	Annual Base Rent per Rentable Square Foot (NNN)	Monthly Rent
RR Adjustment Date – 2/28/17	$15.25	$3,638.40
3/1/17 - 2/28/18	$15.67	$3,738.45
3/1/18 – 2/28/19	$16.10	$3,841.26
3/1/19 –2/28/20	$16.54	$3,946.89
3/1/20 – 2/29/21	$17.00	$4,055.43
3/1/21 – 7/31/21	$17.47	$4,166.96

5. Effective as of August 1, 2021, Base Rent with respect to the Current RR Premises and the Current DA Premises shall be the then-current rates of the Receiving Room (both on a NNN basis), as illustrated in the following tables:

Current RR Premises (2,863 SF)

Period*	Annual Base Rent per Rentable Square Foot (NNN)	Monthly Rent
8/1/21 – 60	$21.46	$5,120.00
61 – 72	$22.05	$5,260.76
73 – 84	$22.65	$5,403.91
85 – Expiration Date	$23.28	$5,554.22

*Escalations based on number of months following RR Expansion Premises Expansion Date, consistent with Section 3 of this Amendment.

Current DA Premises (16,701 SF)

Period*	Annual Base Rent per Rentable Square Foot (NNN)	Monthly Rent
8/1/21 – 60	$21.46	$29,866.96
61 – 72	$22.05	$30,688.09
73 – 84	$22.65	$31,523.14
85 – Expiration Date	$23.28	$32,399.94

*Escalations based on number of months following RR Expansion Premises Expansion Date, consistent with Section 3 of this Amendment.

6. Tenant's Proportionate Share of Operating Expenses with respect to the respective Expansion Premises is as follows:

Expansion Premises	Tenant's Proportionate Share of the Building	Tenant's Proportionate Share of the Project
RR Expansion Premises	79.25482%	12.76767%
PR Second Floor Expansion Premises	22.07039%	8.70729%
DB First Floor Expansion Premises	50.00000%	8.62655%
DB Second Floor Expansion Premises	50.00000%	8.62655%

The Base Rent stated above with respect to the RR Expansion Premises and the DB First Floor Expansion Premises is a "triple-net" rental rate, and Tenant shall pay, with respect to each such Expansion Premises, its Proportionate Share of all Operating Expenses from and after the Expansion Date applicable to each such Expansion Premises. The Base Rent stated above with respect to the PR Second Floor Expansion Premises and the DB Second Floor Expansion Premises is a "full-service" rental rate, and Tenant shall pay, with respect to each such Expansion Premises, from and after January 1, 2018, its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2017.

7. Landlord hereby agrees to grant Tenant an allowance ("Improvements Allowance") with respect to each Expansion Premises. The Improvements Allowance granted with respect to each Expansion Premises shall be calculated by reference to the Base Improvements Allowance per Rentable Square Foot ("Base Amount") set forth in the following table:

Expansion Premises	Base Improvements Allowance per Rentable Square Foot
RR Expansion Premises	$45.00
PR Second Floor Expansion Premises	$25.00
DB First Floor Expansion Premises	$45.00
DB Second Floor Expansion Premises	$25.00

For the RR Expansion Premises and the PR Second Floor Expansion Premises, the Improvements Allowance shall be the Base Amount set forth in the foregoing table. For each Expansion Premises having an Expansion Date later than February 1, 2017 (other than the RR Expansion Premises and the PR Second Floor Expansion Premises), the Improvements Allowance shall be the product of (i) the Base Amount set forth in the foregoing table multiplied by (ii) a fraction, the numerator of which is the number of full calendar months remaining in the Term of this Lease as of the Expansion Date applicable to such Expansion Premises and the denominator of which is eighty-nine (89).

The Improvements Allowances shall be applied toward the cost of the design and construction of any alterations Tenant desires to perform in the Expansion Premises in conjunction with Tenant's initial occupancy of such Expansion Premises. Any portion of the Improvements Allowances may be applied to pay the fees of the architect and engineers and any project manager employed by Tenant with respect to such alterations, as well as any permit costs and fees.

The cost of Tenant's alterations in each of the Expansion Premises shall be paid first out of the applicable Improvements Allowance until the Improvements Allowance is exhausted. Tenant shall deliver to Landlord, no more frequently than once per month, invoices for work performed hereunder together with any other supporting documentation reasonably requested by Landlord. Provided no Event of Default then exists under the Lease, the Improvements Allowance (or

portions thereof) shall be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices for work related to alterations performed by Tenant in the Expansion Premises, accompanied by waivers of liens executed by all contractors employed by Tenant for the performance of such work. If the cost of Tenant's alterations in the Expansion Premises exceeds the amount of the applicable Improvements Allowance, the excess shall be paid by Tenant after the Improvements Allowance is fully exhausted. Notwithstanding the foregoing, the Improvements Allowance associated with any particular Expansion Premises may be utilized by Tenant in the Expansion Premises with which it is associated and/or in any other Expansion Premises that is delivered to Tenant either concurrently with or following the delivery date of the Expansion Premises with which such Improvements Allowance is associated. Tenant may also submit invoices for an existing or completed Expansion Premises project when a new Improvements Allowance becomes available.

Any portion of the Improvements Allowance that has not been utilized by the date that is twelve (12) months following the last Expansion Date applicable to any of the Expansion Premises (as referenced in Section 2 of this Amendment) shall revert to Landlord.

In no event may any portion of the Improvements Allowances may be utilized with respect to alterations or refurbishment performed in the Current Premises.

8. Landlord hereby agrees to grant Tenant an allowance in the amount of $97,820.00 (the "Refurbishment Allowance"), to be applied toward the cost of performing alterations and refurbishment in the Current Premises. Any portion of the Refurbishment Allowances may be applied to pay the fees of the architect and engineers and any project manager employed by Tenant with respect to such alterations, as well as any permit costs and fees. Provided no Event of Default then exists under the Lease, the Refurbishment Allowance (or portions thereof) shall be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices for alterations or refurbishment performed by Tenant in the Current Premises after the date of this Amendment, accompanied by waivers of liens executed by all contractors employed by Tenant for the performance of such work (to the extent reasonably required). Requisitions shall be submitted by Tenant no more frequently than once per month. If the cost of Tenant's alterations and refurbishment in the Current Premises exceeds the amount of the Refurbishment Allowance, the excess shall be paid by Tenant after the Refurbishment Allowance is exhausted. Additionally, Tenant may elect to apply any unexpended Refurbishment Allowance toward work in any Expansion Premises, on the same terms and conditions as listed in Section 7 above.

9. Landlord acknowledges that, following delivery of the RR Expansion Premises to Tenant, Tenant will be the exclusive user of the “private shipping and receiving area” of the loading dock in the Receiving Room, as shown on the attached **Exhibit A** (the “S&R Area”), except as specifically provided herein. Landlord shall reasonably cooperate with Tenant to facilitate Tenant’s use of the loading dock as the primary user thereof; and Tenant agrees to afford Landlord and other tenants of the Receiving Room reasonable access to and use of such loading dock, provided that such access and use does not materially impair Tenant’s use of such facility. Landlord agrees that it will use best efforts to give Tenant not less than twenty-four (24) hours’ prior notice (which need not be in writing) to access and to use the loading dock so that Tenant can appropriately coordinate (clearance of space and security of items in the space). Tenant, at Tenant’s sole cost, shall relocate the existing mailboxes in the loading dock to a mutually-

agreeable location outside the S&R Area, and shall provide a means of access to the IT cabinet that does not require access through the S&R Area, such work to be subject to Landlord's reasonable prior approval.

10. Tenant shall have the right, at Tenant's expense and for its own use, to purchase, install, maintain and operate at the Project an emergency power generator (the "Generator") and a fuel tank (the "Tank") for the Generator, subject to the following terms and conditions:

(a) The Generator and Tank and associated wiring shall be installed by contractors reasonably pre-approved by Landlord, in a good and workmanlike manner and in accordance with the reasonable directions of Landlord relative thereto. Tenant and/or its contractors shall provide all appropriate insurance for such installation. Tenant shall deliver to Landlord detailed plans and specifications for the Generator and the Tank (including the proposed location of the Generator and the Tank) and a copy of Tenant's contract for installing the Generator and the Tank, which plans and specifications and contract and the location of the Generator and Tank shall be subject to Landlord's reasonable approval. If deemed desirable by Landlord, Tenant shall cause the space within which the Generator and Tank are located to be screened in a manner that is reasonably acceptable to Landlord.

(b) Tenant shall pay all costs of design, installation, operation, utilization, replacement, maintenance and removal of the Generator and the Tank, including (without limitation) the cost of any piping needed to connect the Generator and the Tank. Any damage to the Project or other property of Landlord or any other tenant resulting from the installation or maintenance of the Generator and Tank shall be promptly repaired at Tenant's sole cost and expense.

(c) Tenant covenants that it will not use its Generator or the Tank in a manner that will unreasonably interfere with Landlord's and/or any current or future tenant's use of the Project.

(d) Tenant shall be responsible for procuring all licenses and permits required for the installation, use or operation of the Generator and the Tank.

(e) The Generator and Tank shall be designed, constructed, installed, maintained and operated in strict compliance with all applicable environmental laws.

(f) Landlord shall have no liability for any damage to, or caused by, the Generator and Tank. Tenant hereby indemnifies and agrees to hold Landlord harmless from any loss or damage which Landlord may sustain in connection with the Generator and Tank, including all liabilities, costs or expenses of any kind or nature incurred in connection with any claim or proceeding brought thereon and the defense thereof.

(g) Tenant is hereby granted nonexclusive easements and licenses for (i) use of any shafts required to install the electrical wiring for the Generator; and (ii) access to the Generator and the Tank at all reasonable times and in emergencies. The Generator shall be connected to the Premises by electrical wiring, the installation of which shall be performed by Tenant's contractor, at Tenant's sole expense.

(h) At Landlord's request, the Generator and Tank and associated wiring and piping and any screening surrounding the Generator and Tank installed by Tenant hereunder shall be removed by Tenant, by contractors reasonably pre-approved by Landlord, in a good and workmanlike manner, upon the expiration or earlier termination of the Lease, at Tenant's sole cost and expense.

11. The parking rights granted to Tenant under the Lease shall increase proportionately upon the Expansion Date applicable to each Expansion Premises.

12. This Amendment and all provisions contained herein are contingent upon an executed lease termination agreement between Landlord and the existing tenant ("Roivant") for the PR Second Floor Expansion Premises, providing that the PR Second Floor Expansion Premises shall be surrendered to Landlord on or before January 1, 2017 (the "PR Termination Agreement"). If Landlord does not enter into said PR Termination Agreement within fifteen (15) days of the date of full execution of this Amendment, then Tenant shall be entitled to terminate this Amendment (and all of its obligations hereunder) by written notice delivered to Landlord within thirty (30) days following the date of full execution of this Amendment (unless Landlord has entered into the PR Termination Agreement prior to Tenant's delivery of its termination notice, in which event this Amendment shall remain in force and effect).

13. The Right of Refusal granted to Tenant pursuant to Paragraph 10 of the Second Amendment shall remain in force and effect during the Term of the Lease as extended by this Amendment.

14. Except to the extent any of such suites are sooner leased by Tenant pursuant to its Right of First Refusal, Landlord and Tenant hereby agree to the following "must-take" expansion provisions with respect to Suites 110, 120, 130, and 140 of the Prizery, as shown on **Exhibit B**:

(a) Landlord shall deliver Suite 130 and Suite 140, comprising approximately 3,162 rentable square feet ("PR First Floor Expansion Premises A") to Tenant on or around September 1, 2017 (the PR First Floor Expansion Premises A Target Date"). Landlord will use commercially reasonable efforts to meet the PR First Floor Expansion Premises A Target Date. In the event Landlord is unable to deliver possession of the PR First Floor Expansion Premises A to Tenant on the PR First Floor Expansion Premises A Target Date due to an existing tenant's failure to vacate such space or any other cause beyond Landlord's reasonable control, Landlord shall have no liability to Tenant, and Tenant's obligation to lease the PR First Floor Expansion Premises A shall not be nullified, provided Landlord shall use commercially reasonable efforts to deliver possession of the PR First Floor Expansion Premises A to Tenant as soon as possible following the PR First Floor Expansion Premises A Target Date. The Expansion Date for the PR First Floor Expansion Premises A shall be the 30th day following the date that Landlord delivers possession of PR First Floor Expansion Premises A to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order). Rent shall be paid on the same terms (on a per square foot basis) as the PR Second Floor Expansion Premises, and Tenant shall receive the same Improvement Allowance as the PR Second Floor Expansion Premises, on a per square foot basis, and prorated in accordance with Section 7 of this Amendment.

(b) Landlord shall deliver Suite 110 and Suite 120, comprising approximately 2,722 rentable square feet ("PR First Floor Expansion Premises B") to Tenant on or around November

1, 2018 (the "PR First Floor Expansion Premises B Target Date"). Landlord will use commercially reasonable efforts to meet the PR First Floor Expansion Premises B Target Date. In the event Landlord is unable to deliver possession of the PR First Floor Expansion Premises B to Tenant on the PR First Floor Expansion Premises B Target Date due to an existing tenant's failure to vacate such space or any other cause beyond Landlord's reasonable control, Landlord shall have no liability to Tenant, and Tenant's obligation to lease the PR First Floor Expansion Premises B shall not be nullified, provided Landlord shall use commercially reasonable efforts to deliver possession of the PR First Floor Expansion Premises B to Tenant as soon as possible following the PR First Floor Expansion Premises B Target Date. The Expansion Date for the PR First Floor Expansion Premises B shall be the 30th day following the date that Landlord delivers possession of PR First Floor Expansion Premises B to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order). Rent shall be paid on the same terms (on a per square foot basis) as the PR Second Floor Expansion Premises, and Tenant shall receive the same Improvement Allowance as the PR Second Floor Expansion Premises, on a per square foot basis, and prorated in accordance with Section 7 of this Amendment. Following the addition of PR First Floor Expansion Premises B to the Premises, Landlord agrees that Tenant may add the previously shared "common space" to its secured area, and Landlord and Tenant will mutually, in good faith, enter into a Lease amendment to document same.

(c) Notwithstanding anything in Paragraph 14(b) above, Tenant acknowledges that the current tenant of Suite 110 has the option to renew the term of its lease for an additional period of three (3) years. In the event the current tenant of Suite 110 timely exercises its renewal option, Landlord shall so notify Tenant in writing (the "Suite 110 Notice") within fifteen (15) business days of Landlord's receipt of same. In the event Landlord does not deliver the Suite 110 Notice to Tenant within fifteen (15) business days of the current tenant's renewal deadline (which renewal deadline Landlord represents, for the purposes of this Amendment, to be April 30, 2018), Landlord shall be conclusively deemed to have represented that the current Suite 110 tenant no longer has any valid right to renew, and Landlord shall initiate work promptly and diligently to meet the PR First Floor Expansion Premises B Target Date. Within thirty (30) days following Tenant's receipt of the Suite 110 Notice, Tenant may elect, by written notice to Landlord, to delete Suite 110 from the expansion space that is subject to the provisions of this Paragraph 14, in which event Landlord shall have no obligation to deliver possession of Suite 110 to Tenant at any time and Tenant shall have no obligation to lease Suite 110 from Landlord at any time. In the event Tenant does not timely exercise its right to delete Suite 110 from the expansion space under this Paragraph 14, then the delivery date for Suite 110 shall be extended to be the last day of the current tenant's three-year renewal term. Tenant's right pursuant to Paragraph 14(b) above to convert common space into secured area shall be inapplicable unless and until Suite 110 (as well as the remainder of PR First Floor Expansion Premises B) becomes part of the Premises demised to Tenant.

15. The Option to Extend granted to Tenant pursuant to Paragraph 11 of the Second Amendment shall remain in force and effect and shall be applicable to the period immediately following the Term of the Lease as extended by this Amendment.

16. Landlord and Tenant each warrant to the other that in connection with this Amendment neither has employed or dealt with any broker, agent or finder, other than CBRE-Raleigh, LLC and Cushman & Wakefield (the "Brokers"). Landlord acknowledges that it shall pay any commission or fee due to the Brokers, pursuant to a separate written agreement. Each party shall indemnify and hold the other harmless from and against any claim for brokerage or

other commissions asserted by any broker, agent or finder employed by the indemnifying party or with whom the indemnifying party has dealt, other than the Brokers.

IN WITNESS WHEREOF, Landlord and Tenant have executed and delivered this Amendment as of the day and year first above written.

WITNESS:	LANDLORD:
	VENABLE CENTER, LLC
Illegible	By: /s/ Esko I. Korhonen
	Title: Member
WITNESS:	TENANT:
	PRECISION BIOSCIENCES, INC.
Illegible	By: /s/ Todd Melby
	Title: COO

EXHIBIT A

FLOOR PLANS OF EXPANSION PREMISES

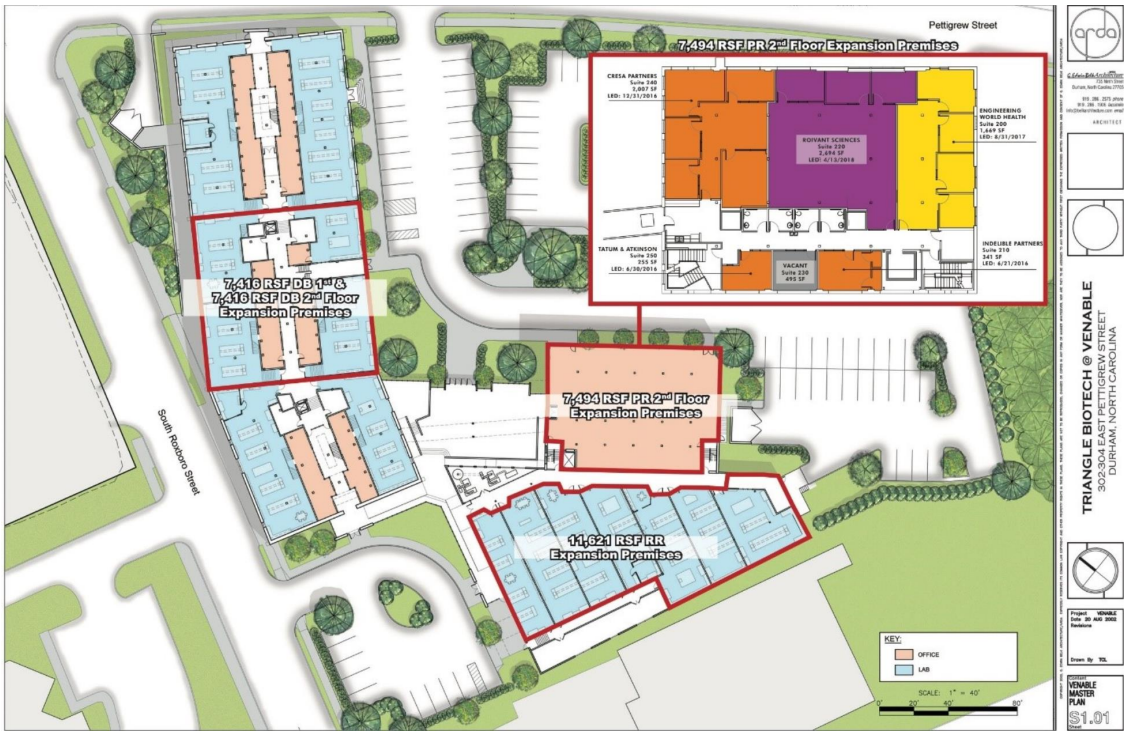
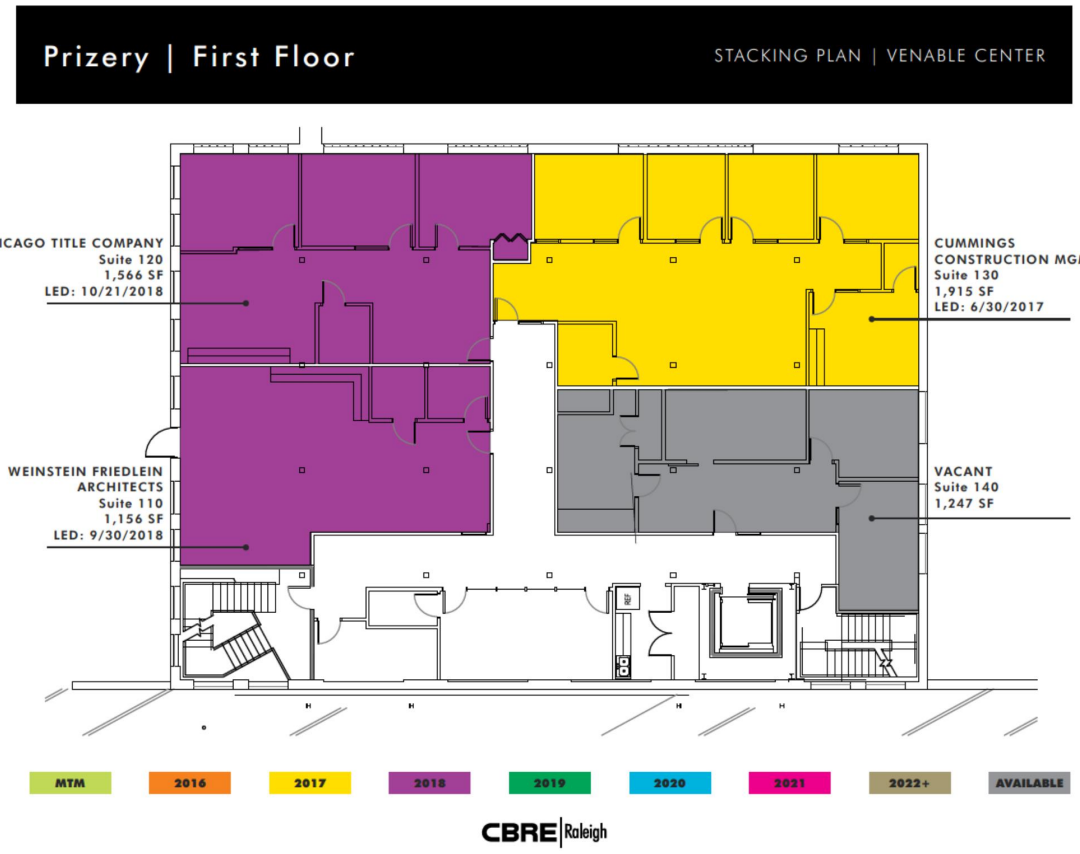
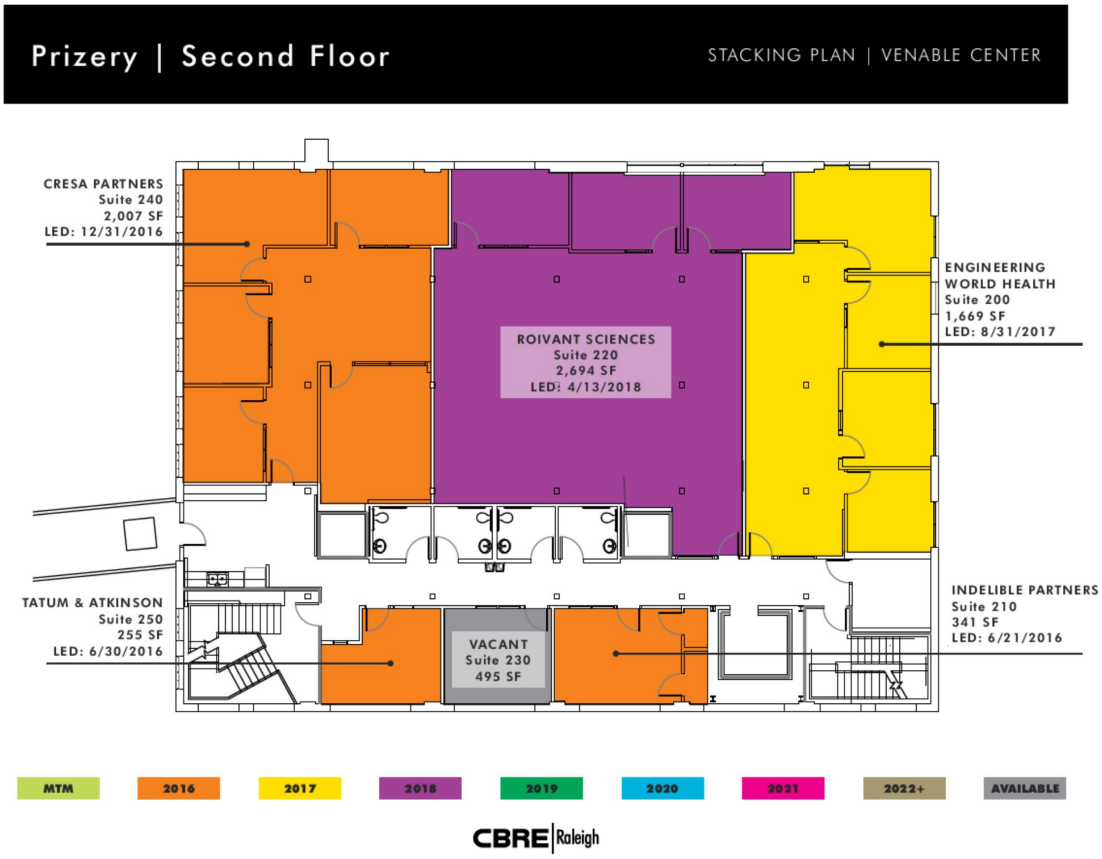


EXHIBIT B


Prizery | First Floor
STACKING PLAN | VENABLE CENTER
CHICAGO TITLE COMPANY
Suite 120
1,566 SF
LED: 10/21/2018
CUMMINGS
CONSTRUCTION MGMT
Suite 130
1,915 SF
LED: 6/30/2017
WEINSTEIN FRIEDLEIN
ARCHITECTS
Suite 110
1,156 SF
LED: 9/30/2018
VACANT
Suite 140
1,247 SF
MTM
2016
2017
2018
2019
2020
2021
2022+
AVAILABLE
CBRE Raleigh


Prizery | Second Floor
STACKING PLAN | VENABLE CENTER
CRESA PARTNERS
Suite 240
2,007 SF
LED: 12/31/2016
ROIVANT SCIENCES
Suite 220
2,694 SF
LED: 4/13/2018
ENGINEERING WORLD HEALTH
Suite 200
1,669 SF
LED: 8/31/2017
TATUM & ATKINSON
Suite 250
255 SF
LED: 6/30/2016
VACANT
Suite 230
495 SF
INDELIBLE PARTNERS
Suite 210
341 SF
LED: 6/21/2016
MTM
2016
2017
2018
2019
2020
2021
2022+
AVAILABLE
CBRE | Raleigh

FIFTH AMENDMENT TO LEASE AGREEMENT

THIS FIFTH AMENDMENT TO LEASE AGREEMENT (this "Amendment") is made as of the 24th day of January, 2018 by and between **VENABLE CENTER, LLC**, a North Carolina limited liability company ("Landlord"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("Tenant"), with respect to the following recitals:

(a) Landlord is the current owner of a group of interconnected buildings situated at 302 East Pettigrew Street, Durham, North Carolina known collectively as "Venable Center" (the "Project"), of which one of the buildings is known as the Prizery (the "Prizery") and one of the buildings is known as Dibrell C ("Dibrell C").

(b) Pursuant to that certain Lease Agreement dated April 5, 2010, as modified by a First Amendment to Lease Agreement dated August 19, 2011 and by a Second Amendment to the Lease Agreement dated July 13, 2015 (the "Second Amendment") and by a Third Amendment to the Lease Agreement dated January 12, 2016, and by a Fourth Amendment to the Lease Agreement dated September 30, 2016 (collectively, the "Lease"), Landlord (as successor to Venable Tenant LLC) leases to Tenant certain office space in the Project (the "Current Premises"), as more particularly described in the Lease;

(c) Landlord and Tenant have agreed to add certain space to the premises demised under the Lease, and to make certain other modifications to the Lease as set forth hereinbelow;

(d) All capitalized terms used in this Amendment that are not otherwise defined herein shall have the meanings ascribed to such terms in the Lease.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. Effective as of a date to be selected by Landlord and falling between May 1, 2018 and May 15, 2018 (the "Third Floor Expansion Date"), Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, Suite 300 (6,358 rsf), Suite 330 (546 rsf) and Suite 340 (202 rsf) in the Prizery (collectively, the "Third Floor Expansion Premises"), as outlined on Exhibit A attached hereto.

2. Base Rent with respect to the Third Floor Expansion Premises shall commence to be payable on the date which is three (3) months following the Third Floor Expansion Date (the "TFEP Rent Date"), and shall thereafter be as follows:

Period	Annual Base Rent per Rentable Square Foot (FS)	Monthly Rent
TFEP Rent Date – 2/28/19	$25.69	$15,212.76*
3/1/19 – 2/29/20	$26.39	$15,627.28
3/1/20 – 2/28/21	$27.12	$16,059.56
3/1/21 – 2/28/22	$27.87	$16,503.68
3/1/22 – 2/28/23	$28.63	$16,953.73
3/1/23 – 2/29/24	$29.42	$17,421.54
3/1/24 – 7/31/24	$30.23	$17,901.20

*prorated for any partial month

Notwithstanding anything in the foregoing to the contrary, provided no Event of Default then exists under the Lease, Landlord agrees to grant Tenant an abatement of the Base Rent due with respect to the Third Floor Expansion Premises, in an amount equal to $63,065.73. Such abatement shall be applied to the first monthly installments of Base Rent that would otherwise be due for the Third Floor Expansion Premises.

3. Tenant's Proportionate Share of Operating Expenses with respect to the Third Floor Expansion Premises is 20.92770% of the Prizery and 8.25647% of the Project. Tenant shall pay, with respect to the Third Floor Expansion Premises, from and after the thirtieth (30th) day following the Third Floor Expansion Date, its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2017.

4. Landlord hereby agrees to grant Tenant an allowance ("Third Floor Improvements Allowance") with respect to the Third Floor Expansion Premises in the amount of $151,701.12. The Third Floor Improvements Allowance shall be applied toward the cost of the design and construction of any alterations Tenant desires to perform in the Third Floor Expansion Premises in conjunction with Tenant's initial occupancy of such Third Floor Expansion Premises. Any portion of the Third Floor Improvements Allowance may be applied to pay the fees of the architect and engineers and any construction supervision, contractors' overhead and profit charges, along with fees for any project manager employed by Tenant with respect to such alterations, as well as any licensing and permitting costs and fees.

The cost of Tenant's alterations in the Third Floor Expansion Premises shall be paid first out of the Third Floor Improvements Allowance until the Third Floor Improvements Allowance is exhausted. Tenant shall deliver to Landlord, no more frequently than once per month, invoices for work performed hereunder together with any other supporting documentation reasonably requested by Landlord. Provided no Event of Default then exists under the Lease, the Third Floor Improvements Allowance (or portions thereof) shall be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices for work related to alterations performed by Tenant in the Third Floor Expansion Premises, accompanied by waivers of liens executed by all contractors employed by Tenant for the performance of such work. If the cost of Tenant's alterations

in the Third Floor Expansion Premises exceeds the amount of the Third Floor Improvements Allowance, the excess shall be paid by Tenant after the Third Floor Improvements Allowance is fully exhausted.

Any portion of the Third Floor Improvements Allowance that has not been utilized by the date that is twelve (12) months following the Third Floor Expansion Date shall revert to Landlord.

5. The parking rights granted to Tenant under the Lease shall increase proportionately upon the Third Floor Expansion Date.

6. Effective as of the "Dibrell Expansion Date" (as defined below), Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, approximately 2,848 rentable square feet of space in the Dibrell C building (collectively, the "Dibrell Expansion Premises"), as outlined on Exhibit B attached hereto. In the event the final BOMA calculation of the rentable area of the Dibrell Expansion Premises discloses that the rentable area of such space is less than 2,848 rentable square feet, the Monthly Rent set forth in Paragraph 7 below and Tenant's Proportionate Share of Operating Expenses with respect to the Dibrell Expansion Premises set forth in Paragraph 8 below shall be reduced pro rata. The "Dibrell Expansion Date" shall be the date following the date that the current tenant of a portion of the Dibrell Expansion Premises, One Cow Standing, LLC, vacates the space occupied by such tenant, so that the space may be delivered by Landlord to Tenant. The Dibrell Expansion Date is anticipated to occur on April 1, 2020, but Landlord shall have no liability to Tenant and this Amendment shall not be rendered void or voidable in the event Landlord is unable to deliver possession of the Dibrell Expansion Premises to Tenant by the anticipated Dibrell Expansion Date because the current tenant fails to vacate by such date (despite Landlord's commercially reasonable efforts to achieve same). In the event the current tenant vacates the Dibrell Expansion Premises prior to the anticipated Dibrell Expansion Date (such vacancy Landlord shall use commercially reasonable efforts to notify Tenant of at least thirty (30) days in advance), the Dibrell Expansion Date shall be the 90th day following the date that Landlord delivers possession of the Dibrell Expansion Premises to Tenant (in good and tenantable condition, broom clean, with all systems serving same in good working order). Landlord and Tenant agree to reasonably document (via e-mail or otherwise in writing) the Dibrell Expansion Date, for the avoidance of confusion or misunderstanding.

7. Base Rent with respect to the Dibrell Expansion Premises shall commence to be payable on the date which is three months following the Dibrell Expansion Date, and shall thereafter be as follows:

Period	Annual Base Rent per Rentable Square Foot (NNN)	Monthly Rent
4/1/20 – 3/31/21	$20.88	$4,955.52
4/1/21 – 3/31/22	$21.46	$5,093.17
4/1/22 – 3/31/23	$22.05	$5,233.20
4/1/23 – 3/31/24	$22.65	$5,375.60
4/1/24 – 7/31/24	$23.28	$5,525.12

The foregoing rent schedule presumes that the Dibrell Expansion Date will be no earlier than April 1, 2020. In the event the Dibrell Expansion Date occurs earlier than April 1, 2020, then (i) Annual Base Rent for any period falling between April 1, 2018 and March 31, 2019 for which rent is payable with respect to the Dibrell Expansion Premises shall be calculated based upon an annual rate of $19.78 per rentable square foot, and (ii) Annual Base Rent for any period falling between April 1, 2019 and March 31, 2020 for which rent is payable with respect to the Dibrell Expansion Premises shall be calculated based upon an annual rate of $20.32 per rentable square foot.

Notwithstanding anything in the foregoing to the contrary, provided no Event of Default then exists under the Lease, Landlord agrees to grant Tenant an abatement of the Base Rent due with respect to the Dibrell Expansion Premises, in an amount equal to the product of (i) five (5) monthly installments of the Base Rent initially applicable to the Dibrell Expansion Premises multiplied by (ii) a fraction, the numerator of which is the number of full calendar months remaining in the Term of the Lease as of the Dibrell Expansion Date and the denominator of which is eighty-nine (89). Such abatement shall be applied to the first monthly installments of Base Rent that would otherwise be due for the Dibrell Expansion Premises.

8. Tenant’s Proportionate Share of Operating Expenses with respect to the Dibrell Expansion Premises is 14.19% of Dibrell C and 3.30909% of the Project. Tenant shall pay, with respect to the Dibrell Expansion Premises, from and after the thirtieth (30th) day following the Dibrell Expansion Date, its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2017.

9. Landlord hereby agrees to grant Tenant an allowance (“Dibrell Improvements Allowance”) with respect to the Dibrell Expansion Premises in an amount (per rentable square foot in the Dibrell Expansion Premises) equal to the product of (i) $45.00 multiplied by (ii) a fraction, the numerator of which is the number of full calendar months remaining in the Term of this Lease as of the Dibrell Expansion Date and the denominator of which is eighty-nine (89). The Improvements Allowance shall be applied toward the cost of the design and construction of any alterations Tenant desires to perform in the Dibrell Expansion Premises in conjunction with Tenant’s initial occupancy of such Dibrell Expansion Premises. Any portion of the Dibrell Improvements Allowance may be applied to pay the fees of the architect and engineers and any construction supervision, contractors’ overhead and profit charges, along with fees for any project manager employed by Tenant with respect to such alterations, as well as any licensing and permitting costs and fees.

The cost of Tenant's alterations in the Dibrell Expansion Premises shall be paid first out of the Dibrell Improvements Allowance until the Dibrell Improvements Allowance is exhausted. Tenant shall deliver to Landlord, no more frequently than once per month, invoices for work performed hereunder together with any other supporting documentation reasonably requested by Landlord. Provided no Event of Default then exists under the Lease, the Dibrell Improvements Allowance (or portions thereof) shall be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices for work related to alterations performed by Tenant in the Dibrell Expansion Premises, accompanied by waivers of liens executed by all contractors employed by Tenant for the performance of such work. If the cost of Tenant's alterations in the Dibrell Expansion Premises exceeds the amount of the Dibrell Improvements Allowance, the excess shall be paid by Tenant after the Dibrell Improvements Allowance is fully exhausted.

Any portion of the Dibrell Improvements Allowance that has not been utilized by the date that is twelve (12) months following the Dibrell Expansion Date shall revert to Landlord.

10. The parking rights granted to Tenant under the Lease shall increase proportionately upon the Dibrell Expansion Date.

11. Landlord acknowledges that it is currently still working with Tenant to resolve certain HVAC issues, and will continue to work together with Tenant in good faith to accommodate Tenant's laboratory requirements related to same.

12. Landlord and Tenant further anticipate that, as previously discussed, a small amount of space may be added to the Dibrell Expansion Premises, after execution of this Amendment (and the parties agree that such space shall be subject to all economic terms and conditions of Section 7, 8, and 9 of this Amendment) To the extent reasonably requested by Landlord or Tenant, the parties shall enter into a confirmatory amendment or side letter after such space is added.

13. Landlord and Tenant each warrant to the other that in connection with this Amendment neither has employed or dealt with any broker, agent or finder, other than CBRE-Raleigh, LLC and Cushman & Wakefield (the "Brokers"). Landlord acknowledges that it shall pay any commission or fee due to the Brokers, pursuant to a separate written agreement. Each party shall indemnify and hold the other harmless from and against any claim for brokerage or other commissions asserted by any broker, agent or finder employed by the indemnifying party or with whom the indemnifying party has dealt, other than the Brokers.

14. As modified by this Amendment, the Lease continues in full force and effect.

IN WITNESS WHEREOF, Landlord and Tenant have executed and delivered this Amendment as of the day and year first above written.

WITNESS:	LANDLORD:
	VENABLE CENTER, LLC
Illegible	By: /s/ Esko I. Korhonen
	Title: President
WITNESS:	TENANT:
	PRECISION BIOSCIENCES, INC.
/s/ Renee Cramer	By: /s/ Todd Melby
	Title: COO

EXHIBIT A

FLOOR PLAN OF THIRD FLOOR EXPANSION PREMISES (Suite 300 & Suite 340)

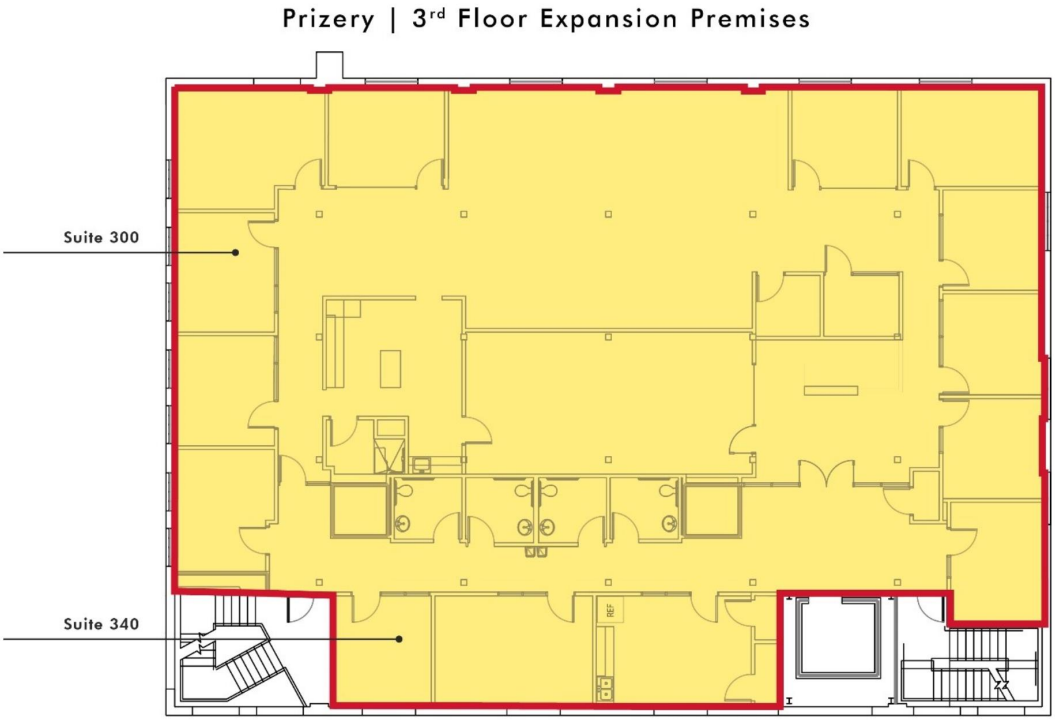
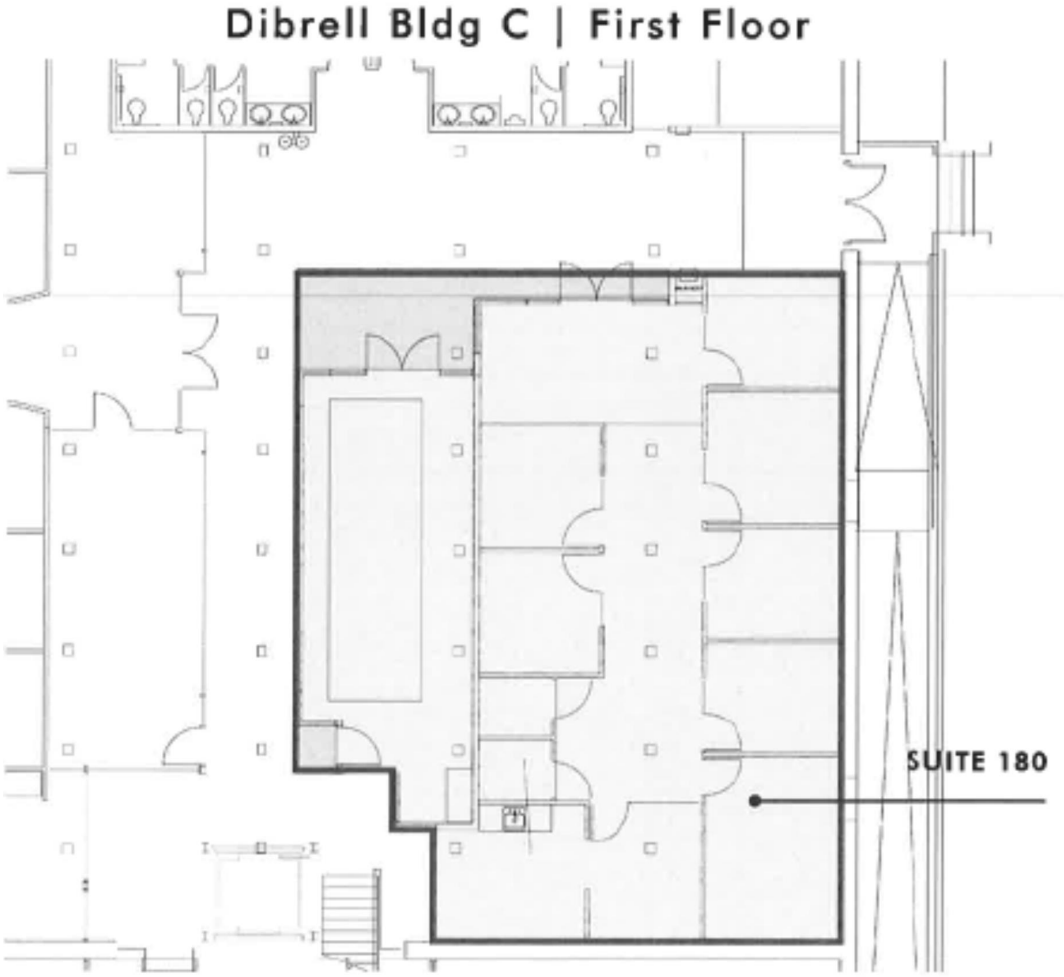


EXHIBIT B

FLOOR PLAN OF DIBRELL EXPANSION PREMISES



SIXTH AMENDMENT TO LEASE AGREEMENT

THIS SIXTH AMENDMENT TO LEASE AGREEMENT (this "Amendment") is made as of the 06 day of August, 2018 by and between **VC OWNER, LLC**, a North Carolina limited liability company ("Landlord"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("Tenant"), with respect to the following recitals:

A. Pursuant to that certain Lease Agreement dated April 5, 2010, as modified by a First Amendment to Lease Agreement dated August 19, 2011, and by a Second Amendment to Lease Agreement dated July 13, 2015, and by a Third Amendment to Lease Agreement dated January 12, 2016, and by a Fourth Amendment to Lease Agreement dated September 30, 2016, and by a Fifth Amendment to Lease Agreement dated January 24, 2018 (collectively, the "Lease"), Landlord (as successor to Venable Tenant LLC) leases to Tenant certain office space in the group of interconnected buildings situated at 302 East Pettigrew Street, Durham, North Carolina known collectively as “Venable Center” (the “Project”), as more particularly described in the Lease;

B. Landlord and Tenant have agreed to add certain space to the premises demised under the Lease, and to make certain other modifications to the Lease as set forth hereinbelow;

C. All capitalized terms used in this Amendment that are not otherwise defined herein shall have the meanings ascribed to such terms in the Lease.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, approximately 1,626 rentable square feet of space known as Suite C-185 (the "Suite C-185 Premises") in the Dibrell Building (the “Building”) in the Project, as outlined on Exhibit A attached hereto. The Term of the Lease with respect to the Suite C-185 Premises shall commence as of September 1, 2018, and shall be coterminous with the Term applicable to the remainder of the Premises. From and after September 1, 2018, the Suite C-185 Premises shall constitute a portion of the "Premises" for all purposes under the Lease. Landlord shall have no liability to Tenant in the event Landlord is unable to deliver possession of the Suite C-185 Premises to Tenant on September 1, 2018 due to the holding over by the prior tenant thereof or due to any other matter beyond Landlord’s reasonable control; however, in such event, rent with respect to the Suite C-185 Premises will not begin to accrue until the first business day after Landlord is able to deliver possession of the Suite C-185 Premises to Tenant, broom clean and free of any prior tenancy.

2. From and after September 1, 2018, Tenant shall pay monthly Base Rent with respect to the Suite C-185 Premises in the amount of $3,929.50 per month, which amount shall escalate by 3.0% per annum on September 1, 2019 and each September 1st thereafter. Notwithstanding the foregoing, provided Tenant is not then in default under the Lease beyond any applicable notice and cure period, Landlord agrees to abate the first four (4) monthly installments of Base Rent with respect to the Suite C-185 Premises (only).

3. Commencing on January 1, 2019, Tenant shall pay Additional Rent with respect to the Suite C-185 Premises pursuant to Section 6 of the Lease. With respect to the Suite C-185 Premises (only), Tenant's Proportionate Share shall be 3.14714% for the Building and 1.89723% for the Project, and Tenant shall pay its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2018.

4. Tenant shall accept the Suite C-185 Premises in their "as is" condition (subject to Landlord's continuing repair and maintenance obligations, as outlined in Section 10 of the Lease (as may be amended)), and Landlord shall have no obligation to make any alterations or improvements thereto whatsoever. Any alterations that Tenant desires to make in the Suite C-185 Premises shall be subject to all the terms and conditions set forth in Section 11 of the Lease. Landlord hereby agrees to grant Tenant an allowance (the "Granted Allowance") in the amount of $32,520.00, to be applied toward the cost (including architectural and engineering fees) of alterations performed by Tenant in the Suite C-185 Premises. The Granted Allowance will be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices with respect to such alterations, together with lien releases from Tenant's contractor(s) and any other supporting documentation reasonably required by Landlord. Any portion of the Granted Allowance that has not been applied (or contracted to be applied) in the manner set forth above by March 1, 2019 shall revert to Landlord, and Tenant shall have no further rights with respect thereto.

5. Concurrently with its execution of this Amendment, Tenant shall deliver to Landlord the sum of $3,929.50, which shall be added to Tenant's existing Security Deposit, and which combined sum shall continue to be held by Landlord throughout the Term pursuant to the provisions of Section 9 of the Lease.

6. Landlord and Tenant each warrant to the other that in connection with this Amendment neither has employed or dealt with any broker, agent or finder, other than CBRE-Raleigh, LLC and Cushman & Wakefield (the "Brokers"). Landlord acknowledges that it shall pay any commission or fee due to the Brokers, pursuant to a separate written agreement. Each party shall indemnify and hold the other harmless from and against any claim for brokerage or other commissions asserted by any broker, agent or finder employed by the indemnifying party or with whom the indemnifying party has dealt, other than the Brokers.

7. This Amendment and all provisions contained herein are contingent upon an executed lease termination agreement between Landlord and the existing tenant ("RS&H, Inc.") for the Suite C-185 Premises, providing that the Suite C-185 Premises shall be surrendered to Landlord on or before August 31, 2018 (the "RS&H Termination Agreement"). If Landlord does not enter into said RS&H Termination Agreement within fifteen (15) days of the date of full execution of this Amendment, then Tenant shall be entitled to terminate this Amendment (and all of its obligations hereunder) by written notice delivered to Landlord within thirty (30) days following the date of full execution of this Amendment (unless Landlord has entered into the RS&H Termination Agreement prior to Tenant's delivery of its termination notice, in which event this Amendment shall remain in force and effect).

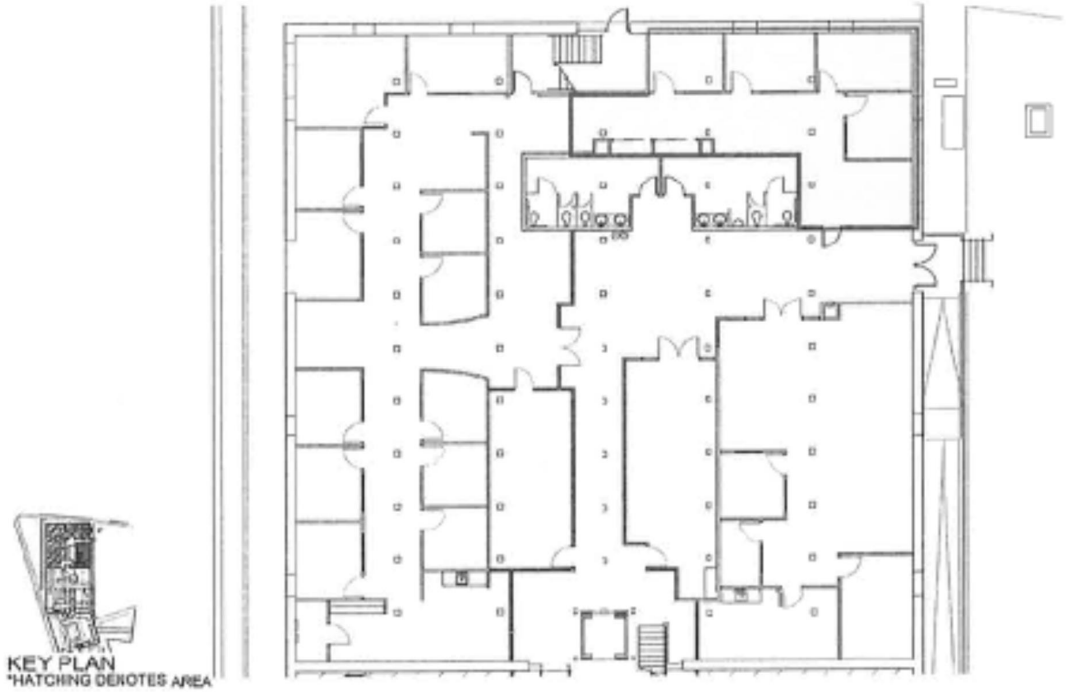
8. As modified by this Amendment, the Lease continues in full force and effect.

IN WITNESS WHEREOF, Landlord and Tenant have executed and delivered this Amendment as of the day and year first above written.

WITNESS:	LANDLORD:
	VC OWNER, LLC
_____	By: /s/ Jeff Sheehan
	Title: Authorized Signatory
WITNESS:	TENANT:
	PRECISION BIOSCIENCES, INC.
/s/ Matt Kane	By: /s/ Matt Kane
	Title: CEO

EXHIBIT A

FLOOR PLAN OF SUITE C-185 PREMISES



AMENDED AND RESTATED SEVENTH AMENDMENT TO LEASE AGREEMENT

THIS **AMENDED AND RESTATED SEVENTH AMENDMENT TO LEASE AGREEMENT** (this "Amendment") is made as of the ___ day of February, 2019 (the "Effective Date") by and between **VC OWNER, LLC**, a Delaware limited liability company ("Landlord"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("Tenant"), with respect to the following recitals:

A. Pursuant to that certain Lease Agreement dated April 5, 2010, as modified by a First Amendment to Lease Agreement dated August 19, 2011, and by a Second Amendment to Lease Agreement dated July 13, 2015, and by a Third Amendment to Lease Agreement dated January 12, 2016, and by a Fourth Amendment to Lease Agreement dated September 30, 2016 (the "Fourth Amendment"), and by a Fifth Amendment to Lease Agreement dated January 24, 2018 (the "Fifth Amendment"), by a Sixth Amendment to Lease Agreement dated August 6, 2018, and by a Seventh Amendment to Lease Agreement (the "Seventh Amendment") dated November 14, 2018 (collectively, the "Lease"), Landlord (as successor to Venable Tenant LLC) leases to Tenant certain office space in the group of interconnected buildings situated at 302 East Pettigrew Street, Durham, North Carolina known collectively as "Venable Center" (the "Project"), as more particularly described in the Lease;

B. Landlord and Tenant have agreed to add certain space to the premises demised under the Lease, to amend, restate, supersede, and replace that certain Seventh Amendment, and to make certain other modifications to the Lease as set forth hereinbelow; and

C. All capitalized terms used in this Amendment that are not otherwise defined herein shall have the meanings ascribed to such terms in the Lease.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. *Premises*. Subject to Section 7 of this Amendment, Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, (i) approximately 7,416 rentable square feet of space known as Suite WB100 (the "Suite WB100 Premises") in Dibrell B, which is located within the Dibrell Building (the "Building") in the Project, as outlined on Exhibit A-1 attached hereto and incorporated herein and (ii) approximately 7,416 rentable square feet of space known as Suite WB200 (the "Suite WB200 Premises", together with the Suite WB100 Premises, collectively, the "Premises") in the Building in the Project, as outlined on Exhibit A-2 attached hereto and incorporated herein. The Term of the Lease with respect to the Suite WB100 Premises shall commence as of March 1, 2019 (the "Suite WB100 Premises Seventh Amendment Commencement Date") and shall be coterminous with the Term applicable to the remainder of the Premises. The Term of the Lease with respect to the Suite WB200 Premises shall commence as of May 1, 2019 (the "Suite WB200 Premises Seventh Amendment Commencement Date", together with the Suite WB100 Premises Seventh Amendment Commencement Date, collectively, the "Seventh Amendment Commencement Date") and shall be coterminous with the Term applicable to the remainder of the Premises. From and after the Suite WB100 Premises Seventh

Amendment Commencement Date and the Suite WB200 Premises Seventh Amendment Commencement Date, respectively, the Suite WB100 Premises and the Suite WB200 Premises, respectively, shall constitute a portion of the "Premises" for all purposes under the Lease. Landlord shall have no liability to Tenant in the event Landlord is unable to deliver possession of the Suite WB100 Premises and the Suite WB200 Premises to Tenant on the Suite WB100 Premises Seventh Amendment Commencement Date and the Suite WB200 Premises Seventh Amendment Commencement Date, respectively, due to the holding over by the prior tenants thereof or due to any other matter beyond Landlord's reasonable control (and further provided that Landlord shall use commercially reasonable efforts to enforce its rights under the existing lease agreements as modified by the Amended and Restated Lease Termination Agreement, as hereinafter defined); however, in such event, Base Rent with respect to the Suite WB100 Premises and the Suite WB200 Premises, respectively, will not begin to accrue until the first business day after Landlord is able to deliver possession of the Suite WB100 Premises and the Suite WB200 Premises to Tenant, broom clean and free of any prior tenancy.

As of the Effective Date, the Suite WB100 Premises and the Suite WB200 Premises are occupied collectively by Hutson Law Office, P.A. ("Hutson Law") and Richard M. Hutson II, Chapter 13 Standing Trustee ("Chapter 13") with Hutson Law occupying a portion of Suite WB200 Premises in premises known as of the Effective Date as Suite B-260 and with Chapter 13 occupying Suite WB100 Premises and a portion of Suite WB200 Premises in premises known as of the Effective Date as Suite B-140. For purposes of clarity, as of the Seventh Amendment Commencement Date, the suites designated as of the Effective Date as Suite B-140 and Suite B-260 shall no longer have such designations and such premises shall be reconfigured and thereafter be known as Suite WB100 Premises and Suite WB200 Premises. Additionally, for purposes of clarity, Suite WB100 Premises is referred to in the Fourth Amendment as DB First Floor Expansion Premises and Suite WB200 Premises is referred to in the Fourth Amendment as DB Second Floor Expansion Premises.

2. *Rent*.

(a) *Suite WB100 Premises*. Except as set forth in Section 2(c) hereof, from the Suite WB100 Premises Seventh Amendment Commencement Date until the 90th day thereafter (the "100 Rent Commencement Date"), Tenant shall not be obligated to pay Base Rent or Operating Expenses with respect to the Suite WB100 Premises while it constructs the tenant improvements in Suite WB100 Premises. From and after the 100 Rent Commencement Date, Tenant shall pay

Base Rent with respect to the Suite WB100 Premises only in accordance with the following rent table:

Period	Rate	Annual Base Rent	Monthly Base Rent
100RCD*– January 31, 2020	$20.32	N/A	$12,557.76**
February 1, 2020 – January 31, 2021	$20.88	$154,846.08	$12,903.84
February 1, 2021 – January 31, 2022	$21.46	$159,147.36	$13,262.28
February 1, 2022 – January 31, 2023	$22.05	$163,522.80	$13,626.90
February 1, 2023 – January 31, 2024	$22.65	$167,972.40	$13,997.70
February 1, 2024 – July 31, 2024	$23.28	N/A	$14,387.04

*100 Rent Commencement Date.

**Notwithstanding anything in the Lease to the contrary (and specifically deleting the reference to the abatement of Base Rent for the DB First Floor Expansion Premises set forth in Section 3 of the Fourth Amendment), Landlord will forebear the obligation of Tenant to pay Base Rent only for the first three (3) months following the 100 Rent Commencement Date and a portion of the fourth (4th) month following the 100 Rent Commencement Date in the total amount of $39,831.14 (the "Suite WB100 Abated Payments").

(b) *Suite WB200 Premises*. Except as set forth in Section 2(c) hereof, from the Suite WB200 Premises Seventh Amendment Commencement Date until the 30th day thereafter (the "200 Rent Commencement Date"), Tenant shall not be obligated to pay Base Rent or Operating Expenses with respect to the Suite WB200 Premises while it constructs the tenant improvements in Suite WB200 Premises. From and after the 200 Rent Commencement Date, Tenant shall pay Base Rent with respect to the Suite WB200 Premises only in accordance with the following rent table:

Period	Rate	Annual/Periodic Base Rent	Monthly Base Rent
200RCD* – March 31, 2020	$26.39	N/A	$16,309.02**
April 1, 2020 – March 31, 2021	$27.12	$201,121.92	$16,760.16
April 1, 2021 – March 31, 2022	$27.87	$206,683.92	$17,223.66
April 1, 2022 – March 31, 2023	$28.63	$212,320.08	$17,693.34
April 1, 2023 – March 31, 2024	$29.42	$218,178.72	$18,181.56
April 1, 2024 – July 31, 2024	$30.23	N/A	$18,682.14

*200 Rent Commencement Date

**Notwithstanding anything in the Lease to the contrary (and specifically deleting the reference to the abatement of Base Rent for the DB Second Floor Expansion Premises set forth in Section 3 of the Fourth Amendment), Landlord will forebear the obligation of Tenant to pay Base

Rent only for the first three (3) months following the 200 Rent Commencement Date and a portion of the fourth (4th) month following the 200 Rent Commencement Date in the total amount of $52,078.65 (the "Suite WB200 Abated Payments").

(c) As a part of Tenant's willingness to incentivize Hutson Law and Chapter 13's early terminations of the Premises in order to facilitate Tenant's own leasing of the Premises, Tenant has agreed to pay a portion of the rent payments owed by Hutson Law and Chapter 13 to Landlord for the Premises. Notwithstanding anything in the Lease to the contrary, Landlord and Tenant hereby acknowledge and agree that Tenant shall make the following payments for the Premises to Landlord on or before the following dates:

Payment Due Date	Amount Due
March 1, 2019	$12,557.76
April 1, 2019	$12,557.76
May 1, 2019	$28,866.78
June 1, 2019	$28,866.78

3. *Additional Rent*.

(a) *Suite WB100 Premises*. Commencing on the 100 Rent Commencement Date, Tenant shall pay Additional Rent with respect to the Suite WB100 Premises pursuant to Section 6 of the Lease. With respect to the Suite WB100 Premises only, Tenant's Proportionate Share shall be (i) 14.36179%, which is the ratio of 7,416 (the rentable square footage of the Suite WB100 Premises) to 51,637 (the rentable square footage of the Building) for the Building, and (ii) 8.66436%, which is the ratio of 7,416 (the rentable square footage of the Suite WB100 Premises) to 85,592 (the rentable square footage of the Project) for the Project. Notwithstanding anything in the Lease to the contrary, with respect to the Suite WB100 Premises only, the Base Rent is a "triple-net" rental rate, and Tenant shall pay its Proportionate Share of all Operating Expenses from and after the Suite WB100 Premises Seventh Amendment Commencement Date. For purposes of clarity, the percentages set forth in the table in Section 6 of the Fourth Amendment for Tenant's Proportionate Share of the Building and Tenant's Proportionate Share of Project for DB First Floor Expansion Premises are hereby deleted in their entirety.

(b) *Suite WB200 Premises*. Commencing on the 200 Rent Commencement Date, Tenant shall pay Additional Rent with respect to the Suite WB200 Premises pursuant to Section 6 of the Lease. With respect to the Suite WB200 Premises (only), Tenant's Proportionate Share shall be (i) 14.36179%, which is the ratio of 7,416 (the rentable square footage of the Suite WB200 Premises) to 51,637 (the rentable square footage of the Building) for the Building, and (ii) 8.66436%, which is the ratio of 7,416 (the rentable square footage of the Suite WB200 Premises) to 85,592 (the rentable square footage of the Project) for the Project. Notwithstanding anything in the Lease to the contrary, with respect to the Suite WB200 Premises only, the Base Rent is a modified "full-service" rental rate, and commencing on the Suite WB200 Premises Seventh Amendment Commencement Date, Tenant shall pay its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2017. For purposes of clarity, the percentages set forth in the table in Section 6 of the Fourth Amendment for the Tenant's Proportionate Share of the Building and Tenant's Proportionate Share of Project for DB Second Floor Expansion Premises are hereby deleted in their entirety.

4. *Tenant Improvements*. Subject to this Section 4, Tenant shall accept the Suite WB100 Premises and Suite WB200 Premises in their "as is" condition (subject to Landlord's continuing repair and maintenance obligations, as outlined in Section 10 of the Lease (as may be amended)), and Landlord shall have no obligation to make any alterations or improvements thereto whatsoever (provided that Landlord shall deliver same in good and tenantable condition, broom clean, with all systems serving same in good working order). Any alterations that Tenant desires to make in the Suite WB100 Premises and Suite WB200 Premises shall be subject to all the terms and conditions set forth in Section 11 of the Lease. Notwithstanding anything in the Lease to the contrary (and specifically deleting the references to the Improvements Allowances (as defined in Section 7 of the Fourth Amendment) for the DB First Floor Expansion Premises and the DB Second Floor Expansion Premises in Section 7 of the Fourth Amendment), Landlord hereby agrees to grant Tenant (i) an allowance in the amount of $217,480.45 (i.e. $29.33 per rentable square foot multiplied by 7,416 rentable square feet) (the "Suite WB100 Granted Allowance") to be applied toward the cost (including architectural and engineering fees) of alterations performed by Tenant in the Suite WB100 Premises and (ii) an allowance in the amount of $124,988.76 (the "Suite WB200 Granted Allowance", together with the Suite WB100 Granted Allowance, collectively, the "Granted Allowance") to be applied toward the cost of the design and construction of any alterations Tenant desires to perform in Suite WB100 Premises and Suite WB200 Premises, respectively, in conjunction with Tenant's initial occupancy of Suite WB100 Premises and Suite WB200. Any portion of the Granted Allowance may be applied to pay the fees of the architect and engineers and any construction supervision, contractors' overhead and profit charges, along with fees for any project manager employed by Tenant with respect to such alterations, as well as any licensing and permitting costs and fees; provided, the Suite WB100 Granted Allowance may only be used for the Suite WB100 Premises and the Suite WB200 Granted Allowance may only be used for the Suite WB200 Premises.

The cost of Tenant's alterations in the Suite WB100 Premises shall be paid first out the Suite WB100 Granted Allowance until the Suite WB100 Granted Allowance is exhausted (at which time Tenant shall be fully responsible for the cost of any further alterations), and the cost of Tenant's alteration in the Suite WB200 Premises shall be paid first out the Suite WB200 Granted Allowance until the Suite WB200 Allowance is exhausted (at which time Tenant shall be fully

responsible for the cost of any further alterations). Provided no Event of Default then exists under the Lease, the Granted Allowance (or portions thereof) shall be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices for work related to alterations performed by Tenant in the Suite WB100 Premises and Suite WB200 Premises, accompanied by waivers of liens executed by all contractors employed by Tenant for the performance of such work. If the cost of Tenant's alterations in the Suite WB100 Premises or the Suite WB200 Premises exceeds the amount of the Suite WB100 Granted Allowance or the Suite WB200 Granted Allowance, the excess shall be paid by Tenant after the Suite WB100 Granted Allowance or the Suite WB200 Granted Allowance is fully exhausted. Any portion of the (i) Suite WB100 Granted Allowance that has not been applied (or contracted to be applied) in the manner set forth above by the date which is twelve (12) months following the Suite WB100 Premises Seventh Amendment Commencement Date shall revert to Landlord, and Tenant shall have no further rights with respect thereto and (ii) Suite WB200 Granted Allowance that has not been applied (or contracted to be applied) in the manner set forth above by the date which is twelve (12) months following the Suite WB200 Premises Seventh Amendment Commencement Date shall revert to Landlord, and Tenant shall have no further rights with respect thereto.

5. *Security Deposit*. Concurrently with its execution of this Amendment, Tenant shall deliver the sum of $28,434.18 to Landlord as an additional portion of the Security Deposit, and accordingly the Security Deposit shall be increased by $28,434.18, which shall be held by Landlord throughout the Term pursuant to the provisions of Section 9 of the Lease.

6. *Brokers*. Landlord and Tenant each warrant to the other that in connection with this Amendment neither has employed or dealt with any broker, agent or finder, other than CBRERaleigh, LLC (the "Landlord's Broker") and Cushman & Wakefield (the "Tenant's Broker", together with Landlord's Broker, collectively, "Brokers"). Landlord acknowledges that it shall pay any commission or fee due to the Landlord's Broker, pursuant to a separate written agreement. Landlord's Broker shall pay any commission or fee due to Tenant's Broker, pursuant to a separate written agreement. Each party shall indemnify and hold the other harmless from and against any claim for brokerage or other commissions asserted by any broker, agent or finder employed by the indemnifying party or with whom the indemnifying party has dealt, other than the Brokers.

7. *Contingency*. This Amendment and all provisions contained herein are contingent upon (i) an executed amended and restated lease termination agreement between Landlord and Hutson Law for the premises that Hutson Law leases from Landlord (the "Amended and Restated Hutson Law Lease Termination Agreement") and (ii) an executed amended and restated lease termination agreement between Landlord and Chapter 13 for the premises that Chapter 13 leases from Landlord (the "Amended and Restated Chapter 13 Lease Termination Agreement", together with the Amended and Restated Hutson Law Lease Termination Agreement, collectively, the "Amended and Restated Lease Termination Agreement"), providing that the Suite WB100 Premises and the Suite WB200 Premises shall be surrendered to Landlord on or before February 28, 2019 or April 30, 2019, respectively, in accordance with the Amended and Restated Lease Termination Agreement. In the event Landlord does not obtain the Amended and Restated Lease Termination Agreement by February 28, 2019, Landlord or Tenant shall thereafter have the right

to terminate this Amendment (prior to date of receipt of a fully executed Amended and Restated Lease Termination Agreement).

8. *Notices*. The Landlord notice information and payment information in Section 29(b) of the Lease is hereby deleted in its entirety and replaced with the following:

For Notice Information:	
Landlord:	VC Owner, LLC c/o Trinity Capital Advisors 440 S. Church Street, Suite 800 Charlotte, NC 28202 Attn: Asset Manager
With a copy to:	Longleaf Law Partners 2235 Gateway Access Point, Suite 201 Raleigh, NC 27607 Attnention: L. Penn Clarke
For Payment Information:	
Landlord:	VC Owner, LLC c/o TP Triangle 3020 Carrington Mill Blvd., Suite 425 Morrisville, NC 27560

9. *Acknowledgement*. Landlord and Tenant acknowledge that, to their actual knowledge, each party has complied with all of its obligations under the Lease to date, and, to the extent not expressly modified hereby, all of the terms and conditions of said Lease shall remain unchanged and in full force and effect.

10. *Seventh Amendment*. This Amendment amends, restates, supersedes and replaces that certain Seventh Amendment in its entirety.

11. *Dibrell Expansion Premises Clarification*. Sections 6 and 7 of the Fifth Amendment are clarified as follows: (i) the Dibrell Expansion Date is agreed to be June 1, 2018; (ii) Base Rent for the Dibrell Expansion Premises, from 1/1/2019 through 3/31/2020 shall be as follows:

1/1/2019 – 1/31/2019:	$3,708.62 (21% abatement)
2/1/2019 – 3/31/2019:	$4,694.45 per month
4/1/2019 – 3/31/2020:	$4,822.61 per month.

Beginning 4/1/2020, Base Rent for the Dibrell Expansion Premises shall follow the existing table in Section 7 of the Fifth Amendment.

12. *Miscellaneous*. The foregoing is intended to be an addition and a modification to the Lease. Except as modified and amended by this Amendment, the Lease shall remain in full

force and effect. If anything contained in this Amendment conflicts with any terms of the Lease, then the terms of this Amendment shall govern and any conflicting terms in the Lease shall be deemed deleted in their entirety. Each party to this Amendment shall execute all instruments and documents and take such further action as may be reasonably required to effectuate the purposes of this Amendment. This Amendment may be modified only by a writing executed by the parties hereto. This Amendment may be executed in multiple counterparts, each of which shall be deemed an original, and all such counterparts shall together constitute one and the same instrument. The invalidity of any portion of this Amendment shall not have any effect on the balance hereof. This Amendment shall be binding upon the parties hereto, as well as their successors, heirs, executors and assigns. This Amendment shall be governed by, and construed in accordance with North Carolina law.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, Landlord and Tenant have executed and delivered this Amendment as of the day and year first above written.

LANDLORD:

VC OWNER, LLC

By: /s/ Jeffrey B. Sheehan
Name: Jeffrey B. Sheehan
Title: Partner

TENANT:

PRECISION BIOSCIENCES, INC.

By: /s/ Matt Kane
Name: Matt Kane
Title: CEO

EXHIBIT A-1

FLOOR PLAN OF SUITE WB100 PREMISES

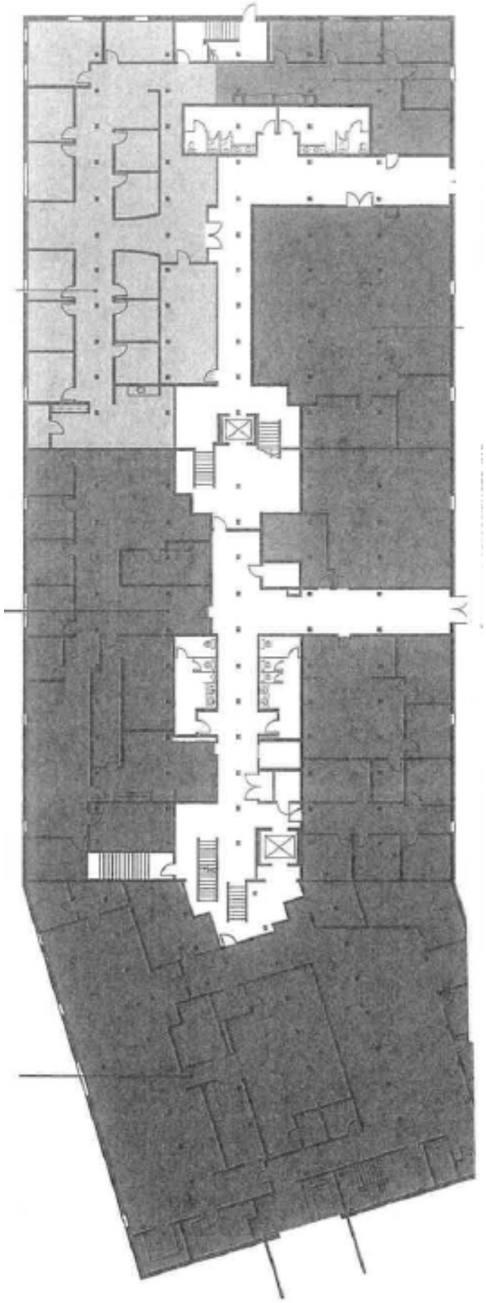
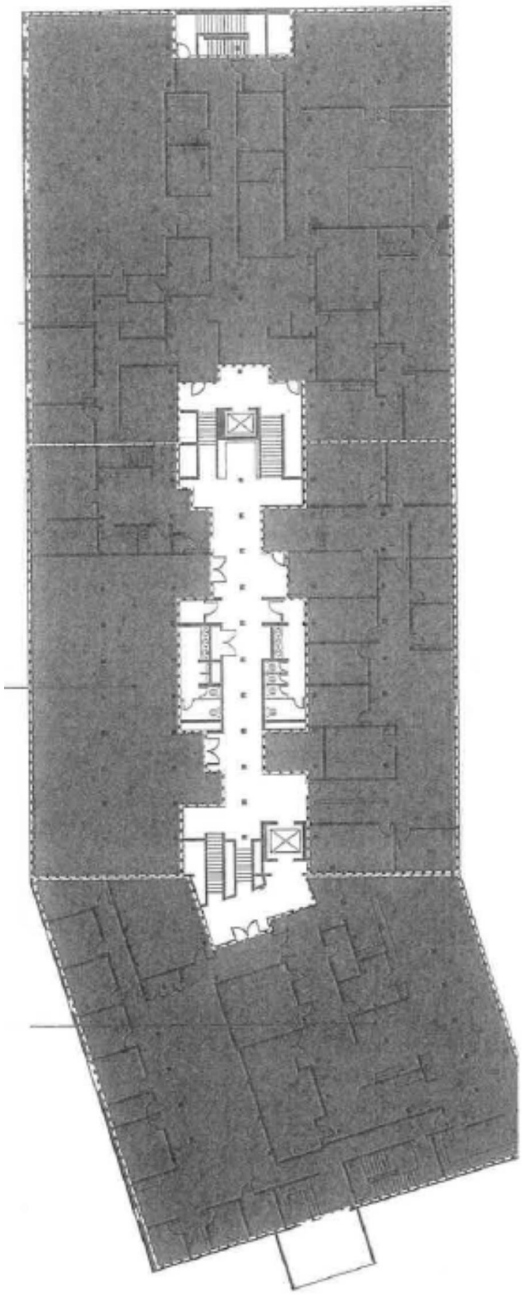


EXHIBIT A-2

FLOOR PLAN OF SUITE WB200 PREMISES



EIGHTH AMENDMENT TO LEASE AGREEMENT

THIS **EIGHTH AMENDMENT TO LEASE AGREEMENT** (this "Amendment") is made as of the 03 day of March, 2020 (the "Effective Date") by and between **VC OWNER, LLC**, a Delaware limited liability company ("Landlord"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("Tenant"), with respect to the following recitals:

D. Pursuant to that certain Lease Agreement dated April 5, 2010, as modified by a First Amendment to Lease Agreement dated August 19, 2011, and by a Second Amendment to Lease Agreement dated July 13, 2015, and by a Third Amendment to Lease Agreement dated January 12, 2016, and by a Fourth Amendment to Lease Agreement dated September 30, 2016 (the "Fourth Amendment"), and by a Fifth Amendment to Lease Agreement dated January 24, 2018, and by a Sixth Amendment to Lease Agreement dated August 6, 2018, and by a Seventh Amendment to Lease Agreement dated November 14, 2018, and an Amended and Restated Seventh Amendment to Lease Agreement dated February , 2019 (collectively, the "Lease"), Landlord (as successor to Venable Tenant LLC) leases to Tenant certain office space in the group of interconnected buildings situated at 302 East Pettigrew Street, Durham, North Carolina known collectively as "Venable Center" (the "Project"), as more particularly described in the Lease;

E. All capitalized terms used in this Amendment that are not otherwise defined herein shall have the meanings ascribed to such terms in the Lease.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

13. *Premises*. Subject to Section 6 of this Amendment, Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, approximately 1,164 rentable square feet of space known as Suite 110 (the "Suite 110 Premises") in the Prizery Building (the "Building") located within the Project, as outlined on Exhibit A attached hereto and incorporated herein. The Term of the Lease with respect to the Suite 110 Premises shall commence as of April 1, 2020 (the "Eighth Amendment Commencement Date") and shall be coterminous with the Term applicable to the remainder of the Premises. From and after the Eighth Amendment Commencement Date, Suite 110 Premises shall constitute a portion of the "Premises" for all purposes under the Lease. Landlord shall have no liability to Tenant in the event Landlord is unable to deliver possession of the Suite 110 Premises to Tenant on the Eighth Amendment Commencement Date due to the holding over by the prior tenant thereof or due to any other matter beyond Landlord's reasonable control (and further provided that Landlord shall use commercially reasonable efforts to enforce its rights under the existing lease agreement as modified by the Lease Termination Agreement, as hereinafter defined); however, in such event, Base Rent with respect to the Suite 110 Premises will not begin to accrue until the first business day after Landlord is able to deliver possession of the Suite 110 Premises, broom clean and free of any prior tenancy.

The Suite 110 Premises was a "must-take" expansion premises as set forth in Section 14 of the Fourth Amendment. Provided, however, and for purposes of clarity, due to the early termination of Weinstein's (as hereinafter defined) occupancy of the Suite 110 Premises in order

to facilitate Tenant's own leasing of the Suite 110 Premises, the parties acknowledge and agree that the "must-take provisions" of Section 14 of the Fourth Amendment shall not be applicable to Tenant's leasing of the Suite 110 Premises, and instead, the terms and conditions of this Eighth Amendment shall govern.

14. *Rent*.

(a) *Suite 110 Premises*. From and after the Eighth Amendment Commencement Date, Tenant shall pay Base Rent with respect to the Suite 110 Premises only in accordance with the following rent table:

Period	*Rate*	*Annual Base Rent*	*Monthly Base Rent*
EACD* – January 31, 2021	$32.50	N/A	$3,152.50
February 1, 2021 – January 31, 2022	$33.48	$38,970.72	$3,247.56
February 1, 2022 – January 31, 2023	$34.48	$40,134.72	$3,344.56
February 1, 2023 – January 31, 2024	$35.51	$41,333.64	$3,444.47
February 1, 2024 – July 31, 2024	$36.58	N/A	$3,548.26

* Eighth Amendment Commencement Date.

(b) As a part of Tenant's willingness to incentivize Weinstein's early termination of the Suite 110 Premises in order to facilitate Tenant's own leasing of the Suite 110 Premises, Tenant has agreed to pay a portion of the rent payments owed by Weinstein to Landlord for the Suite 110 Premises. Notwithstanding anything in the Lease to the contrary, Landlord and Tenant hereby acknowledge and agree that Tenant shall make the following payment for the Premises to Landlord on or before the following date: $19,000.00 on the date that is ten (10) days following the Effective Date.

15. *Additional Rent*. Commencing on the Eighth Amendment Commencement Date, Tenant shall pay Additional Rent with respect to the Suite 110 Premises pursuant to Section 6 of the Lease. With respect to the Suite 110 Premises (only), Tenant's Proportionate Share shall be (i) 5.59% which is the ratio of 1,164 (the rentable square footage of the Suite 110 Premises) to 20,814 (the rentable square footage of the Building, and (ii) 1.33%, which is the ratio of 1,164 (the rentable square footage of the Suite 110 Premises) to 87,416 (the rentable square footage of the Project) for the Project. Notwithstanding anything in the Lease to the contrary, with respect to the Suite 110 Premises only, the Base Rent is a modified "full-service" rental rate, and commencing on January 1, 2021, Tenant shall pay its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2020.

16. *Tenant Improvements*. Subject to this Section 4, Tenant shall accept the Suite 110 Premises in its "as is" condition (subject to Landlord's continuing repair and maintenance obligations, as outlined in Section 10 of the Lease (as may be amended)), and Landlord shall have no obligation to make any alterations or improvements thereto whatsoever (provided that Landlord

shall deliver same in good and tenantable condition, broom clean, with all systems serving same in good working order). Any alterations that Tenant desires to make in the Suite 110 Premises shall be subject to all the terms and conditions set forth in Section 11 of the Lease. Notwithstanding anything in the Lease to the contrary, Landlord hereby agrees to grant Tenant an allowance in the amount of $10,000 to be applied toward the cost (including architectural and engineering fees) of alterations performed by Tenant in the Suite 110 Premises (the "Granted Allowance") in conjunction with Tenant's initial occupancy of Suite 110 Premises.

Provided no Event of Default then exists under the Lease, the Granted Allowance (or portions thereof) shall be disbursed to Tenant within thirty (30) days following Tenant's submission to Landlord of paid invoices for work related to alterations performed by Tenant in the Suite 110 Premises, accompanied by waivers of liens executed by all contractors employed by Tenant for the performance of such work. If the cost of Tenant's alterations in the Suite 110 Premises exceeds the amount of the Granted Allowance, the excess shall be paid by Tenant after the Granted Allowance is fully exhausted. Any portion of the Granted Allowance that has not been applied (or contracted to be applied) in the manner set forth above by the date which is twelve (12) months following the Eighth Amendment Commencement Date shall revert to Landlord, and Tenant shall have no further rights with respect thereto.

17. *Brokers*. Landlord and Tenant each warrant to the other that in connection with this Amendment neither has employed or dealt with any broker, agent or finder, other than CBRERaleigh, LLC (the "Landlord's Broker") and Cushman & Wakefield (the "Tenant's Broker", together with Landlord's Broker, collectively, "Brokers"). Landlord acknowledges that it shall pay any commission or fee due to the Landlord's Broker, pursuant to a separate written agreement. Landlord's Broker shall pay any commission or fee due to Tenant's Broker, pursuant to a separate written agreement. Each party shall indemnify and hold the other harmless from and against any claim for brokerage or other commissions asserted by any broker, agent or finder employed by the indemnifying party or with whom the indemnifying party has dealt, other than the Brokers.

18. *Contingency*. This Amendment and all provisions contained herein are contingent upon an executed lease termination agreement between Landlord and Weinstein Friedlein Architects, P.A. ("Weinstein") for the Suite 110 Premises (the "Lease Termination Agreement"), providing that the Suite 110 Premises shall be surrendered to Landlord on or before March 31, 2020, in accordance with the Lease Termination Agreement. In the event Landlord does not obtain the Lease Termination Agreement by March 31, 2020, Landlord or Tenant shall thereafter have the right to terminate this Amendment (prior to date of receipt of a fully executed Lease Termination Agreement).

19. *Parking*. The parties acknowledge and agree that Landlord (or an affiliate of Landlord) is constructing an office building on a nearby and/or adjacent parcel. Notwithstanding anything in the Lease to the contrary, during the period of time in which Landlord is constructing said office building, (i) Tenant shall not be able to use the parking lot in front of the Building as shown on Exhibit B and (ii) Landlord shall provide Tenant with off-site parking and transportation to and from said off-site parking area to and from the Building.

20. *Acknowledgement*. Landlord and Tenant acknowledge that, to their actual knowledge, each party has complied with all of its obligations under the Lease to date, and, to the extent not expressly modified hereby, all of the terms and conditions of said Lease shall remain unchanged and in full force and effect.

21. *Miscellaneous*. The foregoing is intended to be an addition and a modification to the Lease. Except as modified and amended by this Amendment, the Lease shall remain in full force and effect. If anything contained in this Amendment conflicts with any terms of the Lease, then the terms of this Amendment shall govern and any conflicting terms in the Lease shall be deemed deleted in their entirety. Each party to this Amendment shall execute all instruments and documents and take such further action as may be reasonably required to effectuate the purposes of this Amendment. This Amendment may be modified only by a writing executed by the parties hereto. This Amendment may be executed in multiple counterparts, each of which shall be deemed an original, and all such counterparts shall together constitute one and the same instrument. The invalidity of any portion of this Amendment shall not have any effect on the balance hereof. This Amendment shall be binding upon the parties hereto, as well as their successors, heirs, executors and assigns. This Amendment shall be governed by, and construed in accordance with North Carolina law.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, Landlord and Tenant have executed and delivered this Amendment as of the day and year first above written.

LANDLORD:

VC OWNER, LLC

By: /s/ Jeff Sheehan
Name: Jeff Sheehan
Title: Authorized Signator

TENANT:

PRECISION BIOSCIENCES, INC.

By: /s/ Sinu Bhandaru
Name: Sinu Bhandaru
Title: Vice-President Operations & IT
03March2020

EXHIBIT A

FLOOR PLAN OF SUITE 110 PREMISES

EXHIBIT B

PARKING LOT

NINTH AMENDMENT TO LEASE AGREEMENT

THIS **NINTH AMENDMENT TO LEASE AGREEMENT** (this "Amendment") is made as of the 31st day of August, 2020 (the "Effective Date") by and between **VENABLE HISTORIC, LLC**, a Delaware limited liability company ("Landlord"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("Tenant"), with respect to the following recitals:

A. Pursuant to that certain Lease Agreement dated April 5, 2010 (the "Original Lease"), as modified by a First Amendment to Lease Agreement dated August 19, 2011, and by a Second Amendment to Lease Agreement dated July 13, 2015, and by a Third Amendment to Lease Agreement dated January 12, 2016, and by a Fourth Amendment to Lease Agreement dated September 30, 2016 (the "Fourth Amendment"), and by a Fifth Amendment to Lease Agreement dated January 24, 2018, and by a Sixth Amendment to Lease Agreement dated August 6, 2018, and by a Seventh Amendment to Lease Agreement dated November 14, 2018, an Amended and Restated Seventh Amendment to Lease Agreement dated February ___, 2019, and an Eighth Amendment to Lease Agreement dated March 3, 2020 (collectively, the "Lease"), Landlord (as successor to Venable Tenant LLC, and VC Owner, LLC) leases to Tenant certain office space in the group of interconnected buildings situated at 302 East Pettigrew Street, Durham, North Carolina known collectively as "Venable Center" (the "Project"), as more particularly described in the Lease;

B. All capitalized terms used in this Amendment that are not otherwise defined herein shall have the meanings ascribed to such terms in the Lease.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. *Premises*. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, approximately 330 rentable square feet of space known as Suite 100 (the "Suite 100 Premises") in the Prizery Building (the "Building") located within the Project, as outlined on Exhibit A attached hereto and incorporated herein. The Term of the Lease with respect to the Suite 100 Premises shall commence as of September 1, 2020 (the "Ninth Amendment Commencement Date") and shall be coterminous with the Term applicable to the remainder of the Premises. From and after the Ninth Amendment Commencement Date, the Suite 100 Premises shall constitute a portion of the "Premises" for all purposes under the Lease. Landlord shall have no liability to Tenant in the event Landlord is unable to deliver possession of the Suite 100 Premises to Tenant on the Ninth Amendment Commencement Date due to the holding over by the prior tenant thereof or due to any other matter beyond Landlord's reasonable control (and further provided that Landlord shall use commercially reasonable efforts to enforce its rights under the existing lease agreement for the tenant currently occupying the Suite 100 Premises); however, in the event Landlord is unable to deliver possession of the Suite 100 Premises on or before the Suite 100 Rent Commencement Date (defined below), Base Rent with respect to the Suite 100 Premises

will not begin to accrue until the first business day after Landlord is able to deliver possession of the Suite 100 Premises, broom clean and free of any prior tenancy.

2. *Base Rent for Suite 100 Premises*. From and after October 1, 2020, (the "Suite 100 Rent Commencement Date"), Tenant shall pay Base Rent with respect to the Suite 100 Premises only in accordance with the following rent table:

Period	Rate	Annual Base Rent	Monthly Base Rent
Suite 100 RCD* – January 31, 2021	$32.50	*N/A*	$893.75
February 1, 2021 – January 31, 2022	$33.48	$11,048.40	$920.70
February 1, 2022 – January 31, 2023	$34.48	$11,378.40	$948.20
February 1, 2023 – January 31, 2024	$35.51	$11,718.36	$976.53
February 1, 2024 – July 31, 2024	$36.58	*N/A*	$1,005.95

* Suite 100 Rent Commencement Date.

3. *Additional Rent*. Commencing on the Suite 100 Rent Commencement Date, Tenant shall pay Additional Rent with respect to the Suite 100 Premises pursuant to Section 6 of the Original Lease. With respect to the Suite 100 Premises (only), Tenant's Proportionate Share shall be (i) 1.59%, which is the ratio of 330 (the rentable square footage of the Suite 100 Premises) to 20,814 (the rentable square footage of the Building), and (ii) 0.38%, which is the ratio of 330 (the rentable square footage of the Suite 100 Premises) to 87,416 (the rentable square footage of the Project) for the Project. Notwithstanding anything in the Lease to the contrary, with respect to the Suite 100 Premises only, the Base Rent is a modified "full-service" rental rate, and commencing on January 1, 2021, Tenant shall pay its Proportionate Share of increases in Operating Expenses over the Operating Expenses incurred in calendar year 2020.

4. *Tenant Improvements*. Subject to this Section 4, Tenant shall accept the Suite 100 Premises in its "as is" condition (subject to Landlord's continuing repair and maintenance obligations, as outlined in Section 10 of the Original Lease (as may be amended)), and Landlord shall have no obligation to make any alterations or improvements thereto whatsoever (provided that Landlord shall deliver same in good and tenantable condition, broom clean, with all systems serving same in good working order). Any alterations that Tenant desires to make in the Suite 100 Premises shall be subject to all the terms and conditions set forth in Section 11 of the Original Lease.

5. *Brokers*. Landlord and Tenant each warrant to the other that in connection with this Amendment neither has employed or dealt with any broker, agent or finder, other than CBRERaleigh, LLC (the "Landlord's Broker") and Cushman & Wakefield (the "Tenant's

Broker", together with Landlord's Broker, collectively, "Brokers"). Landlord acknowledges that it shall pay any commission or fee due to the Landlord's Broker, pursuant to a separate written agreement. Landlord's Broker shall pay any commission or fee due to Tenant's Broker, pursuant to a separate written agreement. Each party shall indemnify and hold the other harmless from and against any claim for brokerage or other commissions asserted by any broker, agent or finder employed by the indemnifying party or with whom the indemnifying party has dealt, other than the Brokers.

6. *Notices*. The Landlord notice information and payment information in Section 29(b) of the Original Lease, as amended by Section 8 of the Amended and Restated Seventh Amendment to Lease Agreement is hereby deleted in its entirety, and replaced with the addresses set forth on Exhibit B, attached hereto and incorporated by reference.

7. *Acknowledgement*. Landlord and Tenant acknowledge that, to their actual knowledge, each party has complied with all of its obligations under the Lease to date, and, to the extent not expressly modified hereby, all of the terms and conditions of said Lease shall remain unchanged and in full force and effect.

8. *Miscellaneous*. The foregoing is intended to be an addition and a modification to the Lease. Except as modified and amended by this Amendment, the Lease shall remain in full force and effect. If anything contained in this Amendment conflicts with any terms of the Lease, then the terms of this Amendment shall govern and any conflicting terms in the Lease shall be deemed deleted in their entirety. Each party to this Amendment shall execute all instruments and documents and take such further action as may be reasonably required to effectuate the purposes of this Amendment. This Amendment may be modified only by a writing executed by the parties hereto. This Amendment may be executed in multiple counterparts, each of which shall be deemed an original, and all such counterparts shall together constitute one and the same instrument. The invalidity of any portion of this Amendment shall not have any effect on the balance hereof. This Amendment shall be binding upon the parties hereto, as well as their successors, heirs, executors and assigns. This Amendment shall be governed by, and construed in accordance with North Carolina law.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, Landlord and Tenant have executed and delivered this Amendment as of the day and year first above written.

LANDLORD:

VC HISTORIC, LLC
a Delaware limited liability company

By: /s/ Jeff Sheehan
Name: Jeff Sheehan
Title: Manager

TENANT:

PRECISION BIOSCIENCES, INC.
a Delaware corporation

By: /s/ Sinu Bhandaru
Name: Sinu Bhandaru
Title: Vice-President Operations & IT

EXHIBIT A

FLOOR PLAN OF SUITE 100 PREMISES

EXHIBIT B

LANDLORD NOTICE AND PAYMENT ADDRESSES

For Notice Information

Landlord:	Venable Historic, LLC c/o Jordan Park Group LLC 100 Pine Street, Suite 2600 San Francisco, CA 94111 Attention: Legal and Compliance Email: legalcompliance@jordanpark.com
And to:	c/o Trinity Capital Advisors, LLC 440 South Church Street, Suite 800 Charlotte, NC 28202 Attn: Jeff Sheehan Email: jsheehan@trinitycapitaladvisors.com
And to:	c/o SLI Capital, LLC 424 Six Forks Rd, Suite 820 Raleigh, NC 27609 Attn: Bryan Kane Email: bmk@slicap.com
With copy to:	Sidley Austin LLP 484 Seventh Avenue New York, NY 10019 Attn: Steven C. Koppel Email: skoppel@sidley.com
With copy to:	Troutman Pepper Hamilton Sanders LLP 301 South College Street, Suite 3400 Charlotte, NC 28202 Attn: Patrick L. Ridinger Email: patrick.ridinger@troutman.com

For Payment Information:

Landlord:	Venable Historic, LLC c/o TP Triangle, LLC 3020 Carrington Mill Blvd, Suite 425 Morrisville, NC 27560 For ACH payments: JPMorgan Chase Bank, N.A. 383 Madison Avenue New York, New York 10017 ABA # - 021000021 Account Number – 758985498 For Account of - VENABLE HISTORIC, LLC

Exhibit 10.11

LEASE

BIOPOINT INNOVATION LABS

DURHAM TW ALEXANDER, LLC,

a Delaware limited liability company

as Landlord,

and

PRECISION BIOSCIENCES, INC.,

a Delaware corporation,

as Tenant.

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EXHIBITS

BIOPOINT INNOVATION LABS

LEASE

This Lease (the "**Lease**"), dated as of the date set forth in Section 1 of the Summary of Basic Lease Information (the "**Summary**"), below, is made by and between **DURHAM TW ALEXANDER, LLC,** a Delaware limited liability company ("**Landlord**"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation ("**Tenant**").

SUMMARY OF BASIC LEASE INFORMATION

TERMS OF LEASE	DESCRIPTION
1.Date:	October 2nd, 2018
2.Premises (Article 1).	
2.1Building:	That certain office building containing approximately 148,989 rentable square feet of space located at 20 TW Alexander Drive, Research Triangle Park, NC 27709.
2.2Premises:	Approximately 17,296 rentable square feet of space on the first (1st) floor of the Building and commonly known as Suite 130, as further set forth in **Exhibit C** to the Lease.
3.Lease Term (Article 2).	
3.1Length of Term:	Eighty-six (86) months.
3.2Lease Commencement Date:	The date of Lease execution.
3.3Rent Commencement Date:	Nine (9) months after the Lease Commencement Date.
3.4Lease Expiration Date:	Eighty-six (86) months after the Rent Commencement Date.

4.Base Rent (Article 3):

Time Period	Annual Base Rent	Monthly Installment of Base Rent	Annual Base Rent per Rentable Square Foot
Year 1**	$449,696.04	$37,474.67	$26.00
Year 2	$463,186.92	$38,598.91	$26.78
Year 3	$477,023.64	$39,751.97	$27.58
Year 4	$491,379.36	$40,948.28	$28.41
Year 5	$506,080.92	$42,173.41	$29.26
Year 6	$521,301.48	$43,441.79	$30.14
Year 7	$537,040.80	$44,753.40	$31.05
Year 8	$553,126.08	$46,093.84	$31.98

*Note: Provided Tenant is not in default of the terms of this Lease, after expiration of any applicable notice and cure period, Tenant shall have no obligation to pay any Base Rent attributable to the first two (2) months of the Lease Term following the Rent Commencement Date (the "**Abatement Period**"). Tenant shall be obligated to pay Tenant's Share of Direct Expenses attributable to the Abatement Period.

5.Tenant Improvements Allowance: The improvements in the Premises shall be constructed in accordance with the terms of the Tenant Work Letter attached hereto as **Exhibit D** up to a cost of $70.58 per rentable square foot.

6.NNN Lease. In addition to the Base Rent, Tenant shall be responsible to pay Tenant's Share of Direct Expenses in accordance with the terms of Article 4 of the Lease.

7.Tenant's Share (Article 4): Approximately 11.61%.

8.Permitted Use (Article 5): The Premises may only be used for any or all of the following uses: general office, research and development, engineering, GMP manufacturing, laboratory, storage and/or warehouse uses, including, but not limited to, administrative offices and other lawful uses reasonably related to or incidental to such specified uses, all (i) consistent with substantially similar life sciences and/or office projects in the Durham, North Carolina area ("**First Class Life Sciences Projects**"), and (ii) in compliance with, and subject to, all Applicable Laws (as defined herein), and the terms of this Lease.

9.Security Deposit (Article 21):	$149,898.68 So long as Tenant is not in default under this Lease beyond applicable notice and cure periods at any time during the first three (3) years of the Lease Term then thereafter the Security Deposit shall be reduced to $112,424.01. So long as Tenant is not in default under this Lease beyond applicable notice and cure periods at any time during the first five (5) years of the Lease Term then thereafter the Security Deposit shall be reduced to $74,949.34 for the remainder of the Lease Term. In such event, if the Security Deposit has been posted in the form of a cash deposit Landlord shall refund the additional amount to Tenant within thirty (30) days and if the Security Deposit is in the form of a letter of credit then Landlord shall return the existing letter of credit to Tenant upon Tenant's posting of a new letter of credit in the correct amount or the posting of a cash deposit by Tenant.
10.Parking Pass Ratio (Article 28):	2.5 unreserved parking spaces for every 1,000 rentable square feet of the Premises, subject to the terms of Article 28 of the Lease.
11.Address of Tenant (Section 29.18):	PRECISION BIOSCIENCES, INC. 302 E. Pettigrew ST. Durham, NC 27701 Attention: Sinu Bhandaru, Director, Head of Operations & IT With a Copy of any default notices to: Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, L.L.P. Post Office Box 2611 Raleigh, North Carolina 27602-2611 Attention: Michael P. Saber, Esq. overnight delivery address: Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, L.L.P. 2300 Wells Fargo Capitol Center 150 Fayetteville Street Raleigh, North Carolina 27601
12.Address of Landlord (Section 29.18):	See Section 29.18 of the Lease.
13.Broker(s) (Section 29.24):	Cushman & Wakefield

14.Guarantor(s) (Section 29.33):	None ("**Guarantors**")

1. PREMISES, BUILDING, PROJECT, AND COMMON AREAS

1.1 **Premises, Building, Project and Common Areas**.

1.1.1 **The Premises**. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises set forth in Section 2.2 of the Summary (the "**Premises**"). The outline of the Premises is set forth in **Exhibit C** attached hereto and has the number of rentable square feet as set forth in Section 2.2 of the Summary. The parties hereto agree that the lease of the Premises is upon and subject to the terms, covenants and conditions herein set forth, and Tenant covenants as a material part of the consideration for this Lease to keep and perform each and all of such terms, covenants and conditions by it to be kept and performed and that this Lease is made upon the condition of such performance. The parties hereto hereby acknowledge that the purpose of **Exhibit C** is to show the approximate location of the Premises in the "Building," as that term is defined in Section 1.1.2, below, only, and such Exhibit is not meant to constitute an agreement, representation or warranty as to the construction of the Premises, the precise area thereof or the specific location of the "Common Areas," as that term is defined in Section 1.1.3, below, or the elements thereof or of the accessways to the Premises or the "Project," as that term is defined in Section 1.1.2, below. Tenant shall accept the Premises in its presently existing "as-is" condition and Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Premises except Landlord shall deliver the Premises in broom clean condition, with all currently existing Premises systems in good working order (provided that (i) Tenant acknowledges and agrees that demolition work has been performed to a portion of the space, separating same from the remaining, functioning standard office portion; and (ii) Tenant shall promptly notify Landlord of any known/discovered defects or needed repairs to same so that Landlord may fulfill any repair obligations under Section 7.3 of this Lease), and except as otherwise expressly set forth in this Lease or in the Tenant Work Letter attached hereto as **Exhibit D**.

The Premises shall exclude Common Areas, including without limitation exterior faces of exterior walls, the entry, vestibules and main lobby of the Building, lobbies and common lavatories, the common stairways and stairwells, boiler room, sprinkler rooms, mechanical rooms, loading and receiving areas, electric and telephone closets, janitor closets, and pipes, ducts, conduits, wires and appurtenant fixtures and equipment serving exclusively or in common with other parts of the Building..

1.1.2 **The Building and The Project**. The Premises are a part of the building set forth in Section 2.1 of the Summary (the "**Building**"). The term "**Project**," as used in this Lease, shall mean (i) the Building and the Common Areas, (ii) the land (which is improved with landscaping, parking facilities and other improvements) upon which the Building and the Common Areas are located, (iii) the other buildings located in the project known as "BioPoint Innovation Labs", and the land upon which such adjacent buildings are located, and (iv) at Landlord's discretion, any additional real property, areas, land, buildings or other improvements added thereto outside of the Project. Landlord may only own portions of the Project and any rights granted within portions of the Project not owned by Landlord shall be pursuant to recorded declarations and easements to the extent such documents exist.

1.1.3 **Common Areas**. Tenant shall have the non-exclusive right to use in common with other tenants in the Project, and subject to the Rules and Regulations referred to in Article 5 of this Lease, those portions of the Project which are provided, from time to time, for use in common by Landlord, Tenant and any other tenants of the Project (such areas, together with such other portions of the Project designated by Landlord, in its discretion, including certain areas designated for the exclusive use of certain tenants, or to be shared by Landlord and certain tenants, are collectively referred to herein as the "**Common Areas**"). The Common Areas shall consist of the "**Project Common Areas**" and the "**Building Common Areas**." The term "**Project Common Areas**," as used in this Lease, shall mean the portion of the Project designated as such by Landlord or areas within the Project that the occupants of the Building are permitted to utilize pursuant to a recorded declaration and which areas shall be maintained in accordance with the declaration. The term "**Building Common Areas**," as used in this Lease, shall mean the portions of the Common Areas located within the Building reasonably designated as such by Landlord. The manner in which the Common Areas are maintained and operated shall be at the reasonable discretion of Landlord and the use thereof shall be subject to the Rules and Regulations as Landlord may make from time to time. Landlord reserves the right to close temporarily, make alterations or additions to, or change the location of elements of the Project and the Common Areas, provided that, in connection therewith, Landlord shall perform such closures, alterations, additions

or changes in a commercially reasonable manner and, in connection therewith, shall use commercially reasonable efforts to minimize any material interference with Tenant's use of and access to the Premises.

1.2 **Stipulation of Rentable Square Feet of Premises**. For purposes of this Lease, "rentable square feet" of the Premises shall be deemed as set forth in Section 2.2 of the Summary. Notwithstanding the foregoing, the useable area of the Premises shall be determined in accordance with a standard promulgated by the Building Owners and Managers Association which standard is selected by Landlord. The rentable area of the Premises shall be determined by multiplying the useable area of the Premises by a "core factor". Landlord may, at any time, have its architect or engineer measure the actual total usable and rentable square footage of the Premises. In the event the Premises shall contain an amount of rentable square footage different than the amount of rentable square feet referenced in Section 2.2 of the Summary, the Premises shall be redefined to reflect the actual rentable square footage but the Base Rent and Additional Rent shall not change from/based what is listed in Section 4 of the Summary.

1.3 **Right of First Offer**. Beginning on the date which is six (6) months after the Rent Commencement Date Landlord hereby grants to the Tenant named in the Summary (the "**Original Tenant**") and its "Permitted Assignees", as defined in Section 14.8, below, a continuing right of first offer with respect to **Suite 012 containing approximately 12,128 rentable square feet** located in the Building as set forth in **Exhibit A** attached hereto, (the "**First Offer Space**"). Notwithstanding the foregoing, such first offer right of Tenant shall commence only following the expiration or earlier termination of the initial lease (including renewals) of the First Offer Space, and such right of first offer shall be subordinate to all rights of which are set forth in leases of space in the Project as of the date hereof, including any renewal rights set forth in such leases, regardless of whether such renewal rights are executed strictly in accordance with their terms, or pursuant to a lease amendment or a new lease (collectively, the "**Superior Right Holders**") with respect to such First Offer Space. Tenant's right of first offer shall not be applicable during any Option Term. Tenant's right of first offer shall be on the terms and conditions set forth in this Section 1.3.

1.3.1 **Procedure for Offer**. If Landlord receives a bona fide offer from a third party for the First Offer Space, any portion of the First Offer Space or such larger space that includes the First Offer Space, Landlord shall notify Tenant (the "**First Offer Notice**"), provided that no Superior Right Holder wishes to lease such space. Pursuant to such First Offer Notice, Landlord shall offer to lease to Tenant the then available First Offer Space and any additional space noted within the First Offer Notice. The First Offer Notice shall describe the space so offered to Tenant (which the parties acknowledge may include a portion of the First Offer Space, only the First Offer Space, or the First Offer Space plus additional contiguous space the Landlord is offering for lease) and shall set forth the "First Offer Rent," as that term is defined in Section 1.3.3 below, and the other economic terms upon which Landlord is willing to lease such space to Tenant.

1.3.2 **Procedure for Acceptance**. If Tenant wishes to exercise Tenant's right of first offer with respect to the space described in the First Offer Notice, then within ten (10) business days of delivery of the First Offer Notice to Tenant, Tenant shall deliver notice to Landlord of Tenant's election to exercise its right of first offer with respect to the entire space described in the First Offer Notice on the terms contained in such notice. If Tenant does not so notify Landlord within the ten (10) business day period, then Landlord shall be free to lease the space described in the First Offer Notice to anyone to whom Landlord desires on any terms Landlord desires. Notwithstanding anything to the contrary contained herein, Tenant must elect to exercise its right of first offer, if at all, with respect to all of the space offered by Landlord to Tenant at any particular time, and Tenant may not elect to lease only a portion thereof.

1.3.3 **First Offer Space Rent**. The "Rent," as that term is defined in Section 4.1, below, payable by Tenant for the First Offer Space (the "**First Offer Rent**") shall be equal to the "Fair Rental Value", as defined in Section 2.2.2, below, as of the "First Offer Commencement Date," as that term is defined in Section 1.3.5, below.

1.3.4 **Construction In First Offer Space**. Tenant shall take the First Offer Space in its "as is" condition, subject to any improvement allowance granted as a component of the Fair Rental Value, and the construction of improvements in the First Offer Space shall comply with the terms of Article 8 of this Lease.

1.3.5 **Amendment to Lease**. If Tenant timely exercises Tenant's right to lease the First Offer Space as set forth herein, Landlord and Tenant shall promptly thereafter execute an amendment to this Lease for such

First Offer Space upon the terms and conditions as set forth in the First Offer Notice and this Section 1.3. Tenant shall commence payment of Rent for the First Offer Space, and the term of the First Offer Space shall commence upon the date of delivery of the First Offer Space to Tenant (the "**First Offer Commencement Date**") and terminate on the date set forth in the First Offer Notice.

1.3.6 **Termination of Right of First Offer**. The rights contained in this Section 1.3 shall be personal to the Original Tenant and its Permitted Assignees, and may only be exercised by the Original Tenant or a Permitted Assignee (and not any other assignee, sublessee or other transferee of the Original Tenant's interest in this Lease) if the Original Tenant occupies the majority of the Premises. Tenant shall not have the right to lease First Offer Space, as provided in this Section 1.3, if, as of the date of the attempted exercise of any right of first offer by Tenant, or as of the scheduled date of delivery of such First Offer Space to Tenant, Tenant is in default under this Lease, after the expiration of any applicable notice and cure period, or Tenant has previously been in default, after the expiration of any applicable notice and cure period, under this Lease more than twice.

2. LEASE TERM; OPTION TERM

2.1 **Lease Term**. The terms and provisions of this Lease shall be effective as of the date of this Lease. The term of this Lease (the "**Lease Term**") shall be as set forth in Section 3.1 of the Summary, shall commence on the date set forth in Section 3.2 of the Summary (the "**Lease Commencement Date**"), and shall terminate on the date set forth in Section 3.4 of the Summary (the "**Lease Expiration Date**") unless this Lease is sooner terminated as hereinafter provided. For purposes of this Lease, the term "**Lease Year**" shall mean each consecutive twelve (12) month period during the Lease Term. At any time during the Lease Term, Landlord may deliver to Tenant a notice in the form as set forth in **Exhibit B**, attached hereto, as a confirmation only of the information set forth therein, which Tenant shall execute and return to Landlord within ten (10) business days of receipt thereof.

2.2 **Option Term**.

2.2.1 **Option Right**. Landlord hereby grants to the originally named Tenant herein ("**Original Tenant**"), and its "Permitted Assignees", as that term is defined in Section 14.8, below, one (1) option to extend the Lease Term for a period of five (5) years (the "**Option Term**"), which option shall be irrevocably exercised only by written notice delivered by Tenant to Landlord not more than eighteen (18) months nor less than nine (9) months prior to the expiration of the initial Lease Term, provided that the following conditions **(**the "**Option Conditions**") are satisfied: (i) as of the date of delivery of such notice, Tenant is not in default under this Lease, after the expiration of any applicable notice and cure period; (ii) as of the end of the Lease Term, Tenant is not in default under this Lease, after the expiration of any applicable notice and cure period; (iii) Tenant has not previously been in default under this Lease, after the expiration of any applicable notice and cure period, more than twice; and (iv) the Lease then remains in full force and effect and Original Tenant or a Permitted Assignee occupies the majority of the Premises at the time the option to extend is exercised and as of the commencement of the Option Term. Landlord may, at Landlord's option, exercised in Landlord's sole and absolute discretion, waive any of the Option Conditions in which case the option, if otherwise properly exercised by Tenant, shall remain in full force and effect. Upon the proper exercise of such option to extend, and provided that Tenant satisfies all of the Option Conditions (except those, if any, which are waived by Landlord), the Lease Term, as it applies to the Premises, shall be extended for a period of five (5) years. The rights contained in this Section 2.2 shall be personal to Original Tenant and any Permitted Assignees, and may be exercised by Original Tenant or such Permitted Assignees (and not by any assignee, sublessee or other "Transferee," as that term is defined in Section 14.1 of this Lease, of Tenant's interest in this Lease).

2.2.2 **Option Rent**. The annual Rent payable by Tenant during the Option Term (the "**Option Rent**") shall be equal to the "Fair Rental Value," as that term is defined below, for the Premises as of the commencement date of the Option Term. The "**Fair Rental Value**," as used in this Lease, shall be equal to the annual rent per rentable square foot (including additional rent and considering any "base year" or "expense stop" applicable thereto), including all escalations, at which tenants (pursuant to leases consummated within the twelve (12) month period preceding the first day of the Option Term), are leasing non-sublease, non-encumbered, non-equity space which is not significantly greater or smaller in size than the subject space, for a comparable lease term, in an arm's length transaction, which comparable space is located in the "Comparable Buildings," as that term is defined in this Section 2.2.2, below (transactions satisfying the foregoing criteria shall be known as the "**Comparable**

Transactions"), taking into consideration the following concessions (the "**Concessions**"): (a) rental abatement concessions, if any, being granted such tenants in connection with such comparable space; (b) tenant improvements or allowances provided or to be provided for such comparable space, and taking into account the value, if any, of the existing improvements in the subject space, such value to be based upon the age, condition, design, quality of finishes and layout of the improvements and the extent to which the same can be utilized by a general office user other than Tenant; and (c) other reasonable monetary concessions being granted such tenants in connection with such comparable space; provided, however, that in calculating the Fair Rental Value, no consideration shall be given to (i) the fact that Landlord is or is not required to pay a real estate brokerage commission in connection with Tenant's exercise of its right to extend the Lease Term, or the fact that landlords are or are not paying real estate brokerage commissions in connection with such comparable space, and (ii) any period of rental abatement, if any, granted to tenants in comparable transactions in connection with the design, permitting and construction of tenant improvements in such comparable spaces. The Fair Rental Value shall additionally include a determination as to whether, and if so to what extent, Tenant must provide Landlord with financial security, such as a letter of credit or guaranty, for Tenant's Rent obligations in connection with Tenant's lease of the Premises during the Option Term. Such determination shall be made by reviewing the extent of financial security then generally being imposed in Comparable Transactions from tenants of comparable financial condition and credit history to the then existing financial condition and credit history of Tenant (with appropriate adjustments to account for differences in the then-existing financial condition of Tenant and such other tenants). The Concessions (A) shall be reflected in the effective rental rate (which effective rental rate shall take into consideration the total dollar value of such Concessions as amortized on a straight-line basis over the applicable term of the Comparable Transaction (in which case such Concessions evidenced in the effective rental rate shall not be granted to Tenant)) payable by Tenant, or (B) at Landlord's election, all such Concessions shall be granted to Tenant in kind. The term "**Comparable Buildings**" shall mean the Building and those other class A life sciences or class A office buildings which are comparable to the Building in terms of age (based upon the date of completion of construction or major renovation of to the building), quality of construction, level of services and amenities, size and appearance, and are located in Durham, North Carolina and the surrounding commercial area.

2.2.3 **Determination of Option Rent**. In the event Tenant timely and appropriately exercises an option to extend the Lease Term, Landlord shall notify Tenant of Landlord's determination of the Option Rent at least sixty (60) days before the Lease Expiration Date. If Tenant, on or before the date which is ten (10) business days following the date upon which Tenant receives Landlord's determination of the Option Rent, in good faith objects to Landlord's determination of the Option Rent, then Landlord and Tenant shall attempt to agree upon the Option Rent using their best good-faith efforts. If Landlord and Tenant fail to reach agreement within ten (10) business days following Tenant's objection to the Option Rent (the "**Outside Agreement Date**"), then each party shall make a separate determination of the Option Rent, as the case may be, within five (5) business days, and such determinations shall be submitted to arbitration in accordance with Sections 2.2.3.1 through 2.2.3.7, below. If Tenant fails to object to Landlord's determination of the Option Rent within the time period set forth herein, then Tenant shall be deemed to have objected to Landlord's determination of Option Rent.

2.2.3.1 Landlord and Tenant shall each appoint one arbitrator who shall be, at the option of the appointing party, a real estate broker or appraiser who shall have been active over the five (5) year period ending on the date of such appointment in the leasing or appraisal (not currently or formerly in the employ of Landlord or Tenant), as the case may be, of other class A life sciences buildings located in the Durham, North Carolina market area. The determination of the arbitrators shall be limited solely to the issue of whether Landlord's or Tenant's submitted Option Rent is the closest to the actual Option Rent, taking into account the requirements of Section 2.2.2 of this Lease, as determined by the arbitrators. Each such arbitrator shall be appointed within fifteen (15) days after the Outside Agreement Date. Landlord and Tenant may consult with their selected arbitrators prior to appointment and may select an arbitrator who is favorable to their respective positions. The arbitrators so selected by Landlord and Tenant shall be deemed "**Advocate Arbitrators**."

2.2.3.2 The two (2) Advocate Arbitrators so appointed shall be specifically required pursuant to an engagement letter within ten (10) business days of the date of the appointment of the last appointed Advocate Arbitrator to agree upon and appoint a third arbitrator ("**Neutral Arbitrator**") who shall be qualified under the same criteria set forth hereinabove for qualification of the two Advocate Arbitrators, except that neither the Landlord or Tenant or either parties' Advocate Arbitrator may, directly or indirectly, consult with the Neutral

Arbitrator prior or subsequent to his or her appearance. The Neutral Arbitrator shall be retained via an engagement letter jointly prepared by Landlord's counsel and Tenant's counsel.

2.2.3.3 The three arbitrators shall, within thirty (30) days of the appointment of the Neutral Arbitrator, reach a decision as to whether the parties shall use Landlord's or Tenant's submitted Option Rent, and shall notify Landlord and Tenant thereof.

2.2.3.4 The decision of the majority of the three arbitrators shall be binding upon Landlord and Tenant.

2.2.3.5 If either Landlord or Tenant fails to appoint an Advocate Arbitrator within fifteen (15) days after the Outside Agreement Date, then either party may petition the presiding judge of the Superior Court of Durham County to appoint such Advocate Arbitrator subject to the criteria in Section 2.2.3.1 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such Advocate Arbitrator.

2.2.3.6 If the two (2) Advocate Arbitrators fail to agree upon and appoint the Neutral Arbitrator, then either party may petition the presiding judge of the Superior Court of Durham County to appoint the Neutral Arbitrator, subject to criteria in Section 2.2.3.1 2 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such arbitrator.

2.2.3.7 The cost of the arbitration shall be paid by Landlord and Tenant equally.

2.2.3.8 In the event that the Option Rent shall not have been determined pursuant to the terms hereof prior to the commencement of the Option Term, Tenant shall be required to pay the Option Rent initially provided by Landlord to Tenant, and upon the final determination of the Option Rent, the payments made by Tenant shall be reconciled with the actual amounts of Option Rent due, and the appropriate party shall make any corresponding payment to the other party.

3. BASE RENT

3.1 Beginning on the Rent Commencement Date, Tenant shall pay, without prior notice or demand, to Landlord or Landlord's agent at the management office of the Project, or, at Landlord's option, at such other place as Landlord may from time to time designate in advance and in writing, (i) by a check for currency which, at the time of payment, is legal tender for private or public debts in the United States of America, or (ii) if so elected by Tenant, by electronic funds transfer to the account of Landlord as provided to Tenant, base rent ("**Base Rent**") as set forth in Section 4 of the Summary, payable in equal monthly installments as set forth in Section 4 of the Summary in advance on or before the first day of each and every calendar month during the Lease Term, without any setoff or deduction whatsoever. The Base Rent for the first full month of the Lease Term shall be paid at the time of Tenant's execution of this Lease. If any Rent payment date (including the Rent Commencement Date) falls on a day of the month other than the first day of such month or if any payment of Rent is for a period which is shorter than one month, the Rent for any fractional month shall accrue on a daily basis for the period from the date such payment is due to the end of such calendar month or to the end of the Lease Term at a rate per day which is equal to 1/365 of the applicable annual Rent. All other payments or adjustments required to be made under the terms of this Lease that require proration on a time basis shall be prorated on the same basis. Base Rent and Additional Rent, as defined below, shall together be denominated "**Rent**." Without limiting the foregoing, Tenant's obligation to pay Rent shall not be discharged or otherwise affected by any law or regulation now or hereafter applicable to the Premises, or any other restriction on Tenant's use, or (except as expressly provided herein) any casualty or taking, or any failure by Landlord to perform any covenant contained herein, or any other occurrence.

4. ADDITIONAL RENT

4.1 **General Terms**. In addition to paying the Base Rent specified in Article 3 of this Lease, Tenant shall pay "**Tenant's Share**" of the annual "**Direct Expenses**," as those terms are defined in Sections 4.2.6 and 4.2.2 of this Lease, respectively. Such payments by Tenant, together with any and all other amounts payable by Tenant to Landlord pursuant to the terms of this Lease, are hereinafter collectively referred to as the "**Additional Rent**". All amounts due under this Article 4 as Additional Rent shall be payable for the same periods and in the same manner as the Base Rent. Without limitation on other obligations of Tenant which survive the expiration of the Lease Term, the obligations of Tenant to pay the Additional Rent provided for in this Article 4 shall survive the expiration of the Lease Term.

4.2 **Definitions of Key Terms Relating to Additional Rent**. As used in this Article 4, the following terms shall have the meanings hereinafter set forth:

4.2.1 Intentionally Omitted.

4.2.2 "**Direct Expenses**" shall mean "**Operating Expenses**" and "**Tax Expenses**."

4.2.3 "**Expense Year**" shall mean each calendar year in which any portion of the Lease Term falls, through and including the calendar year in which the Lease Term expires, provided that Landlord, upon advance written notice to Tenant, may change the Expense Year from time to time to any other twelve (12) consecutive month period, and, in the event of any such change, Tenant's Share of Direct Expenses shall be equitably adjusted for any Expense Year involved in any such change.

4.2.4 "**Operating Expenses**" shall mean all reasonable expenses, costs and amounts of every kind and nature which Landlord actually pays or accrues during any Expense Year because of or in connection with the ownership, management, maintenance, security, repair, replacement, restoration or operation of the Project, or any portion thereof. Without limiting the generality of the foregoing, Operating Expenses shall specifically include any and all of the following: (i) the cost of supplying all utilities, the cost of operating, repairing, maintaining, and renovating the utility, telephone, mechanical, sanitary, storm drainage, and elevator systems (if applicable), and the cost of maintenance and service contracts in connection therewith; (ii) the cost of licenses, certificates, permits and inspections and the cost of contesting any governmental enactments which affect Operating Expenses, and the costs incurred in connection with a governmentally mandated transportation system management program or similar program; (iii) the cost of all insurance carried by Landlord in connection with the Project as reasonably determined by Landlord; (iv) the cost of landscaping, re-lamping, and all supplies, tools, equipment and materials used in the operation, repair and maintenance of the Project, or any portion thereof; (v) the cost of parking area operation, repair, restoration, and maintenance; (vi) fees and other costs, including market management and/or incentive fees, consulting fees, legal fees and accounting fees, of all contractors and consultants in connection with the management, operation, maintenance and repair of the Project; (vii) payments under any equipment rental agreements and the fair rental value of any management office space; (viii) subject to item (f), below, wages, salaries and other compensation and benefits, including taxes levied thereon, of all persons engaged in the operation, maintenance and security of the Project (at or below the level of property manager); (ix) costs under any instrument pertaining to the sharing of costs by the Project; (x) operation, repair, maintenance and replacement of all systems and equipment and components thereof of the Project; (xi) the cost of janitorial, alarm, security and other services, replacement of wall and floor coverings, ceiling tiles and fixtures in Common Areas, maintenance and replacement of curbs and walkways, repair to roofs and re-roofing; (xii) amortization (including reasonable interest on the unamortized cost) over such period of time as Landlord shall reasonably determine, of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and repair of the Project, or any portion thereof; (xiii) the cost of capital improvements or other costs incurred in connection with the Project (A) which are intended to reduce expenses in the operation or maintenance of the Project, or any portion thereof, or to reduce current or future Operating Expenses or to enhance the safety or security of the Project or its occupants, (B) that are required to comply with present or anticipated mandatory conservation programs, (C) which are replacements or modifications of nonstructural items located in the Common Areas required to keep the Common Areas in the same good order or condition as on the Commencement Date, or (D) that are required under any governmental law or regulation that was not in force or effect as of the Commencement Date; provided, however, that any capital expenditure shall be amortized (including reasonable interest on the amortized cost as reasonably determined by Landlord) in accordance with IRS regulations; and (xiv) costs, fees, charges or assessments imposed by, or resulting from any mandate imposed on Landlord by, any federal, state or local government for fire and police protection, trash removal, community services, or other services which do not constitute "Tax Expenses" as that term is defined in Section 4.2.5, below, (xv) cost of tenant relation programs reasonably established by

Landlord, and (xvi) payments under any easement, license, operating agreement, declaration, restrictive covenant, or instrument pertaining to the sharing of costs by the Building, including, without limitation, any covenants, conditions and restrictions affecting the property, and reciprocal easement agreements affecting the property, any parking licenses, and any agreements with transit agencies affecting the Property (collectively, "**Underlying Documents**"). In the event that Landlord or Landlord's managers or agents perform services for the benefit of the Building off-site which would otherwise be performed on-site (e.g. accounting), the cost of such services shall be reasonably allocated among the properties benefitting from such service and shall be included in Operating Expenses. Notwithstanding the foregoing, for purposes of this Lease, Operating Expenses shall not, however, include:

(a) costs, including legal fees, space planners' fees, advertising and promotional expenses, and brokerage fees incurred in connection with the original construction or development, or original or future leasing of the Project, and costs, including permit, license and inspection costs, incurred with respect to the installation of tenant improvements made for new tenants initially occupying space in the Project after the Lease Commencement Date or incurred in renovating or otherwise improving, decorating, painting or redecorating vacant space for tenants or other occupants of the Project (excluding, however, such costs relating to any common areas of the Project);

(b) except as set forth in items (xii), (xiii), and (xiv) above, depreciation, interest and principal payments on mortgages and other debt costs, if any, penalties and interest, and costs of capital improvements (as distinguished from repairs or replacements);

(c) costs for which the Landlord is reimbursed by any tenant or occupant of the Project or by insurance by its carrier or any tenant's carrier or by anyone else, and electric power costs for which any tenant directly contracts with the local public service company;

(d) any bad debt loss, rent loss, or reserves for bad debts or rent loss;

(e) costs associated with the operation of the business of the partnership or entity which constitutes the Landlord, as the same are distinguished from the costs of operation of the Project (which shall specifically include, but not be limited to, accounting costs associated with the operation of the Project). Costs associated with the operation of the business of the partnership or entity which constitutes the Landlord include costs of partnership accounting and legal matters, costs of defending any lawsuits with any mortgagee (except as the actions of the Tenant may be in issue), costs of selling, syndicating, financing, mortgaging or hypothecating any of the Landlord's interest in the Project, and costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Project management, or between Landlord and other tenants or occupants;

(f) the wages and benefits of any employee who does not devote substantially all of his or her employed time to the Project unless such wages and benefits are prorated to reflect time spent on operating and managing the Project vis-a-vis time spent on matters unrelated to operating and managing the Project; provided, that in no event shall Operating Expenses for purposes of this Lease include wages and/or benefits attributable to personnel above the level of Project manager;

(g) amount paid as ground rental for the Project by the Landlord;

(h) except for a property management fee to the extent expressly allowed above, overhead and profit increment paid to the Landlord or to subsidiaries or affiliates of the Landlord for services in the Project to the extent the same exceeds the costs of such services rendered by qualified, first-class unaffiliated third parties on a competitive basis;

(i) any compensation paid to clerks, attendants or other persons in commercial concessions operated by the Landlord, provided that any compensation paid to any concierge at the Project shall be includable as an Operating Expense;

(j) rentals and other related expenses incurred in leasing air conditioning systems, elevators (if applicable) or other equipment which if purchased the cost of which would be excluded from Operating Expenses as a capital improvement, except equipment not affixed to the Project which is used in providing janitorial or similar services and, further excepting from this exclusion such equipment rented or leased to remedy or ameliorate an emergency condition in the Project ;

(k) all items and services for which Tenant or any other tenant in the Project reimburses Landlord or which Landlord provides selectively to one or more tenants (other than Tenant) without reimbursement;

(l) any costs expressly excluded from Operating Expenses elsewhere in this Lease;

(m) rent for any office space occupied by Project management personnel to the extent the size or rental rate of such office space exceeds the size or fair market rental value of office space occupied by management personnel of the comparable buildings in the vicinity of the Building, with adjustment where appropriate for the size of the applicable project;

(n) costs arising from the gross negligence or willful misconduct of Landlord or its agents, employees, vendors, contractors, or providers of materials or services;

(o) costs incurred to comply with laws relating to the removal of hazardous material (as defined under Applicable Law) which was in existence in the Building or on the Project prior to the Lease Commencement Date, and was of such a nature that a federal, State or municipal governmental authority, if it had then had knowledge of the presence of such hazardous material, in the state, and under the conditions that it then existed in the Building or on the Project, would have then required the removal of such hazardous material or other remedial or containment action with respect thereto; and costs incurred to remove, remedy, contain, or treat hazardous material, which hazardous material is brought into the Building or onto the Project after the date hereof by Landlord or any other tenant of the Project and is of such a nature, at that time, that a federal, State or municipal governmental authority, if it had then had knowledge of the presence of such hazardous material, in the state, and under the conditions, that it then exists in the Building or on the Project, would have then required the removal of such hazardous material or other remedial or containment action with respect thereto;

(p) costs incurred to comply with laws relating to the removal of Hazardous Materials (other than Hazardous Materials typically found in first class office buildings, such as recyclable materials and typical construction materials, and costs to comply with the Operation and Maintenance Plan described on **Exhibit G**);

(q) the cost of special services, goods or materials provided to any other tenant of the Project free of charge, and not provided to Tenant;

(r) Landlord's general overhead expenses not related to the Project;

(s) legal fees, accountants' fees (other than normal bookkeeping expenses) and other expenses incurred in connection with disputes of tenants or other occupants of the Project or associated with the enforcement of the terms of any leases with tenants or the defense of Landlord's title to or interest in the Project or any part thereof;

(t) costs incurred due to a violation by Landlord or any other tenant of the Project of the terms and conditions of a lease; and

(u) any reserve funds.

If Landlord is not furnishing any particular work or service (the cost of which, if performed by Landlord, would be included in Operating Expenses) to a tenant who has undertaken to perform such work or service in lieu of the performance thereof by Landlord, Operating Expenses shall be deemed to be increased by an amount equal to the

additional Operating Expenses which would reasonably have been incurred during such period by Landlord if it had at its own expense furnished such work or service to such tenant. If the Project is not at least one hundred percent (100%) occupied during all or a portion of any Expense Year, Landlord shall make an appropriate adjustment to the components of Operating Expenses for such year to determine the amount of Operating Expenses that would have been incurred had the Project been one hundred percent (100%) occupied; and the amount so determined shall be deemed to have been the amount of Operating Expenses for such year.

4.2.5 **Taxes**.

4.2.5.1 "**Tax Expenses**" shall mean all federal, state, county, or local governmental or municipal taxes, fees, charges or other impositions of every kind and nature, whether general, special, ordinary or extraordinary (including, without limitation, real estate taxes, general and special assessments, transit taxes, leasehold taxes or taxes based upon the receipt of rent, including gross receipts or sales taxes applicable to the receipt of rent, unless required to be paid by Tenant, personal property taxes imposed upon the fixtures, machinery, equipment, apparatus, systems and equipment, appurtenances, furniture and other personal property used in connection with the Project, or any portion thereof), which shall be paid or accrued during any Expense Year (without regard to any different fiscal year used by such governmental or municipal authority) because of or in connection with the ownership, leasing and operation of the Project, or any portion thereof.

4.2.5.2 Tax Expenses shall include, without limitation: (i) Any tax on the rent, right to rent or other income from the Project, or any portion thereof, or as against the business of leasing the Project, or any portion thereof; (ii) Any assessment, tax, fee, levy or charge in addition to, or in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax; (iii) Any assessment, tax, fee, levy, or charge allocable to or measured by the area of the Premises or the Rent payable hereunder, including, without limitation, any business or gross income tax or excise tax with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof; and (iv) Any assessment, tax, fee, levy or charge, upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises or the improvements thereon.

4.2.5.3 Any reasonable costs and expenses (including, without limitation, reasonable attorneys' and consultants' fees) incurred in attempting to protest, reduce or minimize Tax Expenses shall be included in Tax Expenses in the Expense Year such expenses are incurred. Tax refunds shall be credited against Tax Expenses and refunded to Tenant regardless of when received, based on the Expense Year to which the refund is applicable, provided that in no event shall the amount to be refunded to Tenant for any such Expense Year exceed the total amount paid by Tenant as Additional Rent under this Article 4 for such Expense Year. The foregoing sentence shall survive the expiration or earlier termination of this Lease. If Tax Expenses for any period during the Lease Term or any extension thereof are increased after payment thereof for any reason, including, without limitation, error or reassessment by applicable governmental or municipal authorities, Tenant shall pay Landlord upon demand Tenant's Share of any such increased Tax Expenses. Notwithstanding anything to the contrary contained in this Section 4.2.5, there shall be excluded from Tax Expenses (i) all excess profits taxes, franchise taxes, gift taxes, capital stock taxes, inheritance and succession taxes, estate taxes, transfer tax or fee, federal and state income taxes, and other taxes to the extent applicable to Landlord's general or net income (as opposed to rents, receipts or income attributable to operations at the Project), (ii) any items included as Operating Expenses, and (iii) any items paid by Tenant under Section 4.5 of this Lease.

4.2.6 "**Tenant's Share**" is based upon the ratio that the rentable square feet of the Premises bears to the rentable square feet of the Building and, subject to adjustment pursuant to Section 1.2 above, is the percentage set forth in Section 7 of the Summary.

4.3 **Intentionally omitted**. .

4.4 **Calculation and Payment of Additional Rent**. Tenant shall pay to Landlord, in the manner set forth in Section 4.4.1, below, and as Additional Rent, Tenant's Share of Direct Expenses for each Expense Year. If the Rent Commencement Date is a day other than the first day of an Expense Year, or if this Lease terminates or

expires on a day other than the last day of an Expense Year, then Additional Rent shall be prorated in the manner provided in Section 3.1 above.

4.4.1 **Statement of Actual Direct Expenses and Payment by Tenant**. Landlord shall use good faith efforts to give to Tenant within six (6) months following the end of each Expense Year, a statement (the "**Statement**") which shall state the Direct Expenses incurred or accrued for such preceding Expense Year, and which shall indicate the amount of Tenant's Share of Direct Expenses. Upon receipt of the Statement for each Expense Year commencing or ending during the Lease Term, Tenant shall pay, with its next installment of Base Rent due, the full amount of Tenant's Share of Direct Expenses for such Expense Year, less the amounts, if any, paid during such Expense Year as "**Estimated Direct Expenses**," as that term is defined in Section 4.4.2, below, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Tenant shall receive a credit in the amount of Tenant's overpayment against Rent next due under this Lease. The failure of Landlord to timely furnish the Statement for any Expense Year shall not prejudice Landlord or Tenant from enforcing its rights under this Article 4. Even though the Lease Term has expired and Tenant has vacated the Premises, when the final determination is made of Tenant's Share of Direct Expenses for the Expense Year in which this Lease terminates, Tenant shall pay to Landlord such amount within thirty (30) days, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Landlord shall, within thirty (30) days, deliver a check payable to Tenant in the amount of the overpayment. The provisions of this Section 4.4.1 shall survive the expiration or earlier termination of the Lease Term. Notwithstanding the immediately preceding sentence, Tenant shall not be responsible for Tenant's Share of any Direct Expenses attributable to any Expense Year which are first billed to Tenant more than two (2) calendar years after the earlier of the expiration of the applicable Expense Year or the Lease Expiration Date, provided that in any event Tenant shall be responsible for Tenant's Share of Direct Expenses levied by any governmental authority or by any public utility companies at any time following the Lease Expiration Date which are attributable to any Expense Year (provided that Landlord delivers Tenant a bill for such amounts within two (2) years following Landlord's receipt of the bill therefor).

4.4.2 **Statement of Estimated Direct Expenses**. In addition, Landlord shall give Tenant a yearly expense estimate statement (the "**Estimate Statement**") which shall set forth Landlord's reasonable estimate (the "**Estimate**") of what the total amount of Direct Expenses for the then-current Expense Year shall be and the estimated Tenant's Share of Direct Expenses (the "**Estimated Direct Expenses**"). The failure of Landlord to timely furnish the Estimate Statement for any Expense Year shall not preclude Landlord from enforcing its rights to collect any Estimated Direct Expenses under this Article 4, nor shall Landlord be prohibited from revising any Estimate Statement or Estimated Direct Expenses theretofore delivered to the extent necessary. Thereafter, Tenant shall pay, with its next installment of Base Rent due, a fraction of the Estimated Direct Expenses for the then-current Expense Year (reduced by any amounts paid pursuant to the last sentence of this Section 4.4.2). Such fraction shall have as its numerator the number of months which have elapsed in such current Expense Year, including the month of such payment, and twelve (12) as its denominator. Until a new Estimate Statement is furnished (which Landlord shall have the right to deliver to Tenant at any time), Tenant shall pay monthly, with the monthly Base Rent installments, an amount equal to one-twelfth (1/12) of the total Estimated Direct Expenses set forth in the previous Estimate Statement delivered by Landlord to Tenant.

4.4.3 **Audit Right**. In the event the Controllable Operating Expenses (as defined below) increase by more than three percent (3%) in any given Lease Year (as measured against the Controllable Operating Expenses for the immediately preceding Lease Year), or as otherwise reasonably requested by Tenant (or required by Tenant's business partners and/or applicable law), then Tenant may audit Landlord's records and all information pertaining to Operating Expenses in order to verify the accuracy of Landlord's determination of the Tenant's Share subject to the procedure noted below. Controllable Operating Expenses shall include all Operating Expenses other than utilities (e.g., electricity, gas, water and sewer), management fees, security expenses, insurance, taxes, assessments, snow and ice removal and other weather related charges, association fees and charges under any declaration, storm water fees and similar governmental or quasi-governmentally imposed fees, and any other expenses which are set or determined by a governmental entity or other third party and non-negotiable, or are otherwise beyond Landlord's reasonable control including minimum wage increases, hereafter, "**Controllable Operating Expenses**". Tenant must comply with the following in order to audit Landlord's records and information pertaining to Operating Expenses:

(i) Tenant must give notice to Landlord of its election to undertake said audit within one hundred twenty (120) days after receipt of the statement of the actual amount of Tenant's Share for the preceding calendar year from Landlord, and with respect to such audit, Tenant may audit the two preceding calendar years;

(ii) Such audit will be conducted only during regular business hours at the office where Landlord maintains records of Operating Expenses and only after Tenant gives Landlord fourteen (14) days' advance written notice;

(iii) Tenant shall deliver to Landlord a copy of the results of such audit within fifteen (15) days of its receipt by Tenant and no such audit shall be conducted if any other tenant of the Building has conducted an independent audit for the time period Tenant intends to audit and Landlord furnishes to Tenant a copy of such audit;

(iv) No audit shall be conducted at any time that Tenant is in default (after the expiration of any applicable grace and/or cure period) of any of the terms of this Lease;

(v) No subtenant shall have any right to conduct an audit and no assignee shall conduct an audit for any period during which such assignee was not in possession of the Premises;

(vi) Such audit review by Tenant shall not postpone or alter the liability and obligation of Tenant to pay any amounts due under the terms of this Lease; and

(vii) Such audit shall be conducted by an independent, reputable accounting firm which is not being compensated by Tenant on a contingency fee basis.

Within thirty (30) days after Tenant's receipt of such audit, Tenant must give notice to Landlord of any disputed amounts and identify all items being contested in Landlord's statement of the Tenant Share. If Landlord and Tenant cannot agree upon any such item as to which Tenant shall have given such notice, the dispute shall be resolved by an audit by a major accounting firm mutually and reasonably acceptable to Landlord and Tenant and the cost of said joint audit shall be paid by the non-prevailing party.

Any adjustment required as a result of any audit shall be paid within 30 days, or adjusted in the next installment(s) of Tenant's Share.

4.5 **Taxes and Other Charges for Which Tenant Is Directly Responsible**. Tenant shall be liable for and shall pay before delinquency, taxes levied against Tenant's equipment, furniture, fixtures and any other personal property located in or about the Premises. If any such taxes on Tenant's equipment, furniture, fixtures and any other personal property are levied against Landlord or Landlord's property or if the assessed value of Landlord's property is noticeably increased by the inclusion therein of a value placed upon such equipment, furniture, fixtures or any other personal property (as reasonably documented by Landlord) and if Landlord pays the taxes based upon such increased assessment, which Landlord shall have the right to do regardless of the validity thereof but only under proper protest if requested by Tenant, Tenant shall upon demand repay to Landlord the taxes so levied against Landlord or the proportion of such taxes resulting from such increase in the assessment, as the case may be.

4.6 **Limit of Increases in Tenant's Share of Operating Expenses.** The Controllable Operating Expenses (as hereinafter defined) which may be passed through to Tenant under this Section 4 shall not increase in any year by an amount which exceeds five percent (5%) of such Controllable Operating Expenses for the immediately preceding year (as measured on a cumulative and compounded basis). For purposes hereof, "**Controllable Operating Expenses**" shall be deemed to include all Operating Expenses other than utilities (e.g., electricity, gas, water and sewer), management fees, security expenses, insurance, taxes, assessments, snow and ice removal and other weather related charges, association fees and charges under any declaration, storm water fees and similar governmental or

quasi-governmentally imposed fees, and any other expenses which are set or determined by a governmental entity or other third party or are otherwise beyond Landlord's reasonable control including minimum wage increases.

5. USE OF PREMISES

5.1 **Permitted Use**. Tenant shall use the Premises solely for the Permitted Use set forth in Section 8 of the Summary and Tenant shall not use the Premises or the Project for any other purpose or purposes whatsoever without the prior written consent of Landlord, which may be withheld in Landlord's sole discretion.

5.2 **Prohibited Uses**. Tenant further covenants and agrees that Tenant shall not use, or suffer or permit any person or persons to use, the Premises or any part thereof for any use or purpose contrary to the provisions of the Rules and Regulations set forth in **Exhibit E**, attached hereto (the "**Rules and Regulations**"), or in violation of the laws of the United States of America, the State of North Carolina, or the ordinances, regulations or requirements of the local municipal or county governing body or other lawful authorities having jurisdiction over the Project, including, without limitation, any such laws, ordinances, regulations or requirements relating to hazardous materials or substances, as those terms are defined by Applicable Laws now or hereafter in effect, or any Underlying Documents. Tenant shall not do or permit anything to be done in or about the Premises which will damage the reputation of the Project or obstruct or unreasonably interfere with the rights of other tenants or occupants of the Building, or injure or annoy them or use or allow the Premises to be used for any improper, unlawful or objectionable purpose, nor shall Tenant cause or maintain any nuisance in, on or about the Premises. Tenant shall comply with, and Tenant's rights and obligations under the Lease and Tenant's use of the Premises shall be subject and subordinate to, all recorded easements, covenants, conditions, and restrictions now or hereafter affecting the Project. Provided, however, that (a) in the event of any conflict between any Rules and Regulations and the express terms of this Lease, the Lease terms shall control; (b) such Rules and Regulations do not require payment of additional material sum of money; (c) such Rules and Regulations do not unreasonably and materially interfere with Tenant's conduct of its business or Tenant's use and enjoyment of the Premises; (d) Landlord provides reasonable advance written notice thereof; and (e) such Rules and Regulations are uniformly enforced in a non-discriminatory manner.

5.3 **Intentionally Omitted**.

5.4 **Hazardous Materials**.

5.4.1 **Tenant's Obligations**.

5.4.1.1 **Prohibitions**. As a material inducement to Landlord to enter into this Lease with Tenant, Tenant has, to the best of its knowledge, completed Landlord's Pre-Leasing Environmental Exposure Questionnaire (the "**Environmental Questionnaire**"), which is attached as **Exhibit G**. Tenant hereby represents, warrants and covenants that except for those chemicals or materials, and their respective quantities, specifically listed on the Environmental Questionnaire, neither Tenant nor Tenant's employees, contractors and subcontractors of any tier, entities with a contractual relationship with Tenant (other than Landlord), or any entity acting as an agent or sub-agent of Tenant (collectively, "**Tenant's Agents**") will produce, use, store or generate any "Hazardous Materials," as that term is defined below, on, under or about the Premises, nor cause or permit any Hazardous Material to be brought upon, placed, stored, manufactured, generated, blended, handled, recycled, used or "Released," as that term is defined below, on, in, under or about the Premises. If any information provided to Landlord by Tenant on the Environmental Questionnaire, or otherwise relating to information concerning Hazardous Materials is knowingly false, incomplete, or misleading in any material respect, the same shall be deemed a default by Tenant under this Lease. Tenant shall deliver to Landlord an updated Environmental Questionnaire at least once a year, upon Landlord's request, and in the event of any material change in Tenant's use of Hazardous Materials at the Premises. Landlord's prior written consent shall be required to any Hazardous Materials use for the Premises not described on the initial Environmental Questionnaire, such consent not to be unreasonably withheld, conditioned, or delayed. Tenant shall not install or permit any underground storage tank on the Premises. In addition, Tenant agrees that it: (i) shall not cause or suffer to occur, the Release of any Hazardous Materials at, upon, under or within the Premises or any contiguous or adjacent premises; and (ii) shall not engage in activities at the Premises that result in, give rise to, or lead to the imposition of liability upon Tenant or Landlord or the creation of an environmental lien or use restriction upon the Premises. For purposes of this Lease, "**Hazardous Materials**" means all flammable explosives, petroleum and petroleum products, waste oil, radon, radioactive materials, toxic pollutants, asbestos, polychlorinated biphenyls ("**PCBs**"), medical waste, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including without limitation any chemical, element, compound, mixture, solution, substance, object, waste or any combination thereof, which is or may be hazardous to human health, safety or to the environment due to its radioactivity, ignitability, corrosiveness, reactivity, explosiveness, toxicity, carcinogenicity, infectiousness or other harmful or potentially harmful properties or effects, or defined as, regulated as or included in, the definition of "hazardous substances," "hazardous wastes," "hazardous materials," or "toxic substances" under any Environmental Laws. The term "Hazardous Materials" for purposes of this Lease shall also include any mold, fungus or spores, whether or not the same is defined, listed, or otherwise classified as a "hazardous material" under any Environmental Laws, if such mold, fungus or spores may pose a risk to human health or the environment or negatively impact the value of the Premises. For purposes of this Lease, "**Release**" or "**Released**" or "**Releases**" shall mean any release, deposit, discharge, emission, leaking, spilling, seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Materials into the environment.

Any use or storage of Hazardous Materials by Tenant permitted pursuant to this Article 5 shall not exceed Tenant's proportionate share (measured on a per floor basis), based on the standards of the BMBL (as defined below), of similarly classed Hazardous Materials. Notwithstanding the foregoing to the contrary, in no event shall Tenant or anyone claiming by through or under Tenant perform work at or above the risk category Biosafety Level 2 as established by the Department of Health and Human Services ("**DHHS**") and as further described in the DHHS publication Biosafety in Microbiological and Biomedical Laboratories (5th Edition) (as it may be or may have been further revised, the "**BMBL**") or such nationally recognized new or replacement standards as Landlord may reasonable designate). Tenant shall comply with all applicable provisions of the standards of the BMBL to the extent applicable to Tenant's operations in the Premises.

5.4.1.2 **Intentionally Omitted.**

5.4.1.3 **Notices to Landlord**. Unless Tenant is required by Applicable Laws to give earlier notice to Landlord, Tenant shall notify Landlord in writing as soon as reasonably possible but in no event later than five (5) days after knowledge of (i) the occurrence of any actual, alleged or threatened Release of any Hazardous Material in, on, under, from, about or in the vicinity of the Premises (whether past or present), regardless of the source or quantity of any such Release, or (ii) Tenant becomes aware of any regulatory actions, inquiries, inspections, investigations, directives, or any cleanup, compliance, enforcement or abatement proceedings (including any threatened or contemplated investigations or proceedings) relating to or potentially affecting the Premises, or (iii) Tenant becomes aware of any claims by any person or entity relating to any Hazardous Materials in, on, under, from, about or in the vicinity of the Premises, whether relating to damage, contribution, cost recovery, compensation, loss or injury. Collectively, the matters set forth in clauses (i), (ii) and (iii) above are hereinafter referred to as "Hazardous Materials Claims". Tenant shall promptly forward to Landlord copies of all orders, notices, permits, applications and other communications and reports in connection with any Hazardous Materials Claims. Additionally, Tenant shall promptly advise Landlord in writing of Tenant's discovery of any occurrence or condition on, in, under or about the Premises that could subject Tenant or Landlord to any liability, or restrictions on ownership, occupancy, transferability or use of the Premises under any "Environmental Laws," as that term is defined below. Tenant shall not enter into any legal proceeding or other action, settlement, consent decree or other compromise with respect to any Hazardous Materials Claims without first notifying Landlord of Tenant's intention to do so and affording Landlord the opportunity to join and participate, as a party if Landlord so elects, in such proceedings and in no event shall Tenant enter into any agreements which are binding on Landlord or the Premises without Landlord's prior written consent. Landlord shall have the right to appear at and participate in, any and all legal or other administrative proceedings concerning any Hazardous Materials Claim. For purposes of this Lease, "Environmental Laws" means all applicable present and future laws, including principles of common law, relating to the protection of human health, safety, wildlife or the environment, including, without limitation, (i) all requirements pertaining to reporting, licensing, permitting, investigation and/or remediation of emissions, discharges, Releases, or threatened Releases of Hazardous Materials, whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of Hazardous Materials; and (ii) all requirements pertaining to the health and safety of employees or the public. Environmental Laws include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC § 9601, et seq., the Hazardous Materials Transportation Authorization Act of 1994, 49 USC § 5101,

et seq., the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and Hazardous and Solid Waste Amendments of 1984, 42 USC § 6901, et seq., the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 USC § 1251, et seq., the Clean Air Act of 1966, 42 USC § 7401, et seq., the Toxic Substances Control Act of 1976, 15 USC § 2601, et seq., the Safe Drinking Water Act of 1974, 42 USC §§ 300f through 300j, the Occupational Safety and Health Act of 1970, as amended, 29 USC § 651 et seq., the Oil Pollution Act of 1990, 33 USC § 2701 et seq., the Emergency Planning and Community Right-To-Know Act of 1986, 42 USC § 11001 et seq., the National Environmental Policy Act of 1969, 42 USC § 4321 et seq., the Federal Insecticide, Fungicide and Rodenticide Act of 1947, 7 USC § 136 et seq., North Carolina Oil Pollution and Hazardous Substances Control Act, N.C. Gen. Stat. § 143-215.75 et seq., North Carolina Inactive Hazardous Sites Act, N.C. Gen. Stat. § 130A-310, North Carolina Water and Air Resources Act, N.C. Gen. Stat. § 143-211 et seq., 15A N.C. Admin. Code Subchapter 2L, , and any other state or local law counterparts, as amended, as such Applicable Laws, are in effect as of the Lease Commencement Date, or thereafter adopted, published, or promulgated.

5.4.1.4 **Releases of Hazardous Materials**. If any Release of any Hazardous Material in, on, under, from or about the Premises shall occur at any time during the Lease and/or if any other Hazardous Material condition exists at the Premises proximately due to the breach of Tenant's obligations under this Section 5.4 that requires response actions under Environmental Laws, in addition to notifying Landlord as specified above, Tenant, at its own sole cost and expense, shall (i) immediately comply with any and all reporting requirements imposed pursuant to any and all Environmental Laws, (ii) provide a written certification to Landlord indicating that Tenant has complied with all applicable reporting requirements, (iii) take any and all necessary investigation, corrective and remedial action in accordance with any and all applicable Environmental Laws, utilizing an environmental consultant reasonably approved by Landlord, all in accordance with the provisions and requirements of this Section 5.4, including, without limitation, Section 5.4.4, and (iv) take any such additional investigative, remedial and corrective actions as Landlord shall in its reasonable discretion deem necessary such that the Premises are remediated to a condition allowing unrestricted use of the Premises (i.e. to a level that will allow any future use of the Premises, including residential, without any engineering controls or deed restrictions), all in accordance with the provisions and requirements of this Section 5.4. Landlord may, as required by any and all Environmental Laws, report the Release of any Hazardous Material to the appropriate governmental authority, identifying Tenant as the responsible party. Tenant shall deliver to Landlord copies of all administrative orders, notices, demands, directives or other communications directed to Tenant from any governmental authority with respect to any Release of Hazardous Materials in, on, under, from, or about the Premises, together with copies of all investigation, assessment, and remediation plans and reports prepared by or on behalf of Tenant in response to any such regulatory order or directive. Notwithstanding the foregoing, if Tenant provides Landlord with substantial proof that a Release in the Premises was caused by another tenant or occupant in the Project then Landlord shall use good faith efforts to assist Tenant in pursuing such party to cause it to remediate the Release or pay for such remediation, but ultimately Tenant's obligations under this Section 5.4 shall remain as stated herein.

5.4.1.5 **Indemnification**.

5.4.1.5.1 **In General**. Without limiting in any way Tenant's obligations under any other provision of this Lease, Tenant shall be solely responsible for and shall protect, defend, indemnify and hold the Landlord Parties harmless from and against any and all claims, judgments, losses, damages, costs, expenses, penalties, enforcement actions, taxes, fines, remedial actions, liabilities (including, without limitation, actual attorneys' fees, litigation, arbitration and administrative proceeding costs, expert and consultant fees and laboratory costs) including, without limitation, consequential damages and sums paid in settlement of claims, which arise during or after the Lease Term, whether foreseeable or unforeseeable, directly or indirectly arising out of or attributable to the presence, use, generation, manufacture, treatment, handling, refining, production, processing, storage, Release or presence of Hazardous Materials in, on, under or about the Premises by Tenant, except to the extent such liabilities result from the gross negligence or willful misconduct of Landlord following the Lease Commencement Date. The foregoing obligations of Tenant shall include, including without limitation: (i) the costs of any required or necessary removal, repair, cleanup or remediation of the Premises, and the preparation and implementation of any closure, removal, remedial or other required plans; (ii) judgments for personal injury or property damages; and (iii) all costs and expenses incurred by Landlord in connection therewith. It is the express intention of the parties to this Lease that Tenant assumes all such liabilities, and holds Landlord harmless from all such liabilities, associated with the environmental condition of the Premises, arising on or after the date Tenant takes possession of the Premises.

5.4.1.5.2 **Limitations**. Landlord warrants and represents that Landlord has not engaged in the Release of any Hazardous Materials subsequent to the date of the "Phase I Environmental Site Assessment Report" bearing ECS Project No. 49-1782, prepared on behalf of Longfellow Real Estate Ventures, LLC as of April 18, 2016 ("ECS Phase I") Landlord further warrants and represents that, to Landlord's knowledge, on or after the effective date of the ECS Phase I report, Landlord has not received a summons, citation, directive, letter or other communication, written or oral, from any state agency or the U.S. Government concerning the Project or any intentional or unintentional action on Landlord or any occupant's part as a result of a Release of any Hazardous Materials.

5.4.1.6 **Compliance with Environmental Laws**. Without limiting the generality of Tenant's obligation to comply with Applicable Laws as otherwise provided in this Lease, Tenant shall, at its sole cost and expense, comply with all Environmental Laws. Tenant shall obtain and maintain any and all necessary permits, licenses, certifications and approvals appropriate or required for the use, handling, storage, and disposal of any Hazardous Materials used, stored, generated, transported, handled, blended, or recycled by Tenant on the Premises. Landlord shall have a continuing right, without obligation, to require Tenant to obtain, and to review and inspect any and all such permits, licenses, certifications and approvals, together with copies of any and all Hazardous Materials management plans and programs, any and all Hazardous Materials risk management and pollution prevention programs, and any and all Hazardous Materials emergency response and employee training programs respecting Tenant's use of Hazardous Materials. Upon request of Landlord, Tenant shall deliver to Landlord a narrative description explaining the nature and scope of Tenant's activities involving Hazardous Materials and showing to Landlord's satisfaction compliance with all Environmental Laws and the terms of this Lease.

5.4.2 **Assurance of Performance**.

5.4.2.1 **Environmental Assessments In General**. Landlord may, but shall not be required to, engage from time to time such contractors as Landlord determines to be appropriate (and with reasonable advance notice to Tenant, not less than 5 business days) to perform "Environmental Assessments," as that term is defined below, to ensure Tenant's compliance with the requirements of this Lease with respect to Hazardous Materials. For purposes of this Lease, "**Environmental Assessment**" means an assessment including, without limitation: (i) an environmental site assessment conducted in accordance with the then-current standards of the American Society for Testing and Materials and meeting the requirements for satisfying the "all appropriate inquiries" requirements; and (ii) sampling and testing of the Premises based upon potential recognized environmental conditions or areas of concern or inquiry identified by the environmental site assessment.

5.4.2.2 **Costs of Environmental Assessments**. All costs and expenses incurred by Landlord in connection with any such Environmental Assessment initially shall be paid by Landlord; provided that if any such Environmental Assessment shows that Tenant has failed to comply with the provisions of this Section 5.4, then all of the costs and expenses of such Environmental Assessment shall be reimbursed by Tenant as Additional Rent within thirty (30) days after receipt of written demand therefor (and reasonable documentation of Tenant's material breach of its environmental obligations).

5.4.3 **Tenant's Obligations upon Surrender**. At the expiration or earlier termination of the Lease Term, Tenant, at Tenant's sole cost and expense, shall: (i) cause an Environmental Assessment of the Premises to be conducted in accordance with Section 15.3; (ii) cause all Hazardous Materials to be removed from the Premises and disposed of in accordance with all Environmental Laws and as necessary to allow the Premises to be used for any purpose; and (iii) cause to be removed all containers installed or used by Tenant or Tenant's Agents to store any Hazardous Materials on the Premises, and cause to be repaired any damage to the Premises caused by such removal.

5.4.4 **Clean-up**.

5.4.4.1 **Environmental Reports; Clean-Up**. If any written report, including any report containing results of any Environmental Assessment (an "**Environmental Report**") shall indicate (i) the presence of any Hazardous Materials as to which Tenant has a removal or remediation obligation under this Section 5.4, and (ii) that as a result of same, the investigation, characterization, monitoring, assessment, repair, closure, remediation, removal, or other clean-up (the "**Clean-up**") of any Hazardous Materials is required, Tenant shall promptly prepare and submit to Landlord within thirty (30) days after receipt of the Environmental Report a comprehensive plan, subject to Landlord's written approval, specifying the actions to be taken by Tenant to perform the Clean-up so that the Premises are restored to the conditions required by this Lease. Upon Landlord's approval of the Clean-up plan, Tenant shall, at Tenant's sole cost and expense, without limitation on any rights and remedies of Landlord under this Lease, immediately implement such plan with a consultant reasonably acceptable to Landlord and proceed to Clean-Up Hazardous Materials in accordance with all Applicable Laws and as required by such plan and this Lease. If, within thirty (30) days after receiving a copy of such Environmental Report, Tenant fails either (a) to complete such Clean-up, or (b) with respect to any Clean-up that cannot be completed within such thirty-day period, fails to proceed with diligence to prepare the Clean-up plan and complete the Clean-up as promptly as practicable, then Landlord shall have the right, but not the obligation, and without waiving any other rights under this Lease, to carry out any Clean-up recommended by the Environmental Report or required by any governmental authority having jurisdiction over the Premises, and recover all of the costs and expenses thereof from Tenant as Additional Rent, payable within ten (10) business days after receipt of written demand therefor.

5.4.4.2 **No Rent Abatement**. Tenant shall continue to pay all Rent due or accruing under this Lease during any Clean-up, and shall not be entitled to any reduction, offset or deferral of any Base Rent or Additional Rent due or accruing under this Lease during any such Clean-up.

5.4.4.3 **Surrender of Premises**. Tenant shall complete any Clean-up prior to surrender of the Premises upon the expiration or earlier termination of this Lease, and shall fully comply with all Environmental Laws and requirements of any governmental authority with respect to such completion, including, without limitation, fully comply with any requirement to file a risk assessment, mitigation plan or other information with any such governmental authority in conjunction with the Clean-up prior to such surrender. Tenant shall obtain and deliver to Landlord a letter or other written determination from the overseeing governmental authority confirming that the Clean-up has been completed in accordance with all requirements of such governmental authority and that no further response action is required for the unrestricted use of the Premises from an Environmental Law standpoint ("**Closure Letter**"). Upon the expiration or earlier termination of this Lease, Tenant shall also be obligated to close all permits obtained in connection with Hazardous Materials in accordance with applicable laws.

5.4.4.4 **Failure to Timely Clean-Up**. Should any Clean-up for which Tenant is responsible not be completed, or should Tenant not receive the Closure Letter and any governmental approvals required under Environmental Laws in conjunction with such Clean-up prior to the expiration or earlier termination of this Lease, and Tenant's failure to receive the Closure Letter is prohibiting Landlord from leasing the Premises or any part thereof to a third party, or prevents the occupancy or use of the Premises or any part thereof by a third party, then Tenant shall be liable to Landlord as a holdover tenant (as more particularly provided in Article 16) until Tenant has fully complied with its obligations under this Section 5.4.

5.4.5 **Confidentiality**. Unless compelled to do so by Applicable Law, Tenant agrees that Tenant shall not disclose, discuss, disseminate or copy any information, data, findings, communications, conclusions and reports regarding the environmental condition of the Premises to any Person (other than Tenant's consultants, attorneys, property managers and employees that have a need to know such information), including any governmental authority, without the prior written consent of Landlord, not to be unreasonably withheld, conditioned, or delayed. In the event Tenant reasonably believes that disclosure is compelled by Applicable Law, it shall provide Landlord ten (10) days' advance notice of disclosure of confidential information so that Landlord may attempt to obtain a protective order. Tenant may additionally release such information to bona fide prospective purchasers or lenders, subject to any such parties' written agreement to be bound by the terms of this Section 5.4.

5.4.6 **Copies of Environmental Reports**. Within thirty (30) days of receipt thereof, Tenant shall provide Landlord with a copy of any and all environmental assessments, audits, studies and reports regarding Tenant's activities with respect to the Premises, or ground water beneath the Land, or the environmental condition or Clean-up thereof. Tenant shall be obligated to provide Landlord with a copy of such materials without regard to whether such materials are generated by Tenant or prepared for Tenant, or how Tenant comes into possession of such materials.

5.4.7 **Intentionally Omitted**.

5.4.8 **Signs, Response Plans, Etc**. Tenant shall be responsible for posting on the Premises any signs required under applicable Environmental Laws. Tenant shall also complete and file any business response plans or inventories required by any Applicable Laws. Tenant shall concurrently file a copy of any such business response plan or inventory with Landlord.

5.4.9 **Survival**. Each covenant, agreement, representation, warranty and indemnification made by Tenant set forth in this Section 5.4 shall survive the expiration or earlier termination of this Lease and shall remain effective until all of Tenant's obligations under this Section 5.4 have been completely performed and satisfied.

6. SERVICES AND UTILITIES

6.1 **Landlord Provided Services**. Landlord shall provide the following services on all days (unless otherwise stated below) during the Lease Term.

6.1.1 Subject to limitations imposed by all governmental rules, regulations and guidelines applicable thereto, Landlord shall provide adequate electrical wiring and facilities for connection to Tenant's lighting fixtures and incidental use equipment, provided that the connected electrical load of the incidental use equipment and the connected electrical load of Tenant's lighting fixtures does not exceed Tenant's Share of the system capacity (as reasonably documented by Landlord). Tenant shall bear the cost of replacement of lamps, starters and ballasts for lighting fixtures within the Premises.

6.1.2 Landlord shall provide city water from the regular Building outlets for drinking, lavatory and toilet purposes in the Building Common Areas and service to the Premises.

6.1.3 Landlord shall provide a dumpster and/or trash compactor at the Building for use by Tenant and other tenants for ordinary office waste (and not for Hazardous Materials).

6.1.4 Landlord shall provide landscaping, snow and ice removal in the Common Areas.

6.1.5 Landlord shall provide access to the rooftop as stated in Section 7.2.

6.1.6 Landlord shall provide Building standard heating, ventilation (including exhaust) and air conditioning ("**HVAC**").

6.2 **Tenant Provided Services and Utilities**. Except as otherwise expressly set forth in Section 6.1, above, Tenant will be responsible, at its sole cost and expense, for the furnishing of all services and utilities to the Premises including internet, telephone, janitorial and interior Building security services.

6.2.1 Landlord shall not provide janitorial or trash services for the Premises except as expressly provided in Section 6.1.3, above. Tenant shall be solely responsible for performing all janitorial and trash services and other cleaning of the Premises, all in compliance with Applicable Laws. In the event such service is provided by a third party janitorial service, and not by employees of Tenant, such service shall be a janitorial service approved in advance by Landlord, (Landlord shall provide Tenant with a list of approved vendors upon Tenant's request). The janitorial and cleaning of the Premises shall be adequate to maintain the Premises in a manner consistent with Comparable Buildings.

6.2.2 Subject to Applicable Laws and the other provisions of this Lease (including, without limitation, the Rules and Regulations, and except in the event of an emergency), Tenant shall have access to the Building, the Premises and the Common Areas of the Building, other than Common Areas requiring access with a Building engineer, twenty-four (24) hours per day, seven (7) days per week, every day of the year; provided, however, that Tenant shall only be permitted to have access to and use of the limited-access areas of the Building during the normal operating hours of such portions of the Building.

Tenant shall reasonably cooperate with Landlord at all times and abide by all regulations and requirements that Landlord may reasonably prescribe for the proper functioning and protection of the HVAC, electrical, mechanical and plumbing systems.

6.2.3 Tenant shall pay for all water, gas, heat, light, power, telephone, internet service, cable television, other telecommunications and other utilities supplied to the Premises, together with any fees, surcharges and taxes thereon, whether part of Operating Expenses or as provided under this Article 6. Tenant shall pay all costs and expenses for any separately metered utilities provided exclusively to the Premises directly to the applicable service provider. Tenant shall pay all actual out-of-pocket costs and expenses, without mark-up, for utility charges that are based on a check- or sub-metering metering installation based on Landlord's reading of such meters and directly to Landlord, including without limitation for utility charges for power, gas and water serving the HVAC system of the Building (which are measured by the control management system of the Building based on air volume provided to each tenant space). Additional Rent for such utilities may be reasonably estimated monthly by Landlord, based on actual readings of sub- and "check" meters where applicable, and shall be paid monthly by Tenant within thirty (30) days after being billed with a final accounting based upon actual bills received from the utility providers following the conclusion of each fiscal year of the Building.

6.3 **Metering**. If necessary, Landlord may install devices to separately meter any utility use (or use other reasonable industry standard methods to reasonably estimate such use) and in such event Tenant shall pay the cost directly to Landlord, within thirty (30) days after Tenant's receipt of an invoice therefor, at the rates charged by the public utility company furnishing the same, including the cost of installing, testing and maintaining of such metering devices. Tenant's use of electricity and any other utility shall never exceed the capacity of the feeders to the Project or the risers or wiring installation or Tenant's Share of the per floor limits as reasonably determined and documented by Landlord.

6.4 **Interruption of Use**. Tenant agrees that, to the extent permitted pursuant to Applicable Laws, Landlord shall not be liable for damages, by abatement of Rent or otherwise, for failure to furnish or delay in furnishing any service (including telephone and telecommunication services), or for any diminution in the quality or quantity thereof, when such failure or delay or diminution is occasioned, in whole or in part, by breakage, repairs, replacements, or improvements, by any strike, lockout or other labor trouble, by inability to secure electricity, gas, water, or other fuel at the Building or Project after reasonable effort to do so, by any riot or other dangerous condition, emergency, accident or casualty whatsoever, by act or default of Tenant or other parties, or by any other cause not under Landlord's reasonable control; and such failures or delays or diminution shall never be deemed to constitute an eviction or disturbance of Tenant's use and possession of the Premises or relieve Tenant from paying Rent or performing any of its obligations under this Lease. Furthermore, Landlord shall not be liable under any circumstances for a loss of, or injury to, property or for injury to, or interference with, Tenant's business, including, without limitation, loss of profits, however occurring, through or in connection with or incidental to a failure to furnish any of the services or utilities as set forth in this Article 6.

Notwithstanding the foregoing to the contrary, in the event that there shall be an interruption, curtailment or suspension of any service required to be provided by Landlord pursuant to Section 6.1 (and no reasonably equivalent alternative service or supply is provided by Landlord) that shall materially interfere with Tenant's use and enjoyment of a material portion of the Premises, and Tenant actually ceases to use affected portion of the Premises (any such event, a "**Service Interruption**"), and if (i) such Service Interruption shall continue for seventy-two (72) consecutive hours following receipt by Landlord of written notice from Tenant describing such Service Interruption (the "**Service Interruption Notice**"), (ii) such Service Interruption shall not have been caused, in whole or in part, by reasons beyond Landlord's reasonable control or by an act or omission in violation of this Lease by Tenant or by any negligence of Tenant, or Tenant's agents, employees, contractors or invitees, and (iii) either (A) Landlord does not diligently commence and pursue to completion the remedy of such Service Interruption or (B) Landlord receives proceeds from its rental interruption insurance that covers such Service Interruption (a Service Interruption that satisfies the foregoing conditions being referred to hereinafter as a "**Material Service Interruption**") then, as liquidated damages and Tenant's sole remedy at law or equity, Tenant shall be entitled to an equitable abatement of Base Rent and Tenant's Share of Direct Expenses, based on the nature and duration of the Material Service Interruption, the area of the Premises affected, and the then current Rent amounts, for the period that shall begin on the commencement of such Material Service Interruption and that shall end on the day such Material Service

Interruption shall cease. To the extent a Material Service Interruption is caused by an event covered by Articles 11 or 13 of this Lease, then Tenant's right to abate rent shall be governed by the terms of such Article 11 or 13, as applicable, and the provisions of this paragraph shall not apply

6.5 **Responsibility Matrix**. The matrix attached hereto as **Exhibit H** and incorporated by reference provides the maintenance, repair, services, and utilities responsibilities for Landlord and Tenant at the Premises and Building ("**Responsibility Matrix**"). Landlord reserves the right at any time to make reasonable changes to the Responsibility Matrix based on current conditions at the Building as in Landlord's reasonable judgment may from time to time be necessary for the management, safety, care and cleanliness of the Premises and Building. The parties shall perform the obligations as noted in the Responsibility Matrix and to the extent of any discrepancies between this Article 6 and the Responsibility Matrix the details in the Responsibility Matrix shall control.

7. REPAIRS

7.1 **Tenant Repairs**. Tenant shall, at Tenant's own expense, keep the Premises, including all improvements, fixtures, furnishings, supplemental/non-Building heating, ventilation (including exhaust) and air conditioning (which Tenant installs as part of the Tenant Improvements) ("**Supplemental HVAC**"), and systems and equipment therein (including, without limitation, plumbing fixtures and equipment such as dishwashers, garbage disposals, and insta-hot dispensers), and the floor of the Building on which the Premises are located, in good order, repair and condition as received (ordinary wear and tear and casualty damage excepted) at all times during the Lease Term. In addition, Tenant shall, at Tenant's own expense, but under the supervision and subject to the prior reasonable approval of Landlord, and within any reasonable period of time specified by Landlord, promptly and adequately repair all damage to the Premises and replace or repair all damaged, broken, or worn fixtures and appurtenances, except for damage caused by ordinary wear and tear or beyond the reasonable control of Tenant; provided however, that, at Landlord's option, or if Tenant fails to make such repairs (after notice from Landlord a reasonable opportunity to do so), Landlord may, but need not, make such repairs and replacements, and Tenant shall pay Landlord the cost thereof, including a percentage of the cost thereof (to be uniformly established for the Building and/or the Project) sufficient to reimburse Landlord for all overhead, general conditions, fees and other costs or expenses arising from Landlord's involvement with such repairs and replacements forthwith upon being billed for same. Without limitation, Tenant shall be responsible for the Supplemental HVAC and Tenant shall secure, pay for, and keep in force contracts with appropriate and reputable service companies reasonably approved by Landlord providing for the regular maintenance of such systems.

7.2 **Riser Room and Rooftop Rights**. Landlord grants Tenant the right, subject to the terms and conditions of this Lease, to access the riser room and the roof of the Building in order to maintain, repair and replace the Supplemental HVAC equipment and any other mechanical equipment located in the riser room or on the roof for which Tenant is responsible to repair, maintain and replace. Tenant may not install additional locks on any access doors or any equipment in such areas. In the event the Tenant desires to move any rooftop equipment or install any new rooftop equipment the exact location and layout of such items must be approved in advance in writing by Landlord, such approval not to be unreasonably withheld, conditioned, or delayed. Tenant's access to the riser room for the purposes of exercising its rights and obligations under this Section 7.2 shall be limited to Building Hours by prior appointment with the property manager, except in the case of emergencies. In the event of an emergency Tenant shall utilize Landlord's after-hours contact information. Tenant shall be provided access to the rooftop at all times except during an emergency through card access with Tenant's personnel who are approved in advance by Landlord. Tenant shall engage Landlord's roofer before beginning any rooftop installations or repairs which affect the roof whether under this Section 7.2 or otherwise, and shall always comply with the roof warranty governing the protection of the roof and modifications to the roof. Tenant shall obtain a letter from Landlord's roofer following completion of such work stating that the roof warranty remains in effect. Tenant agrees that Tenant's access to the riser room or roof and any work on the roof shall be at Tenant's sole risk. Tenant shall indemnify, defend and hold Landlord harmless against any liability, claim or cost, including reasonable attorneys' fees, incurred in connection with the loss of life, personal injury, damage to property or business or any other loss or injury (except to the extent due to the grossly negligent act or willful misconduct of Landlord or its employees, agents or contractors) arising out of the access to the riser room or rooftop or any work on the rooftop by Tenant or its employees, agents, or contractors, including any liability arising out of Tenant's violation of this Section 7.2. Tenant shall specifically be responsible for Landlord's costs to repair any damage or remedy any infraction caused by Tenant or Tenant's vendor in the riser

room or on the roof of the Building. Landlord shall not be responsible for any damage or harm that result from Tenant's inability or delay to access the riser room or rooftop and Tenant hereby waives any claims against Landlord arising from such delays in access. The provisions of this paragraph shall survive the expiration or earlier termination of this Lease.

7.3 **Landlord Repairs**. Notwithstanding the foregoing, Landlord shall be responsible for repairs to the exterior walls, windows, foundation and roof (including roof membrane) of the Building, the structural portions of the floors of the Building, and the base building systems and equipment of the Building and Common Areas (to the extent not serving Tenant exclusively (but Landlord acknowledges and agrees that the air handler currently serving the Premises constitutes part of the base Building)), except to the extent that such repairs are required due to the gross negligence or willful misconduct of Tenant; provided, however, that if such repairs are due to the gross negligence or willful misconduct of Tenant, Landlord shall nevertheless make such repairs at Tenant's expense, or, if covered by Landlord's insurance, Tenant shall only be obligated to pay any deductible in connection therewith. Subject to the terms of Article 27, below, Landlord may, but shall not be required to, enter the Premises at all reasonable times and upon reasonable prior notice to make such repairs, alterations, improvements or additions to the Premises or to the Project or to any equipment located in the Project as Landlord shall reasonably desire or deem necessary or as Landlord may be required to do by governmental or quasi-governmental authority or court order or decree.

8. ADDITIONS AND ALTERATIONS

8.1 **Landlord's Consent to Alterations**. Tenant may not make any improvements, alterations, additions or changes to the Premises or any mechanical, plumbing or HVAC facilities or systems pertaining to the Premises (collectively, the "**Alterations**") without first procuring the prior written consent of Landlord to such Alterations, which consent shall be requested by Tenant not less than ten (10) business days prior to the commencement thereof, and which consent shall not be unreasonably withheld, conditioned or delayed by Landlord, provided it shall be deemed reasonable for Landlord to withhold its consent to any Alteration which adversely affects the structural portions or the systems or equipment of the Building or is visible from the exterior of the Building. Notwithstanding the foregoing, Tenant shall be permitted to make non-structural Alterations following ten (10) business days' notice to Landlord, but without Landlord's prior consent, to the extent that such Alterations (i) do not materially affect the Building roof, systems or equipment, (ii) are not visible from the exterior of the Building, and (iii) cost less than fifty thousand and 00/100 ($50,000.00) per year.

8.2 Prior to commencing any Alterations affecting air distribution or disbursement from ventilation systems serving Tenant or the Building, including without limitation the installation of Tenant's exhaust systems, Tenant shall provide Landlord with a third party report from a consultant, and in a form reasonably acceptable to Landlord, showing that such work will not materially and adversely affect the ventilation systems or air quality of the Building (or of any other tenant in the Building) and shall, upon completion of such work, provide Landlord with a certification reasonably satisfactory to Landlord from such consultant confirming that no such adverse effects have resulted from such work.

8.3 **Manner of Construction**. Landlord may impose, as an express condition of its consent (at the time said consent is given) to any and all Alterations (other than the Tenant Improvements) or repairs of the Premises or about the Premises, such requirements as Landlord in its reasonable discretion may deem desirable, including, but not limited to, the requirement that Tenant utilize for such purposes only contractors, subcontractors, materials, mechanics and materialmen selected by Tenant and approved by Landlord (which approval shall not be unreasonably withheld, conditioned or delayed), the requirement that upon Landlord's request at the time Landlord approves said Alterations (subject to the terms of Section 8.5, below), Tenant shall, at Tenant's expense, remove such Alterations upon the expiration or any early termination of the Lease Term. Tenant shall construct such Alterations and perform such repairs in a good and workmanlike manner, in conformance with any and all applicable federal, state, county or municipal laws, rules and regulations and pursuant to a valid building permit, issued by the city in which the Building is located (or other applicable governmental authority). Tenant shall not use (and upon notice from Landlord shall cease using) contractors, services, workmen, labor, materials or equipment that, in Landlord's reasonable judgment, would disturb labor harmony with the workforce or trades engaged in performing other work, labor or services in or about the Building or the Common Areas. Upon completion of any Alterations (or repairs), Tenant shall deliver to Landlord final lien waivers from all contractors, subcontractors and materialmen who performed such work. In

addition to Tenant's obligations under Article 9 of this Lease, upon completion of any Alterations, Tenant shall deliver to the Project construction manager a reproducible copy of the "**as built**" drawings of the Alterations as well as all permits, approvals and other documents issued by any governmental agency in connection with the Alterations. Landlord shall make its construction rules and a pre-approved vendor list available to Tenant upon request.

8.4 **Payment for Improvements**. If Tenant orders any work directly from Landlord, Tenant shall pay to Landlord an amount equal to four percent (4%) of the cost of such work to compensate Landlord for all overhead, general conditions, fees and other costs and expenses arising from Landlord's involvement with such work. If Tenant does not order any work directly from Landlord, Tenant shall reimburse Landlord for Landlord's reasonable, actual, out-of-pocket costs and expenses actually incurred in connection with Landlord's review of such work including a construction management fee in the amount of two and one-half percent (2.5%) of the total costs of such work, up to but not to exceed a total payment by Tenant to Landlord of Forty Thousand and 00/100 Dollars ($40,000.000).

8.5 **Construction Insurance**. In addition to the requirements of Article 10 of this Lease, in the event that Tenant makes any Alterations, prior to the commencement of such Alterations, Tenant shall provide Landlord with evidence that Tenant carries "**Builder's All Risk**" insurance (to the extent that the cost of the work shall exceed $100,000.00) in an amount approved by Landlord covering the construction of such Alterations, and such other standard and reasonable insurance as Landlord may reasonably require, it being understood and agreed that all of such Alterations shall be insured by Tenant pursuant to Article 10 of this Lease immediately upon completion thereof. In addition, Tenant's contractors and subcontractors shall be required to carry Commercial General Liability Insurance in an amount approved by Landlord and otherwise in accordance with the requirements of Article 10 of this Lease and such general liability insurance shall name the Landlord Parties as additional insureds. In addition, Tenant's contractors and subcontractors shall be required to carry workers compensation insurance with a waiver of subrogation in favor of Landlord Parties.

9. COVENANT AGAINST LIENS

Tenant shall keep the Project and Premises free from any liens or encumbrances arising out of the work performed, materials or services furnished or obligations incurred by or on behalf of Tenant, and shall protect, defend, indemnify and hold Landlord harmless from and against any claims, liabilities, judgments or costs (including, without limitation, reasonable attorneys' fees and costs) arising out of same or in connection therewith. Tenant shall give Landlord notice at least twenty (20) days prior to the commencement of any work, services or obligations related to the Premises giving rise to any such liens or encumbrances (or such additional time as may be necessary under Applicable Laws) to afford Landlord the opportunity of posting and recording appropriate notices of non-responsibility (to the extent applicable pursuant to then Applicable Laws). Tenant shall remove any such lien or encumbrance by statutory lien bond or otherwise within ten (10) business days after notice by Landlord, and if Tenant shall fail to do so, Landlord may pay the amount necessary to remove such lien or encumbrance, without being responsible for investigating the validity thereof.

10. INSURANCE

10.1 **Indemnification and Waiver**. Tenant hereby assumes all risk of damage to property or injury to persons in, upon or about the Premises from any cause whatsoever (including, but not limited to, any personal injuries resulting from a slip and fall in, upon or about the Premises) and agrees that Landlord, its lenders, partners, subpartners and their respective officers, agents, servants, employees, and independent contractors (collectively, "**Landlord Parties**") shall not be liable for, and are hereby released from any responsibility for, any damage either to person or property or resulting from the loss of use thereof, which damage is sustained by Tenant or by other persons claiming through Tenant. Tenant shall indemnify, defend, protect, and hold harmless the Landlord Parties from any and all loss, cost, damage, injury, expense and liability (including without limitation court costs and reasonable attorneys' fees) during the Lease Term, or any period of Tenant's occupancy of the Premises prior to the commencement or after the expiration of the Lease Term, incurred in connection with or arising from any cause in, on or about the Premises (including, but not limited to, a slip and fall), any acts, omissions or negligence of Tenant or of any person claiming by, through or under Tenant, or of the contractors, agents, servants, employees, invitees, guests or licensees of Tenant or any such person, in, on or about the Project or any breach of the terms of this Lease, either prior to, during, or after the expiration of the Lease Term, provided that the terms of the foregoing indemnity shall not apply to the gross

negligence or willful misconduct of Landlord. Should Landlord be named as a defendant in any suit brought against Tenant in connection with or arising out of Tenant's occupancy of the Premises, Tenant shall pay to Landlord its reasonable costs and expenses incurred in such suit, including without limitation, its actual professional fees such as reasonable appraisers', accountants' and attorneys' fees. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease with respect to any claims or liability arising in connection with any event occurring prior to such expiration or termination.

10.2 **Tenant's Compliance With Landlord's Property Insurance**. Tenant shall, at Tenant's expense, comply with all reasonable insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises for any purpose other than customary, general office use causes any increase in the premium for such insurance policies (as reasonably documented by Landlord) then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body.

10.3 **Tenant's Insurance**. Tenant shall maintain the following coverages in the following amounts.

10.3.1 Commercial General Liability Insurance on an occurrence form covering the insured against claims of bodily injury, personal and advertising injury and property damage (including loss of use thereof) arising out of Tenant's operations, products/completed operations, and contractual liability including a Broad Form endorsement covering the insuring provisions of this Lease and the performance by Tenant of the indemnity agreements set forth in Section 10.1 of this Lease, and including, solely on a claims-made basis, products and completed operations coverage, for limits of liability of not less than:

Bodily Injury and Property Damage Liability	$5,000,000 each occurrence $5,000,000 annual aggregate
Personal and Advertising Injury Liability	$5,000,000 each occurrence $5,000,000 annual aggregate 0% Insured's participation

10.3.2 Property Insurance covering (i) all office furniture, business and trade fixtures, office equipment, free-standing cabinet work, movable partitions, merchandise and all other items of Tenant's property on the Premises installed by, for, or at the expense of Tenant, and (ii) any other improvements which exist in the Premises as of the Lease Commencement Date (excluding the Base Building) (the "**New Improvements**"). Such insurance shall be written on an "**all risks**" of physical loss or damage basis, for the full replacement cost value (subject to reasonable deductible amounts) new without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include coverage for damage or other loss caused by fire or other peril including, but not limited to, vandalism and malicious mischief, theft, water damage of any type, including sprinkler leakage, bursting or stoppage of pipes, and explosion.

10.3.3 Business Income Interruption for one (1) year plus Extra Expense insurance in such amounts as will reimburse Tenant for actual direct or indirect loss of earnings attributable to the risks outlined in Section 10.3.2 above.

10.3.4 Worker's Compensation and Employer's Liability or other similar insurance pursuant to all applicable state and local statutes and regulations. The policy will include a waiver of subrogation in favor of the Landlord Parties.

10.4 **Form of Policies**. The minimum limits of policies of insurance required of Tenant under this Lease shall in no event limit the liability of Tenant under this Lease. Such insurance shall (i) name Landlord, its subsidiaries and affiliates and any other party the Landlord so specifies, as an additional insured, as applicable, including Landlord's managing agent, if any; (ii) cover the liability assumed by Tenant under this Lease; (iii) be issued by an insurance company having a rating of not less than A:VIII in Best's Insurance Guide or which is otherwise acceptable to Landlord and licensed to do business in the State of North Carolina; (iv) be primary insurance as to all claims

thereunder and provide that any insurance carried by Landlord is excess and is non-contributing with any insurance required of Tenant; (v) be in form and content reasonably acceptable to Landlord; and (vi) provide that said insurer shall endeavor to provide written notice to Landlord and any mortgagee of Landlord, to the extent such names are furnished to Tenant prior to the cancellation of such policy. Tenant shall deliver said policy or policies or certificates thereof to Landlord on or before the earlier to occur of (A) the Lease Commencement Date, and (B) the date upon which Tenant is first provided access to the Premises, and at least ten (10) days before the expiration dates thereof. In the event Tenant shall fail to procure such insurance, or to deliver such policies or certificate within ten (10) days after written notice from Landlord, Landlord may, at its option (upon notice to Tenant), procure such policies for the account of Tenant, and the cost thereof shall be paid to Landlord within five (5) days after delivery to Tenant of bills therefor.

10.5 **Subrogation**. Landlord and Tenant intend that their respective property loss risks shall be borne by reasonable insurance carriers to the extent above provided, and Landlord and Tenant hereby agree to look solely to, and seek recovery only from, their respective insurance carriers in the event of a property loss to the extent that such coverage is agreed to be provided hereunder. The parties each hereby waive all rights and claims against each other for such losses, and waive all rights of subrogation of their respective insurers, provided such waiver of subrogation shall not affect the right to the insured to recover thereunder. The parties agree that their respective insurance policies are now, or shall specify that the waiver of subrogation shall not affect the right of the insured to recover thereunder.

10.6 **Additional Insurance Obligations**. Tenant shall carry and maintain during the entire Lease Term, at Tenant's sole cost and expense, increased amounts of insurance to the extent required by any lender or mortgagee on the Building.

10.7 **Landlord Insurance Obligations**. Landlord shall keep in force during the term of this Lease at least the following coverage: (i) commercial general liability insurance against any and all claims for bodily injury and property damage occurring in or about the Building or the Common Areas having a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) in the aggregate, and (ii) property insurance for fire, casualty and special causes of loss in such amounts and coverages as Landlord deems appropriate or is otherwise required of Landlord by its lender or Applicable Law, but in no event less than the lesser of (a) at least one hundred percent (100%) percent of the replacement cost of the Building or (b) the maximum insurable value of the Building.

11. DAMAGE AND DESTRUCTION

11.1 **Repair of Damage to Premises by Landlord**. Tenant shall promptly notify Landlord of any damage to the Premises resulting from fire or any other casualty. If the Premises or any Common Areas serving or providing access to the Premises shall be damaged by fire or other casualty, Landlord shall promptly and diligently, subject to reasonable delays for insurance adjustment or other matters beyond Landlord's reasonable control, and subject to all other terms of this Article 11, restore such Common Areas and the Premises to substantially the same condition as existed prior to the casualty, except for modifications required by zoning and building codes and other laws or by the holder of a mortgage on the Building or Project or any other modifications to the Common Areas deemed desirable by Landlord, which are consistent with the character of the Project, provided that access to the or the use of Premises shall not be materially impaired. Upon the occurrence of any damage to the Premises, upon notice (the "**Landlord Repair Notice**") to Tenant from Landlord, Tenant shall assign to Landlord (or to any party designated by Landlord) all insurance proceeds payable to Tenant under Tenant's insurance required under Section 10.3.2(ii) of this Lease and Landlord's obligation to restore any Alterations or Tenant Improvements shall be limited to the extent of such proceeds received by Landlord. To the extent permitted pursuant to Applicable Laws, Landlord shall not be liable for any inconvenience or annoyance to Tenant or its visitors, or injury to Tenant's business resulting in any way from such damage or the repair thereof; provided however, that if such fire or other casualty shall have damaged the Premises or Common Areas necessary to Tenant's occupancy, and the Premises, or a material portion of the Premises, are not occupied by Tenant as a result thereof, then during the time and to the extent the Premises are unfit for occupancy, the Rent shall be abated in proportion to the ratio that the amount of rentable square feet of the Premises which is unfit for occupancy for the purposes permitted under this Lease bears to the total rentable square feet of the Premises.

11.2 **Landlord's Option to Repair**. Notwithstanding the terms of Section 11.1 of this Lease, Landlord may elect not to rebuild and/or restore the Premises, Building and/or Project, and instead terminate this Lease, by notifying Tenant in writing of such termination within forty-five (45) days after the date of discovery of the damage, such notice to include a termination date giving Tenant sixty (60) days to vacate the Premises, but Landlord may so elect only if the Building or Project shall be damaged by fire or other casualty or cause, whether or not the Premises are affected, and one or more of the following conditions is present: (i) in Landlord's reasonable judgment, repairs cannot reasonably be completed within one hundred eighty (180) days after the date of discovery of the damage (when such repairs are made without the payment of overtime or other premiums); (ii) the holder of any mortgage on the Building or Project or ground lessor with respect to the Building or Project shall require that the insurance proceeds or any portion thereof be used to retire the mortgage debt, or shall terminate the ground lease, as the case may be; (iii) at least Ten Thousand and 00/100 Dollars ($10,000.00) of damage is not fully covered by Landlord's insurance policies; (iv) intentionally omitted; (v) the damage occurs during the last twelve (12) months of the Lease Term; or (vi) any owner of any other portion of the Project, other than Landlord, does not intend to repair the damage to such portion of the Project; provided, however, that if Landlord does not elect to terminate this Lease pursuant to Landlord's termination right as provided above, and the repairs cannot, in the reasonable opinion of Landlord, be completed within one hundred eighty (180) days after the date of the damage, Tenant may elect, no earlier than thirty (30) days after the date of the damage and not later than ninety (90) days after the date of such damage, to terminate this Lease by written notice to Landlord effective as of the date specified in the notice, which date shall not be less than thirty (30) days nor more than sixty (60) days after the date such notice is given by Tenant. Notwithstanding the provisions of this Section 11.2, Tenant shall have the right to terminate this Lease under this Section 11.2 only if each of the following conditions is satisfied: (a) the damage to the Project by fire or other casualty was not caused by the gross negligence or intentional act of Tenant or its partners or subpartners and their respective officers, agents, servants, employees, and independent contractors; and (b) as a result of the damage, Tenant cannot reasonably conduct business from the Premises. In addition, Tenant may terminate this Lease if the damage to the Premises occurs during the last twelve (12) months of the Lease Term and such repair will take more than 10% of the remaining Term to repair.

12. NONWAIVER

No provision of this Lease shall be deemed waived by either party hereto unless expressly waived in a writing signed thereby. The waiver by either party hereto of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of same or any other term, covenant or condition herein contained. The subsequent acceptance of Rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by Tenant of any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular Rent so accepted, regardless of Landlord's knowledge of such preceding breach at the time of acceptance of such Rent. No acceptance of a lesser amount than the Rent herein stipulated shall be deemed a waiver of Landlord's right to receive the full amount due, nor shall any endorsement or statement on any check or payment or any letter accompanying such check or payment be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the full amount due. No receipt of monies by Landlord from Tenant after the termination of this Lease shall in any way alter the length of the Lease Term or of Tenant's right of possession hereunder, or after the giving of any notice shall reinstate, continue or extend the Lease Term or affect any notice given Tenant prior to the receipt of such monies, it being agreed that after the service of notice or the commencement of a suit, or after final judgment for possession of the Premises, Landlord may receive and collect any Rent due, and the payment of said Rent shall not waive or affect said notice, suit or judgment.

13. CONDEMNATION

If the whole or any part of the Premises, Building or Project shall be taken by power of eminent domain or condemned by any competent authority for any public or quasi-public use or purpose, or if any adjacent property or street shall be so taken or condemned, or reconfigured or vacated by such authority in such manner as to require the use, reconstruction or remodeling of any part of the Premises, Building or Project, or if Landlord shall grant a deed or other instrument in lieu of such taking by eminent domain or condemnation, Landlord shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority. Tenant shall not because of such taking assert any claim against Landlord or the authority for any compensation because of such taking and Landlord shall be entitled to the entire award or payment in connection therewith, except that Tenant shall have the right to file any separate claim available to Tenant for any taking of Tenant's personal property and fixtures

belonging to Tenant and removable by Tenant upon expiration of the Lease Term pursuant to the terms of this Lease, and for moving expenses, so long as such claims do not diminish the award available to Landlord, its ground lessor with respect to the Building or Project or its mortgagee, and such claim is payable separately to Tenant. All Rent shall be apportioned as of the date of such termination. If any part of the Premises shall be taken, and this Lease shall not be so terminated, the Rent shall be proportionately abated. Notwithstanding anything to the contrary contained in this Article 13, in the event of a temporary taking of all or any portion of the Premises for a period of one hundred and eighty (180) days or less, and provided that such temporary taking does not materially preclude or unreasonably diminish Tenant's ability to conduct business from the Premises, then this Lease shall not terminate but the Base Rent and the Additional Rent shall be abated for the period of such taking in proportion to the ratio that the amount of rentable square feet of the Premises taken bears to the total rentable square feet of the Premises. Landlord shall be entitled to receive the entire award made in connection with any such temporary taking, provided, however, that Tenant shall be entitled to a share of the award for any loss of fixtures and improvements and for moving and other reasonable expenses that do not otherwise reduce Landlord's recovery.

14. ASSIGNMENT AND SUBLETTING

14.1 **Transfers**. Tenant shall not, without the prior written consent of Landlord, assign, mortgage, pledge, hypothecate, encumber, or permit any lien to attach to, or otherwise transfer, this Lease or any interest hereunder, permit any assignment, or other transfer of this Lease or any interest hereunder by operation of law, sublet the Premises or any part thereof, or enter into any license or concession agreements or otherwise permit the occupancy or use of the Premises or any part thereof by any persons other than Tenant and its employees and contractors (all of the foregoing are hereinafter sometimes referred to collectively as "**Transfers**" and any person to whom any Transfer is made or sought to be made is hereinafter sometimes referred to as a "**Transferee**"). If Tenant desires Landlord's consent to any Transfer, Tenant shall notify Landlord in writing, which notice (the "**Transfer Notice**") shall include (i) the proposed effective date of the Transfer, which shall not be less than twenty (20) days nor more than one hundred eighty (180) days after the date of delivery of the Transfer Notice, (ii) a description of the portion of the Premises to be transferred (the "**Subject Space**"), (iii) all of the terms of the proposed Transfer and the consideration therefor, including calculation of the "**Transfer Premium**", as that term is defined in Section 14.3 below, in connection with such Transfer, the name and address of the proposed Transferee, and a copy of all existing executed and/or proposed documentation pertaining to the proposed Transfer, and (iv) current financial statements of the proposed Transferee certified by an officer, partner or owner thereof, business credit and personal references and history of the proposed Transferee and any other information reasonably required by Landlord which will enable Landlord to determine the financial responsibility, character, and reputation of the proposed Transferee, nature of such Transferee's business and proposed use of the Subject Space. Any Transfer made without Landlord's prior written consent shall, at Landlord's option, be null, void and of no effect, and shall, at Landlord's option, constitute a default by Tenant under this Lease. Whether or not Landlord consents to any proposed Transfer, Tenant shall pay Landlord's reasonable review and processing fees(not to exceed $1,500.00 for Landlord's internal costs) plus any reasonable professional fees (including, without limitation, attorneys', accountants', architects', engineers' and consultants' fees) incurred by Landlord, within thirty (30) days after written request by Landlord.

14.2 **Landlord's Consent**. Landlord shall not unreasonably withhold, condition or delay its consent to any proposed Transfer of the Subject Space to the Transferee on the terms specified in the Transfer Notice. Without limitation as to other reasonable grounds for withholding consent, the parties hereby agree that it shall be reasonable under this Lease and under any applicable law for Landlord to withhold consent to any proposed Transfer where one or more of the following apply:

14.2.1 The Transferee is of a character or reputation or engaged in a business which is not consistent with the quality of the Building or the Project;

14.2.2 The Transferee is either a governmental agency or instrumentality thereof;

14.2.3 The Transferee is not a party of reasonable financial worth and/or financial stability in light of the responsibilities to be undertaken in connection with the Transfer on the date consent is requested;

14.2.4 The proposed Transfer would cause a violation of another lease for space in the Project, or would give an occupant of the Project a right to cancel its lease; or

14.2.5 Either the proposed Transferee, or any person or entity which directly or indirectly, controls, is controlled by, or is under common control with, the proposed Transferee, is actively negotiating with Landlord or has negotiated with Landlord during the four (4) month period immediately preceding the date Landlord receives the Transfer Notice, to lease space in the Project (and Landlord has suitable space available in the Project to meet Transferee's needs).

14.2.6 In Landlord's reasonable determination, the sub-rent, additional rent or other amounts received or accrued by Tenant from subleasing, assigning or otherwise Transferring all or any portion of the Premises is based on the income or profits of any person, or the assignment of sublease could cause any portion of the amounts received by Landlord pursuant to this Lease to fail to qualify as "rents from real property" within the meaning of section 856(d) of the Internal Revenue Code of 1986, as amended (the "Code"), or any similar or successor provision thereto or which would cause any other income of Landlord to fail to qualify as income described in section 856(c)(2) of the Code.

If Landlord consents to any Transfer pursuant to the terms of this Section 14.2 (and does not exercise any recapture rights Landlord may have under Section 14.4 of this Lease), Tenant may within six (6) months after Landlord's consent, but not later than the expiration of said six-month period, enter into such Transfer of the Premises or portion thereof, upon substantially the same terms and conditions as are set forth in the Transfer Notice furnished by Tenant to Landlord pursuant to Section 14.1 of this Lease, provided that if there are any material changes in the terms and conditions from those specified in the Transfer Notice such that Landlord would initially have been entitled to refuse its consent to such Transfer under this Section 14.2, Tenant shall again submit the Transfer to Landlord for its approval and other action under this Article 14 (including Landlord's right of recapture, if any, under Section 14.4 of this Lease). Notwithstanding anything to the contrary in this Lease, if Tenant or any proposed Transferee claims that Landlord has unreasonably withheld or delayed its consent under Section 14.2 or otherwise has breached or acted unreasonably under this Article 14, their sole remedies shall be a suit for contract damages (other than damages for injury to, or interference with, Tenant's business including, without limitation, loss of profits, however occurring) or declaratory judgment and an injunction for the relief sought, and Tenant hereby waives all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all Applicable Laws, on behalf of the proposed Transferee.

14.3 **Transfer Premium**. If Landlord consents to a Transfer, as a condition thereto which the parties hereby agree is reasonable, Tenant shall pay to Landlord fifty percent (50%) of any "**Transfer Premium**," as that term is defined in this Section 14.3, received by Tenant from such Transferee (other than any Permitted Transferee). "**Transfer Premium**" shall mean all rent, additional rent or other consideration payable by such Transferee in connection with the Transfer in excess of the Rent and Additional Rent payable by Tenant under this Lease during the term of the Transfer on a per rentable square foot basis if less than all of the Premises is transferred, after deducting the reasonable third party expenses incurred by Tenant for (i) any design and construction costs incurred on account of changes, alterations and improvements to the Premises in connection with the Transfer, (ii) any free base rent and tenant improvement allowances reasonably provided to the Transferee in connection with the Transfer (provided that such free rent and tenant improvement allowances shall be deducted only to the extent the same is included in the calculation of total consideration payable by such Transferee), (iii) any brokerage commissions in connection with the Transfer, (iv) legal fees and disbursements reasonably incurred in connection with the Transfer, and (v) any unamortized Excess Costs, as defined in Exhibit D (as determined on a straight line basis over the initial term of this Lease, without interest) paid by Tenant for the Tenant Improvements (collectively, "**Tenant's Subleasing Costs**"). "**Transfer Premium**" shall also include, but not be limited to, key money, bonus money or other cash consideration paid by Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to Transferee or for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to Transferee in connection with such Transfer. The determination of the amount of Landlord's applicable share of the Transfer Premium shall be made on a monthly basis as rent or other consideration is received by Tenant under the Transfer.

14.4 **Landlord's Option as to Subject Space**. Notwithstanding anything to the contrary contained in this Article 14, in the event Tenant contemplates a Transfer which, together with all prior Transfers then remaining in effect, would cause seventy-five percent (75%) or more of the Premises to be Transferred for more than fifty percent (50%) of the then remaining Lease Term (assuming all sublease renewal or extension rights are exercised), Tenant shall give Landlord notice (the "**Intention to Transfer Notice**") of such contemplated Transfer (whether or not the contemplated Transferee or the terms of such contemplated Transfer have been determined). The Intention to Transfer Notice shall specify the portion of and amount of rentable square feet of the Premises which Tenant intends to Transfer (the "**Contemplated Transfer Space**"), the contemplated date of commencement of the Contemplated Transfer (the "**Contemplated Effective Date**"), and the contemplated length of the term of such contemplated Transfer, and shall specify that such Intention to Transfer Notice is delivered to Landlord pursuant to this Section 14.4 in order to allow Landlord to elect to recapture the Contemplated Transfer Space. Thereafter, Landlord shall have the option, by giving written notice to Tenant within fifteen (15) days after receipt of any Intention to Transfer Notice, to recapture the Contemplated Transfer Space. Such recapture shall cancel and terminate this Lease with respect to such Contemplated Transfer Space as of the Contemplated Effective Date. In the event of a recapture by Landlord, if this Lease shall be canceled with respect to less than the entire Premises, the Rent reserved herein shall be prorated on the basis of the number of rentable square feet retained by Tenant in proportion to the number of rentable square feet contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon request of either party, the parties shall execute written confirmation of the same.

14.5 **Effect of Transfer**. If Landlord consents to a Transfer, (i) the terms and conditions of this Lease shall in no way be deemed to have been waived or modified, (ii) such consent shall not be deemed consent to any further Transfer by either Tenant or a Transferee, (iii) Tenant shall deliver to Landlord, promptly after execution, an original executed copy of all documentation pertaining to the Transfer in form reasonably acceptable to Landlord, (iv) intentionally omitted, and (v) no Transfer relating to this Lease or agreement entered into with respect thereto, whether with or without Landlord's consent, shall relieve Tenant or any guarantor of the Lease from any liability under this Lease, including, without limitation, in connection with the Subject Space.

14.6 **Sublease/Transfer Restrictions**. Notwithstanding anything contained herein to the contrary and without limiting the generality of Section 14.1 above, Tenant shall not: (a) sublet all or part of the Premises or assign or otherwise Transfer this Lease on any basis such that the rental or other amounts to be paid by the subtenant or assignee thereunder would be based, in whole or in part, on the income or profits derived by the business activities of the subtenant or assignee; (b) sublet all or part of the Premises or assign this Lease to any person or entity in which, under Section 856(d)(2)(B) of the Code, Longfellow Atlantic REIT, Inc., a Delaware corporation (the "Company"), or any affiliate of the Company owns, directly or indirectly (by applying constructive ownership rules set forth in Section 856(d) (5) of the Code), a ten percent (10%) or greater interest; or (c) sublet all or part of the Premises or assign this Lease in any other manner or otherwise derive any income which could cause any portion of the amounts received by Landlord pursuant hereto or any sublease to fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Code, or which could cause any other income received by Landlord to fail to qualify as income described in Section 856(c) (2) of the Code. The requirements of this Section 14.4 shall likewise apply to any further subleasing, assignment or other Transfer by any subtenant or assignee. All references herein to Section 856 of the Code also shall refer to any amendments thereof or successor provisions thereto.

14.7 **Occurrence of Default**. Any Transfer hereunder shall be subordinate and subject to the provisions of this Lease, and if this Lease shall be terminated during the term of any Transfer, Landlord shall have the right to: (i) treat such Transfer as cancelled and repossess the Subject Space by any lawful means, or (ii) require that such Transferee attorn to and recognize Landlord as its landlord under any such Transfer. If Tenant shall be in default under this Lease (beyond applicable notice and cure period), Landlord is hereby irrevocably authorized to direct any Transferee to make all payments under or in connection with the Transfer directly to Landlord (which Landlord shall apply towards Tenant's obligations under this Lease) until such default is cured. Such Transferee shall rely on any representation by Landlord that Tenant is in default hereunder, without any need for confirmation thereof by Tenant. Upon any assignment, the assignee shall assume in writing all obligations and covenants of Tenant thereafter to be performed or observed under this Lease. No collection or acceptance of rent by Landlord from any Transferee shall be deemed a waiver of any provision of this Article 14 or the approval of any Transferee or a release of Tenant from any obligation under this Lease, whether theretofore or thereafter accruing. In no event shall Landlord's enforcement of any provision of this Lease against any Transferee be deemed a waiver of Landlord's right to enforce any term of

this Lease against Tenant or any other person. If Tenant's obligations hereunder have been guaranteed, Landlord's consent to any Transfer shall not be effective unless the guarantor also consents to such Transfer.

14.8 **Non-Transfers**. Notwithstanding anything to the contrary contained in this Article 14, (i) an assignment or subletting of all or a portion of the Premises to an affiliate of Tenant (an entity which is controlled by, controls, or is under common control with, Tenant), (ii) an assignment of the Premises to an entity which acquires all or substantially all of the assets or interests (partnership, stock or other) of Tenant, (iii) an assignment of the Premises to an entity which is the resulting entity of a merger or consolidation of Tenant, or (iv) a sale of corporate shares of capital stock in Tenant in connection with an initial public offering of Tenant's stock on a nationally-recognized stock exchange (collectively, a "**Permitted Transferee**"), shall not be deemed a Transfer under this Article 14, provided that (A) Tenant notifies Landlord of any such assignment or sublease and promptly supplies Landlord with any documents or information reasonably requested by Landlord regarding such assignment or sublease or such affiliate, (B) such assignment or sublease is not a subterfuge by Tenant to avoid its obligations under this Lease, (C) such Permitted Transferee shall be of a character and reputation consistent with the quality of the Building, and (D) such Permitted Transferee shall have a tangible net worth (not including goodwill as an asset) computed in accordance with generally accepted accounting principles ("**Net Worth**") at least equal to the Net Worth of Tenant on the day immediately preceding the effective date of such assignment or sublease. An assignee of Tenant's entire interest that is also a Permitted Transferee may also be known as a "**Permitted Assignee**". "**Control**," as used in this Section 14.8, shall mean the ownership, directly or indirectly, of at least fifty-one percent (51%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of at least fifty-one percent (51%) of the voting interest in, any person or entity. No such permitted assignment or subletting shall serve to release Tenant from any of its obligations under this Lease.

15. SURRENDER OF PREMISES; OWNERSHIP AND REMOVAL OF TRADE FIXTURES

15.1 **Surrender of Premises**. No act or thing done by Landlord or any agent or employee of Landlord during the Lease Term shall be deemed to constitute an acceptance by Landlord of a surrender of the Premises unless such intent is specifically acknowledged in writing by Landlord. The delivery of keys to the Premises to Landlord or any agent or employee of Landlord shall not constitute a surrender of the Premises or effect a termination of this Lease, whether or not the keys are thereafter retained by Landlord, and notwithstanding such delivery Tenant shall be entitled to the return of such keys at any reasonable time upon request until this Lease shall have been properly terminated. The voluntary or other surrender of this Lease by Tenant, whether accepted by Landlord or not, or a mutual termination hereof, shall not work a merger, and at the option of Landlord shall operate as an assignment to Landlord of all subleases or subtenancies affecting the Premises or terminate any or all such sublessees or subtenancies.

15.2 **Removal of Tenant Property by Tenant**. Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, subject to the provisions of this Article 15, quit and surrender possession of the Premises to Landlord in as good order and condition as when Tenant took possession and as thereafter improved by Landlord and/or Tenant, reasonable wear and tear and repairs which are specifically made the responsibility of Landlord hereunder excepted. Upon such expiration or termination, Tenant shall, without expense to Landlord, remove or cause to be removed from the Premises all debris and rubbish, and such items of furniture, equipment, free-standing cabinet work, movable partitions (not including modular "clean rooms" built into the Premises as part of the Tenant Improvements) and other articles of personal property owned by Tenant or installed or placed by Tenant at its expense in the Premises, and such similar articles of any other persons claiming under Tenant, as Landlord may, in its sole discretion, require to be removed, and Tenant shall repair at its own expense all damage to the Premises and Building resulting from such removal. In no event shall any Landlord's Work be deemed to be Tenant's personal property, it being the intent that Tenant's personal property includes only those items that are not built into the Premises and that have not been constructed or installed by Landlord pursuant to the Work Letter.

15.3 **Environmental Assessment**. Prior to the expiration of the Lease (or within thirty (30) days after any earlier termination), Tenant shall clean and otherwise decommission all interior surfaces (including floors, walls, ceilings, and counters), piping, supply lines, waste lines and plumbing in or serving the Premises, and all exhaust or other ductwork in or serving the Premises, in each case that has carried, released or otherwise been exposed to any Hazardous Materials due to Tenant's use or occupancy of the Premises, and shall otherwise clean the Premises so as

to permit the Environmental Assessment called for by this Section 15.3 to be issued. Prior to the expiration of this Lease (or within thirty (30) days after any earlier termination), Tenant, at Tenant's expense, shall obtain for Landlord a report (an "**Environmental Assessment**") addressed to Landlord (and, at Tenant's election, Tenant) by a reputable licensed environmental consultant or industrial hygienist that is designated by Tenant and acceptable to Landlord in Landlord's reasonable discretion, which report shall be based on the environmental consultant's inspection of the Premises and shall state, to the Landlord's reasonable satisfaction, that (a) the Hazardous Materials described in the first sentence of this paragraph, to the extent, if any, existing prior to such decommissioning, have been removed in accordance with Applicable Laws; (b) all Hazardous Materials described in the first sentence of this paragraph, if any, have been removed in accordance with Applicable Laws from the interior surfaces of the Premises (including floors, walls, ceilings, and counters), piping, supply lines, waste lines and plumbing, and all such exhaust or other ductwork in the Premises, may be reused by a subsequent tenant or disposed of in compliance with Applicable Laws without incurring special costs or undertaking special procedures for demolition, disposal, investigation, assessment, cleaning or removal of such Hazardous Materials and without giving notice in connection with such Hazardous Materials; and (c) the Premises may be reoccupied for office, research and development, or laboratory use, demolished or renovated without incurring special costs or undertaking special procedures for disposal, investigation, assessment, cleaning or removal of Hazardous Materials described in the first sentence of this paragraph and without giving notice in connection with Hazardous Materials. Further, for purposes of clauses (b) and (c), "special costs" or "special procedures" shall mean costs or procedures, as the case may be, that would not be incurred but for the nature of the Hazardous Materials as Hazardous Materials instead of non-hazardous materials. The report shall also include reasonable detail concerning the clean-up measures taken, the clean-up locations, the tests run and the analytic results. Tenant shall submit to Landlord the scope of the proposed Environmental Assessment for Landlord's reasonable review and approval at least 30 days prior to commencing the work described therein or at least 60 days prior to the expiration of the Lease Term, whichever is earlier.

If Tenant fails to perform its obligations under this Section 15.3 without limiting any other right or remedy, Landlord may, on five (5) business days' prior written notice to Tenant perform such obligations at Tenant's expense if Tenant has not commenced to do so within said five day period, and Tenant shall within 10 days of written demand reimburse Landlord for all reasonable out-of-pocket costs and expenses incurred by Landlord in connection with such work. Tenant's obligations under this Section 15.3 shall survive the expiration or earlier termination of this Lease. In addition, at Landlord's election, Landlord may inspect the Premises and/or the Project for Hazardous Materials at Landlord's cost and expense within sixty (60) days of Tenant's surrender of the Premises at the expiration or earlier termination of this Lease. Tenant shall pay for all such costs and expenses incurred by Landlord in connection with such inspection if such inspection reveals that a release of Hazardous Materials exists at the Project or Premises as a proximate result of the acts or omissions of Tenant, its officers, employees, contractors, and agents (except to the extent resulting from (i) Hazardous Materials existing in the Premises as at the delivery of possession to Tenant (in which event Landlord shall be responsible for any Clean-up, as provided in this Lease), or (ii) the acts or omissions of Landlord or Landlord's agents, employees or contractors).

16. HOLDING OVER

If Tenant holds over after the expiration of the Lease Term or earlier termination thereof, with the express or implied consent of Landlord, such tenancy shall be from month-to-month only, and shall not constitute a renewal hereof or an extension for any further term. If Tenant holds over after the expiration of the Lease Term of earlier termination thereof, without the express or implied consent of Landlord, such tenancy shall be deemed to be a tenancy by sufferance only, and shall not constitute a renewal hereof or an extension for any further term. In either case, Base Rent shall be payable at a monthly rate equal to one hundred twenty-five percent (125%) of the Base Rent applicable during the last rental period of the Lease Term under this Lease for the first two (2) months of such holdover with such rate increasing to one hundred fifty percent (150%) of the Base Rent if Tenant holdsover longer than two (2) months. Such month-to-month tenancy or tenancy by sufferance, as the case may be, shall be subject to every other applicable term, covenant and agreement contained herein. Nothing contained in this Article 16 shall be construed as consent by Landlord to any holding over by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or other termination of this Lease. The provisions of this Article 16 shall not be deemed to limit or constitute a waiver of any other rights or remedies of Landlord provided herein or at law. If Tenant fails to surrender the Premises upon the termination or expiration of this Lease, in addition to any other liabilities to Landlord accruing therefrom, Tenant shall protect,

defend, indemnify and hold Landlord harmless from all loss, costs (including reasonable attorneys' fees) and liability resulting from such failure, including, without limiting the generality of the foregoing, any claims made by any succeeding tenant founded upon such failure to surrender and any lost profits to Landlord resulting therefrom.

17. ESTOPPEL CERTIFICATES

Within ten (10) business days following a request in writing by Landlord, Tenant shall execute, acknowledge and deliver to Landlord an estoppel certificate, which, as submitted by Landlord, shall be substantially in the form of **Exhibit F**, attached hereto (or such other commercially reasonable form as may be required by any prospective mortgagee or purchaser of the Project, or any portion thereof), indicating therein any exceptions thereto that may exist at that time, and shall also contain any other information reasonably requested by Landlord or Landlord's mortgagee or prospective mortgagee. Any such certificate may be relied upon by any prospective mortgagee or purchaser of all or any portion of the Project. Tenant shall execute and deliver whatever other instruments may be reasonably required for such purposes. At any time during the Lease Term, but not more often than twice per year, Landlord may require Tenant to provide Landlord with a current financial statement and financial statements of the two (2) years prior to the current financial statement year. Such statements shall be prepared in accordance with generally accepted accounting principles and, if such is the normal practice of Tenant, shall be audited by an independent certified public accountant. Failure of Tenant to timely execute, acknowledge and deliver such estoppel certificate or other instruments shall constitute an acceptance of the Premises and an acknowledgment by Tenant that statements included in the estoppel certificate are true and correct, without exception.

18. SUBORDINATION

This Lease shall be subject and subordinate to all present and future ground or underlying leases of the Building or Project and to the lien of any mortgage, trust deed or other encumbrances now or hereafter in force against the Building or Project or any part thereof, if any, and to all renewals, extensions, modifications, consolidations and replacements thereof, and to all advances made or hereafter to be made upon the security of such mortgages or trust deeds, unless the holders of such mortgages, trust deeds or other encumbrances, or the lessors under such ground lease or underlying leases, require in writing that this Lease be superior thereto. Tenant covenants and agrees in the event any proceedings are brought for the foreclosure of any such mortgage or deed in lieu thereof (or if any ground lease is terminated), to attorn, without any deductions or set-offs whatsoever, to the lienholder or purchaser or any successors thereto upon any such foreclosure sale or deed in lieu thereof (or to the ground lessor), if so requested to do so by such purchaser or lienholder or ground lessor, and to recognize such purchaser or lienholder or ground lessor as the lessor under this Lease, provided such lienholder or purchaser or ground lessor shall agree to accept this Lease and not disturb Tenant's occupancy, so long as Tenant timely pays the rent and observes and performs the terms, covenants and conditions of this Lease to be observed and performed by Tenant. Landlord's delivery to Tenant of commercially reasonable non-disturbance agreement(s) in favor of Tenant from any ground lessors, mortgage holders or lien holders of Landlord who come into existence following the date hereof but prior to the expiration of the Lease Term shall be in consideration of, and a condition precedent to, Tenant's agreement to subordinate this Lease to any such ground lease, mortgage or lien. Landlord's interest herein may be assigned as security at any time to any lienholder. Tenant shall, within ten (10) business days of request by Landlord, execute such further commercially reasonable instruments or assurances as Landlord may reasonably deem necessary to evidence or confirm the subordination or superiority of this Lease to any such mortgages, trust deeds, ground leases or underlying leases. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of the Tenant hereunder in the event of any foreclosure proceeding or sale.

19. DEFAULTS; REMEDIES

19.1 **Events of Default**. The occurrence of any of the following shall constitute a default of this Lease by Tenant:

19.1.1 Any failure by Tenant to pay any Rent or any other charge required to be paid under this Lease, or any part thereof, when due (provided, however, that it shall not be a default if Tenant makes full payment

within five (5) business days after receipt of written notice of any delinquency; provided that Landlord shall not be required to provide more than one (1) such notices in any twelve (12) month period during the Lease Term); or

19.1.2 Except where a specific time period is otherwise set forth for Tenant's performance in this Lease, in which event the failure to perform by Tenant within such time period shall be a default by Tenant under this Section 19.1.2, any failure by Tenant to observe or perform any other provision, covenant or condition of this Lease to be observed or performed by Tenant where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant; provided that if the nature of such default is such that the same cannot reasonably be cured within a thirty (30) day period, Tenant shall not be deemed to be in default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure such default; or

19.1.3 Abandonment of the Premises by Tenant and failure to perform any obligation under this Lease regarding the maintenance, cleanliness or operation of the Premises within five (5) business days after notice from Landlord; or

19.1.4 The failure by Tenant to observe or perform according to the provisions of Articles 5, 14, 17 or 18 of this Lease where such failure continues for more than two (2) business days after notice from Landlord.

The notice periods provided herein are in lieu of, and not in addition to, any notice periods provided by law.

19.2 **Remedies Upon Default**. Upon the occurrence of any event of default by Tenant, Landlord shall have, in addition to any other remedies available to Landlord at law or in equity (all of which remedies shall be distinct, separate and cumulative), the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any separate notice or demand whatsoever.

19.2.1 Landlord may, immediately or at any time thereafter, elect to terminate this Lease by notice of termination, by entry, or by any other means available under law and may recover possession of the Premises as provided herein. Upon termination by notice, by entry, or by any other means available under law, Landlord shall be entitled immediately, in the case of termination by notice or entry, and otherwise in accordance with the provisions of law to recover possession of the Premises from Tenant and those claiming through or under the Tenant. Such termination of this Lease and repossession of the Premises shall be without prejudice to any remedies which Landlord might otherwise have for arrears of rent or for a prior breach of the provisions of this Lease. Tenant waives any statutory notice to quit and equitable rights in the nature of further cure or redemption, and Tenant agrees that upon Landlord's termination of this Lease Landlord shall be entitled to re-entry and possession in accordance with the terms hereof. Landlord may, without notice, store Tenant's personal property (and those of any person claiming under Tenant) at the expense and risk of Tenant or, if Landlord so elects, Landlord may sell such personal property at public auction or auctions or at private sale or sales after seven days' notice to Tenant and apply the net proceeds to the earliest of installments of rent or other charges owing Landlord. Tenant agrees that a notice by Landlord alleging any default shall, at Landlord's option (the exercise of such option shall be indicated by the inclusion of the words "notice to quit" in such notice), constitute a statutory notice to quit. If Landlord exercises its option to designate a notice of default hereunder as a statutory notice to quit, any grace periods provided for herein shall run concurrently with any statutory notice periods.

19.2.2 In the case of termination of this Lease pursuant to Section 19.2.1, Tenant shall reimburse Landlord for all expenses arising out of such termination, including without limitation, all reasonable costs incurred in collecting amounts due from Tenant under this Lease (including reasonable attorneys' fees, costs of litigation and the like); all expenses incurred by Landlord in attempting to relet the Premises or parts thereof (including advertisements, brokerage commissions, Tenant's allowances, costs of preparing space, and the like); and all Landlord's other reasonable expenditures necessitated by the termination. The reimbursement from Tenant shall be due and payable immediately from time to time upon notice from Landlord that an expense has been incurred, without regard to whether the expense was incurred before or after the termination.

19.2.3 Landlord may elect by written notice to Tenant within one year following such termination to be indemnified for loss of rent by a lump sum payment representing the then present value of the amount of Rent that would have been paid in accordance with this Lease for the remainder of the Lease Term minus the then present

value of the aggregate fair market rent and additional charges payable for the Premises for the remainder of the Lease Term (if less than the Rent payable hereunder), estimated as of the date of the termination, and taking into account reasonable projections of vacancy and time required to re-lease the Premises. (For the purposes of calculating the Rent that would have been paid hereunder for the lump sum payment calculation described herein, the last full year's Additional Rent under Article 4 is to be deemed constant for each year thereafter. The Federal Reserve discount rate (or equivalent) shall be used in calculating present values.) Should the parties be unable to agree on a fair market rent, the matter shall be submitted, upon the demand of either party, to the Charlotte, North Carolina office of the American Arbitration Association, with a request for arbitration in accordance with the rules of the Association by a single arbitrator who shall be an MAI appraiser with at least ten years' experience as an appraiser of life sciences buildings in the Research Triangle Park and Durham markets. The parties agree that a decision of the arbitrator shall be conclusive and binding upon them. If, at the end of the Lease Term, the rent that Landlord has actually received from the Premises is less than the aggregate fair market rent estimated as aforesaid, Tenant shall thereupon pay Landlord the amount of such difference. If and for so long as Landlord does not make the election provided for in this Section 19.2.3, Tenant shall indemnify Landlord for the loss of Rent by a payment at the end of each month which would have been included in the Lease Term, representing the excess of the Rent that would have been paid in accordance with this Lease (Base Rent together with any Additional Rent that would have been payable under Article 4, to be ascertained monthly) over the rent actually derived from the Premises by Landlord for such month (the amount of rent deemed derived shall be the actual amount less any portion thereof attributable to Landlord's reletting expenses described in Section 19.2.2 that have not been reimbursed by Tenant thereunder).

19.2.4 Intentionally Omitted.

19.2.5 In lieu of any other damages or indemnity and in lieu of full recovery by Landlord of all sums payable under all the foregoing provisions of this Section 19.2, Landlord may by written notice to Tenant within six (6) months after termination under any of the provisions contained in Section 19.1 and before such full recovery, elect to recover, and Tenant shall thereupon pay, as minimum liquidated damages under this Section 19.2, an amount equal to the lesser of (i) the aggregate of the Base Rent and Additional Rent for the balance of the Lease Term had it not been terminated or (ii) the aggregate thereof for the 12 months ending one year after the termination date, plus in either case (iii) the amount of Base Rent and Additional Rent of any kind accrued and unpaid at the time of termination and minus (iv) the amount of any recovery by Landlord under the foregoing provisions of this Section 19.2 up to the time of payment of such liquidated damages (but reduced by any amounts of reimbursement under Section 19.2.2). Liquidated damages hereunder shall not be in lieu of any claims for reimbursement under Section 19.2.2.

19.2.6 If Landlord does not elect to terminate this Lease on account of any default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

19.2.7 Landlord shall at all times have the rights and remedies (which shall be cumulative with each other and cumulative and in addition to those rights and remedies available under Sections 19.2.1 and 19.2.2, above, or any law or other provision of this Lease), without prior demand or notice except as required by Applicable Law, to seek any declaratory, injunctive or other equitable relief, and specifically enforce this Lease, or restrain or enjoin a violation or breach of any provision hereof. The provisions of this Section 19.2.7 are not dependent upon the occurrence of a default.

19.2.8 Any obligation imposed by law upon Landlord to relet the Premises after any termination of the Lease shall be subject to the reasonable requirements of Landlord to lease to high quality tenants on such terms as Landlord may from time to time deem reasonably appropriate and to develop the Building in a harmonious manner with an appropriate mix of uses, tenants, floor areas and terms of tenancies, and the like, and Landlord shall not be obligated to relet the Premises to any party to whom Landlord or its affiliate may desire to lease other available space in the Building.

19.2.9 Nothing herein shall limit or prejudice the right of Landlord to prove and obtain in a proceeding for bankruptcy, insolvency, arrangement or reorganization, by reason of the termination, an amount equal to the maximum allowed by a statute of law in effect at the time when, and governing the proceedings in which, the

damages are to be proved, whether or not the amount is greater to, equal to, or less than the amount of the loss or damage which Landlord has suffered.

19.3 **Subleases of Tenant**. Whether or not Landlord elects to terminate this Lease on account of any default by Tenant, as set forth in this Article 19, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. In the event of Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

19.4 **Efforts to Relet**. No re-entry or repossession, repairs, maintenance, changes, alterations and additions, reletting, appointment of a receiver to protect Landlord's interests hereunder, or any other action or omission by Landlord shall be construed as an election by Landlord to terminate this Lease or Tenant's right to possession, or to accept a surrender of the Premises, nor shall same operate to release Tenant in whole or in part from any of Tenant's obligations hereunder, unless express written notice of such intention is sent by Landlord to Tenant. Tenant hereby irrevocably waives any right otherwise available under any law to redeem or reinstate this Lease.

19.5 **Landlord Default**.

19.5.1 **General**. Notwithstanding anything to the contrary set forth in this Lease, Landlord shall not be in default in the performance of any obligation required to be performed by Landlord pursuant to this Lease unless Landlord fails to perform such obligation within thirty (30) days after the receipt of notice from Tenant specifying in detail Landlord's failure to perform; provided, however, if the nature of Landlord's obligation is such that more than thirty (30) days are required for its performance, then Landlord shall not be in default under this Lease if it shall commence such performance within such thirty (30) day period and thereafter diligently pursue the same to completion. Upon any such default by Landlord under this Lease, Tenant may, except as otherwise specifically provided in this Lease to the contrary, exercise any of its rights provided at law or in equity.

19.5.2 **Intentionally Omitted**.

20. COVENANT OF QUIET ENJOYMENT

Landlord covenants that Tenant, on paying the Rent, charges for services and other payments herein reserved and on keeping, observing and performing all the other terms, covenants, conditions, provisions and agreements herein contained on the part of Tenant to be kept, observed and performed, shall, during the Lease Term, peaceably and quietly have, hold and enjoy the Premises subject to the terms, covenants, conditions, provisions and agreements hereof without interference by any persons lawfully claiming by or through Landlord. The foregoing covenant is in lieu of any other covenant express or implied.

21. SECURITY DEPOSIT

Concurrently with Tenant's execution and delivery of this Lease, Tenant shall deposit with Landlord cash in the amount set forth in Section 9 of the Summary as security for the faithful performance by Tenant of all of its obligations under this Lease. The Security Deposit shall be held by Landlord as security for the faithful performance by Tenant of all of the terms, covenants and conditions of this Lease to be kept and performed by Tenant during the period commencing on the Execution Date and ending upon the expiration or termination of Tenant's obligations under this Lease. After an Event of Default Landlord may (but shall not be required to) use, apply or retain all or any part of the Security Deposit for the payment of any Rent or any other sum in default, or to compensate Landlord for any other loss or damage that Landlord may suffer by reason of Tenant's default as provided in this Lease. The provisions of this Article shall survive the expiration or earlier termination of this Lease. In the event of bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit then being held by Landlord shall be deemed to be applied first to the payment of Rent and other charges due Landlord for all periods prior to the filing of such proceedings. Landlord shall deliver or credit to any purchaser of Landlord's interest in the Premises the funds then

held hereunder by Landlord, and thereupon (and upon confirmation by the transferee of such funds, whether expressly or by written assumption of this Lease, generally) Landlord shall be discharged from any further liability with respect to such funds. This provision shall also apply to any subsequent transfers. If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, then the Security Deposit, if any, or any balance thereof, shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within 90 days after the expiration or earlier termination of this Lease. Landlord shall hold the Security Deposit in an account at a banking organization selected by Landlord; provided, however, that Landlord shall not be required to maintain a separate account for the Security Deposit, but may intermingle it with other funds of Landlord. Landlord shall be entitled to all interest and/or dividends, if any, accruing on such Security Deposit.

22. SUBSTITUTION OF OTHER PREMISES

Intentionally omitted.

23. SIGNS

23.1 **Interior Signage**. All letters and numerals on doors or other signs on the Premises shall be in the standard form of graphics for the Building, and no others shall be used or permitted without Landlord's prior written consent, not to be unreasonably withheld, conditioned, or delayed. Furthermore, Tenant shall not place signs on or in the Premises which are visible from outside the Premises. Tenant's name and suite number shall be included by Landlord on the lobby directory for the Building, at Landlord's cost.

23.2 **Intentionally omitted**.

23.3 **Prohibited Signage and Other Items**. Any signs, notices, logos, pictures, names or advertisements which are installed and that have not been separately approved by Landlord may be removed without notice by Landlord at the sole expense of Tenant. Tenant may not install any signs on the exterior or roof of the Project or the Common Areas. Any signs, window coverings, or blinds (even if the same are located behind the Landlord-approved window coverings for the Building), or other items visible from the exterior of the Premises or Building, shall be subject to the prior approval of Landlord, in its sole discretion. Tenant shall not place or install any projections, antennae, aerials, or similar devices inside or outside of the Building, without the prior written approval of Landlord (not to be unreasonably withheld, conditioned, or delayed), subject to Tenant's rights pursuant to Section 23.1, above.

24. COMPLIANCE WITH LAW

Tenant shall not do anything or suffer anything to be done in or about the Premises or the Project which will conflict with any law, statute, ordinance or other governmental rule, regulation or requirement now in force or which may hereafter be enacted or promulgated (collectively, "**Applicable Laws**"). At its sole cost and expense, Tenant shall promptly comply with all such Applicable Laws which relate to (i) Tenant's use of the Premises, (ii) any Alterations or Tenant Improvements, or (iii) the Building, but as to the Building (and as to any improvements to exterior walls, structural floors and the portions of the electrical, heating, ventilation and air conditioning and other systems of the Building that serve other tenants and that are located within the Premises), only to the extent such obligations are triggered by Alterations or Tenant Improvements, or Tenant's use of the Premises for non-general office and laboratory use. Tenant shall be responsible, at its sole cost and expense, to make all alterations to the Premises as are required to comply with the Applicable Laws to the extent required in this Article 24. Notwithstanding the foregoing terms of this Article 24 to the contrary, Tenant may defer such compliance with Applicable Laws while Tenant contests, in a court of proper jurisdiction, in good faith, the applicability of such Applicable Laws to the Premises or Tenant's specific use or occupancy of the Premises; provided, however, Tenant may only defer such compliance if such deferral shall not (a) prohibit Tenant from obtaining or maintaining a certificate of occupancy for the Premises, (b) prohibit Landlord from obtaining or maintaining a certificate of occupancy for the Building or any portion thereof, (c) unreasonably and materially affect the safety of the employees and/or invitees of Landlord or of any tenant in the Building (including Tenant), (d) create a significant health hazard for the employees and/or invitees of Landlord or of any tenant in the Building (including Tenant), (e) otherwise materially and adversely affect Tenant's use of or access to the Buildings or the Premises, or (f) impose material obligations, liability, fines, or penalties upon Landlord or any other tenant of the Building, or would materially and adversely affect the use of or access to the

Building by Landlord or other tenants or invitees of the Building. The judgment of any court of competent jurisdiction or the admission of Tenant in any judicial action, regardless of whether Landlord is a party thereto, that Tenant has violated any of said governmental measures, shall be conclusive of that fact as between Landlord and Tenant. Landlord shall comply with all Applicable Laws relating to the Base Building and the Common Areas, provided that compliance with such Applicable Laws is not the responsibility of Tenant under this Lease, and provided further that Landlord's failure to comply therewith would prohibit Tenant from obtaining or maintaining a certificate of occupancy for the Premises, or would unreasonably and materially affect the safety of Tenant's employees or create a significant health hazard for Tenant's employees, or would otherwise materially and adversely affect Tenant's use of or access to the Premises. Landlord shall be permitted to include in Operating Expenses any costs or expenses incurred by Landlord under this Article 24 to the extent not prohibited by the terms of Section 4.2.7 above.

25. LATE CHARGES

If any installment of Rent or any other sum due from Tenant shall not be received by Landlord or Landlord's designee within five (5) business days after Tenant's receipt of written notice from Landlord that said amount is due, then Tenant shall pay to Landlord a late charge equal to five percent (5%) of the overdue amount plus any reasonable attorneys' fees incurred by Landlord by reason of Tenant's failure to pay Rent and/or other charges when due hereunder. Notwithstanding the foregoing, Landlord shall not charge Tenant a late charge for the first (1st) late payment in any twelve (12) month period (but in no event with respect to any subsequent late payment in any twelve (12) month period) during the Lease Term that Tenant fails to timely pay Rent or another sum due under this Lease, provided that such late payment is made within three (3) days following the expiration of the five (5) business day period set forth in the first sentence of this Article 25. The late charge shall be deemed Additional Rent and the right to require it shall be in addition to all of Landlord's other rights and remedies hereunder or at law and shall not be construed as liquidated damages or as limiting Landlord's remedies in any manner. In addition to the late charge described above, any Rent or other amounts owing hereunder which are not paid when due shall bear interest from the date when due until paid at a rate per annum equal to the lesser of (i) the annual "**Bank Prime Loan**" rate cited in the Federal Reserve Statistical Release Publication G.13(415), published on the first Tuesday of each calendar month (or such other comparable index as Landlord and Tenant shall reasonably agree upon if such rate ceases to be published) plus four (4) percentage points, and (ii) the highest rate permitted by Applicable Law.

26. LANDLORD'S RIGHT TO CURE DEFAULT; PAYMENTS BY TENANT

26.1 **Landlord's Cure**. All covenants and agreements to be kept or performed by Tenant under this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any reduction of Rent, except to the extent, if any, otherwise expressly provided herein. If Tenant shall fail to perform any obligation under this Lease, and such failure shall continue after notice in excess of the time allowed under Section 19.1.2, above, unless a specific time period is otherwise stated in this Lease, Landlord may, but shall not be obligated to, make any such payment or perform any such act on Tenant's part without waiving its rights based upon any default of Tenant and without releasing Tenant from any obligations hereunder.

26.2 **Tenant's Reimbursement**. Except as may be specifically provided to the contrary in this Lease, Tenant shall pay to Landlord, upon delivery by Landlord to Tenant of statements therefor: (i) sums equal to expenditures reasonably made and obligations incurred by Landlord in connection with the remedying by Landlord of Tenant's defaults pursuant to the provisions of Section 26.1; (ii) sums equal to all losses, costs, liabilities, damages and expenses referred to in Article 10 of this Lease; and (iii) sums equal to all expenditures made and obligations incurred by Landlord in collecting or attempting to collect the Rent or in enforcing or attempting to enforce any rights of Landlord under this Lease or pursuant to law, including, without limitation, all reasonable legal fees and other amounts so expended. Tenant's obligations under this Section 26.2 shall survive the expiration or sooner termination of the Lease Term.

27. ENTRY BY LANDLORD

Provided, however, that any such entry by Landlord shall (i) remain subject to Tenant's reasonable security and privacy measures; and (ii) not unreasonably interfere with Tenant's use and occupancy of the Premises, or the conduct of its business therein, then Landlord reserves the right at all reasonable times and upon not less than one (1)

day's prior written (e-mail is acceptable) notice to Tenant (except in the case of an emergency) to enter the Premises to (i) inspect them; (ii) show the Premises to prospective purchasers, or to current or prospective mortgagees, ground or underlying lessors or insurers or, during the last nine (9) months of the Lease Term, to prospective tenants; (iii) post notices of nonresponsibility (to the extent applicable pursuant to then Applicable Law); or (iv) alter, improve or repair the Premises or the Building, or for structural alterations, repairs or improvements to the Building or the Building's systems and equipment. Provided that Landlord employs commercially reasonable efforts to minimize interference with the conduct of Tenant's business in connection with entries into the Premises, Landlord may make any such entries without the abatement of Rent, except as otherwise provided in this Lease, and shall take such reasonable steps as required to accomplish the stated purposes. In an emergency, Landlord shall have the right to use any means that Landlord may deem proper to open the doors in and to the Premises. Any entry into the Premises by Landlord in the manner hereinbefore described shall not be deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an actual or constructive eviction of Tenant from any portion of the Premises.

28. TENANT PARKING

Tenant shall have the right, without the payment of any parking charge or fee (other than as a reimbursement of operating expenses to the extent allowed pursuant to the terms of Article 4 of this Lease, above), commencing on the Lease Commencement Date, to use the amount of unreserved parking spaces set forth in Section 10 of the Summary, on a monthly basis throughout the Lease Term, which parking spaces shall pertain to the on-site and/or off-site, as the case may be, parking facility (or facilities) which serve the Project. Notwithstanding the foregoing, Tenant shall be responsible for the full amount of any taxes imposed by any governmental authority in connection with the renting of such parking spaces by Tenant or the use of the parking facility by Tenant. Tenant's continued right to use the parking spaces is conditioned upon Tenant abiding by all rules and regulations which are prescribed from time to time for the orderly operation and use of the parking facility where the parking spaces are located (including any sticker or other identification system established by Landlord and the prohibition of vehicle repair and maintenance activities in the parking facilities), and shall reasonably cooperate in seeing that Tenant's employees and visitors also comply with such rules and regulations. Tenant's use of the Project parking facility shall be at Tenant's sole risk and Tenant acknowledges and agrees that Landlord shall have no liability whatsoever for damage to the vehicles of Tenant, its employees and/or visitors, or for other personal injury or property damage or theft relating to or connected with the parking rights granted herein or any of Tenant's, its employees' and/or visitors' use of the parking facilities.

29. MISCELLANEOUS PROVISIONS

29.1 **Terms; Captions**. The words "**Landlord**" and "**Tenant**" as used herein shall include the plural as well as the singular. The necessary grammatical changes required to make the provisions hereof apply either to corporations or partnerships or individuals, men or women, as the case may require, shall in all cases be assumed as though in each case fully expressed. The captions of Articles and Sections are for convenience only and shall not be deemed to limit, construe, affect or alter the meaning of such Articles and Sections.

29.2 **Binding Effect**. Subject to all other provisions of this Lease, each of the covenants, conditions and provisions of this Lease shall extend to and shall, as the case may require, bind or inure to the benefit not only of Landlord and of Tenant, but also of their respective heirs, personal representatives, successors or assigns, provided this clause shall not permit any assignment by Tenant contrary to the provisions of Article 14 of this Lease.

29.3 **No Air Rights**. No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease. If at any time any windows of the Premises are temporarily darkened or the light or view therefrom is obstructed by reason of any repairs, improvements, maintenance or cleaning in or about the Project, the same shall be without liability to Landlord and without any reduction or diminution of Tenant's obligations under this Lease.

29.4 **Modification of Lease**. Should any current or prospective mortgagee or ground lessor for the Building or Project require a modification of this Lease, which modification will not cause an increased cost or expense to Tenant or in any other way materially and adversely change the rights and obligations of Tenant hereunder, then and in such event, Tenant agrees that this Lease may be so modified and agrees to execute whatever documents are reasonably required therefor and to deliver the same to Landlord within ten (10) business days following a request

therefor. At the request of Landlord or any mortgagee or ground lessor, Tenant agrees to execute a short form of Lease and deliver the same to Landlord within ten (10) business days following the request therefor.

29.5 **Transfer of Landlord's Interest**. Tenant acknowledges that Landlord has the right to transfer all or any portion of its interest in the Project or Building and in this Lease, and Tenant agrees that in the event of any such transfer, Landlord shall automatically be released from all liability under this Lease and Tenant agrees to look solely to such transferee for the performance of Landlord's obligations hereunder after the date of transfer and such transferee shall be deemed to have fully assumed and be liable for all obligations of this Lease to be performed by Landlord, including the return of any Security Deposit, and Tenant shall attorn to such transferee.

29.6 **Prohibition Against Recording**. In the event this Lease, a copy or any notice or memorandum thereof shall be recorded by Tenant without Landlord's consent, then such recording shall constitute a default by Tenant under Article 19 hereof entitling Landlord to immediately terminate this Lease. At the request of either Landlord or Tenant, the parties shall execute a memorandum of lease in recordable form containing such information as is necessary to constitute a notice of lease under North Carolina law. All costs of preparation and recording such notice shall be borne by the party requesting the memorandum. At the expiration or earlier termination of this Lease, Tenant shall provide Landlord with an executed termination of the memorandum in recordable form, which obligation shall survive such expiration or earlier termination.

29.7 **Landlord's Title**. Landlord's title is and always shall be paramount to the title of Tenant. Nothing herein contained shall empower Tenant to do any act which can, shall or may encumber the title of Landlord.

29.8 **Relationship of Parties**. Nothing contained in this Lease shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent, partnership, joint venturer or any association between Landlord and Tenant.

29.9 **Application of Payments**. Landlord shall have the right to apply payments received from Tenant pursuant to this Lease, regardless of Tenant's designation of such payments, to satisfy any obligations of Tenant hereunder, in such order and amounts as Landlord, in its sole discretion, may elect.

29.10 **Time of Essence**. Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

29.11 **Partial Invalidity**. If any term, provision or condition contained in this Lease shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, provision or condition to persons or circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and each and every other term, provision and condition of this Lease shall be valid and enforceable to the fullest extent possible permitted by law.

29.12 **No Warranty**. In executing and delivering this Lease, Tenant has not relied on any representations, including, but not limited to, any representation as to the amount of any item comprising Additional Rent or the amount of the Additional Rent in the aggregate or that Landlord is furnishing the same services to other tenants, at all, on the same level or on the same basis, or any warranty or any statement of Landlord which is not set forth herein or in one or more of the exhibits attached hereto.

29.13 **Landlord Exculpation**. The liability of Landlord or the Landlord Parties to Tenant for any default by Landlord under this Lease or arising in connection herewith or with Landlord's operation, management, leasing, repair, renovation, alteration or any other matter relating to the Project or the Premises shall be limited solely and exclusively to an amount which is equal to the interest of Landlord in the Building (including rental income and insurance/condemnation proceeds). Neither Landlord, nor any of the Landlord Parties shall have any personal liability therefor, and Tenant hereby expressly waives and releases such personal liability on behalf of itself and all persons claiming by, through or under Tenant. The limitations of liability contained in this Section 29.13 shall inure to the benefit of Landlord's and the Landlord Parties' present and future partners, beneficiaries, officers, directors, trustees, shareholders, agents and employees, and their respective partners, heirs, successors and assigns. Under no

circumstances shall any present or future partner of Landlord (if Landlord is a partnership), or trustee or beneficiary (if Landlord or any partner of Landlord is a trust), have any liability for the performance of Landlord's obligations under this Lease. Notwithstanding any contrary provision herein, neither Landlord nor the Landlord Parties, not Tenant (except with respect to any holdover tenancy) shall be liable under any circumstances for consequential or indirect damages, including without limitation injury or damage to, or interference with, Tenant's business, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring.

29.14 **Entire Agreement**. It is understood and acknowledged that there are no oral agreements between the parties hereto affecting this Lease and this Lease constitutes the parties' entire agreement with respect to the leasing of the Premises and supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by Landlord to Tenant with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. None of the terms, covenants, conditions or provisions of this Lease can be modified, deleted or added to except in writing signed by the parties hereto.

29.15 **Right to Lease**. Landlord reserves the absolute right to effect such other tenancies in the Project as Landlord in the exercise of its sole business judgment shall determine to best promote the interests of the Building or Project. Tenant does not rely on the fact, nor does Landlord represent, that any specific tenant or type or number of tenants shall, during the Lease Term, occupy any space in the Building or Project.

29.16 **Force Majeure**. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, acts of war, terrorist acts, governmental action or inaction, inability to obtain services, labor, or materials or reasonable substitutes therefor, governmental actions, civil commotions, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform, except with respect to the obligations imposed with regard to Rent and other charges to be paid by Tenant pursuant to this Lease (collectively, a "**Force Majeure**"), notwithstanding anything to the contrary contained in this Lease, shall excuse the performance of such party for a period equal to any such prevention, delay or stoppage and, therefore, if this Lease specifies a time period for performance of an obligation of either party, that time period shall be extended by the period of any delay in such party's performance caused by a Force Majeure.

29.17 **Waiver of Redemption by Tenant**. Tenant hereby waives, for Tenant and for all those claiming under Tenant, any and all rights now or hereafter existing to redeem by order or judgment of any court or by any legal process or writ, Tenant's right of occupancy of the Premises after any termination of this Lease.

29.18 **Notices**. All notices, demands, statements, designations, approvals or other communications (collectively, "**Notices**") given or required to be given by either party to the other hereunder or by law shall be in writing, shall be (A) sent by United States certified or registered mail, postage prepaid, return receipt requested ("**Mail**"), (B) delivered by a nationally recognized overnight courier, or (D) delivered personally. Any Notice shall be sent, transmitted, or delivered, as the case may be, to Tenant at the appropriate address set forth in Section 11 of the Summary, or to such other place as Tenant may from time to time designate in a Notice to Landlord, or to Landlord at the addresses set forth below, or to such other places as Landlord may from time to time designate in a Notice to Tenant. Any Notice will be deemed given (i) upon receipt or refusal, (ii) the date the overnight courier delivery is made, or (iii) the date personal delivery is made. As of the date of this Lease, any Notices to Landlord must be sent, transmitted, or delivered, as the case may be, to the following addresses:

DURHAM TW ALEXANDER, LLC
c/o Longfellow Real Estate Partners
260 Franklin Street, Suite 1920
Boston, MA 02110
Attention: Asset Management

And

David E. Wagner
K&L Gates LLP

4350 Lassiter at North Hills Avenue
Suite 300 (27609)
Post Office Box 17047
Raleigh, North Carolina 27619-7047

29.19 **Joint and Several**. If there is more than one Tenant, the obligations imposed upon Tenant under this Lease shall be joint and several.

29.20 **Authority**. Landlord and Tenant each hereby represents and warrants that it is a duly formed and existing entity qualified to do business in the State of North Carolina and that said party has full right and authority to execute and deliver this Lease and that each person signing on behalf of said party is authorized to do so.

29.21 **Attorneys' Fees**. In the event that either Landlord or Tenant should bring suit for the possession of the Premises, for the recovery of any sum due under this Lease, or because of the breach of any provision of this Lease or for any other relief against the other, then all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party therein shall be paid by the other party, which obligation on the part of the other party shall be deemed to have accrued on the date of the commencement of such action and shall be enforceable whether or not the action is prosecuted to judgment.

29.22 **Governing Law; WAIVER OF TRIAL BY JURY**. This Lease shall be construed and enforced in accordance with the laws of the State of North Carolina. Landlord and Tenant waive trial by jury in any action to which they are parties, and further agree that any action arising out of this Lease (except an action for possession by Landlord, which may be brought in whatever manner or place provided by law) shall be brought in the Trial Court, Superior Court Department, in the county where the Premises are located.

29.23 **Submission of Lease**. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of, option for or option to lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

29.24 **Brokers**. Landlord and Tenant hereby warrant to each other that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Lease, excepting only the real estate brokers or agents specified in Section 13 of the Summary (the "**Brokers**"), and that it knows of no other real estate broker or agent which represented said party who is entitled to a commission in connection with this Lease. Landlord and Tenant each agree to indemnify and defend each other against and hold the indemnified party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party. The terms of this Section 29.24 shall survive the expiration or earlier termination of the Lease Term.

29.25 **Independent Covenants**. This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent and not dependent and Tenant hereby expressly waives the benefit of any statute to the contrary and agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to any setoff of the Rent or other amounts owing hereunder against Landlord.

29.26 **Project or Building Name, Address and Signage**. Landlord shall have the right at any time to change the name and/or address of the Project or Building and to install, affix and maintain any and all signs on the exterior and on the interior of the Project or Building as Landlord may, in Landlord's sole discretion, desire. Tenant shall not use the name of the Project or Building or use pictures or illustrations of the Project or Building in advertising or other publicity or for any purpose other than as the address of the business to be conducted by Tenant in the Premises, without the prior written consent of Landlord.

29.27 **Counterparts**. This Lease may be executed in counterparts with the same effect as if both parties hereto had executed the same document. Both counterparts shall be construed together and shall constitute a single lease.

29.28 **Confidentiality**. Tenant acknowledges that the content of this Lease and any related documents are confidential information. Tenant shall keep such confidential information confidential and shall not disclose such confidential information to any person or entity other than Tenant's lawyers, accountants, auditors, agents, lenders, and prospective purchasers/investors for reasonable business purposes.

29.29 **Development of the Project**.

29.29.1 **Subdivision**. Landlord reserves the right to subdivide all or a portion of the buildings and Common Areas. Tenant agrees to execute and deliver, upon demand by Landlord and in the form requested by Landlord, any additional documents needed to conform this Lease to the circumstances resulting from a subdivision and any all maps in connection therewith. Notwithstanding anything to the contrary set forth in this Lease, the separate ownership of any buildings and/or Common Areas by an entity other than Landlord shall not affect the calculation of Direct Expenses or Tenant's payment of Tenant's Share of Direct Expenses.

29.29.2 **Construction of Property and Other Improvements**. Tenant acknowledges that portions of the Project and/or the Other Improvements may be under construction following Tenant's occupancy of the Premises, and that such construction may result in levels of noise, dust, obstruction of access, etc. which are in excess of that present in a fully constructed project. Tenant hereby waives any and all rent offsets or claims of constructive eviction which may arise in connection with such construction. Provided, however, that Landlord shall use good faith efforts to provide Tenant with fourteen (14) days' notice, which may be verbal, in advance of commencing any construction activities that Landlord anticipates could disrupt Tenant's use of the Premises, including a reasonable description of the scope of work to be performed and the anticipated duration of such activity. At all times Landlord shall use commercially reasonable efforts to minimize any disruption with the conduct of Tenant's business within the Premises. Upon request from Tenant Landlord will inform Tenant of the general construction schedule for any work adjacent to the Premises or which adversely affects access to the Premises.

29.30 **No Violation**. Landlord and Tenant each hereby warrant and represent that neither its execution of nor performance under this Lease shall cause said party to be in violation of any agreement, instrument, contract, law, rule or regulation by which said party is bound, and said party shall protect, defend, indemnify and hold the indemnified party harmless against any claims, demands, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable attorneys' fees and costs, arising from the indemnifying party's breach of this warranty and representation.

29.31 **Communications and Computer Lines**. Tenant may install, maintain, replace, remove or use any communications or computer wires and cables serving the Premises (collectively, the "**Lines**"), provided that (i) Tenant shall obtain Landlord's prior written consent (which consent shall not be unreasonably withheld, conditioned or delayed), use an experienced and qualified contractor reasonably approved in writing by Landlord, and comply with all of the other provisions of Articles 7 and 8 of this Lease. Tenant shall pay all costs in connection therewith. Landlord reserves the right, upon notice to Tenant prior to the expiration or earlier termination of this Lease, to require that Tenant, at Tenant's sole cost and expense, remove any Lines located in or serving the Premises prior to the expiration or earlier termination of this Lease.

29.32 **Transportation Management**. Tenant shall reasonably comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project and/or the Building, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. Such programs may include, without limitation: (i) restrictions on the number of peak-hour vehicle trips generated by Tenant; (ii) increased vehicle occupancy; (iii) implementation of an in-house ridesharing program and an employee transportation coordinator; (iv) working with employees and any Project, Building or area-wide ridesharing program manager; (v) instituting employer-sponsored

incentives (financial or in-kind) to encourage employees to rideshare; and (vi) utilizing flexible work shifts for employees.

29.33 **Guarantor**. Intentionally omitted.

29.34 **REIT**. Tenant acknowledges that the Company, an affiliate of Landlord, elects to be taxed as a real estate investment trust (a "REIT") under the Code. Tenant hereby agrees to modifications of this Lease required to retain or clarify the Company's status as a REIT, provided such modifications: (a) are reasonable, (b) do not adversely affect in a material manner Tenant's use of the Premises as herein permitted, and (c) do not increase the Base Rent, Additional Rent and other sums to be paid by Tenant or Tenant's other obligations pursuant to this Lease, or reduce any rights of Tenant under this Lease, then Landlord may submit to Tenant an amendment to this Lease incorporating such required modifications, and Tenant shall execute, acknowledge and deliver such amendment to Landlord within ten (10) business days after Tenant's receipt thereof.

29.35 **Additional Storage**. Landlord shall provide Tenant with access to and use an exterior storage area as shown on **Exhibit I** ("**Storage Area**"). Tenant shall use the Storage Area in compliance with all Environmental Laws and in compliance with Section 5.4 of this Lease. Other tenants may utilize other portions of the structure or area in which the Storage Area is located, provided that Tenant shall always have access to no less than one-half of the capacity of the larger structure (as shown on **Exhibit I**). Tenant shall not exceed its share of any storage allocation applicable to the Storage Area, as reasonably determined by Landlord.

29.36 **Generator**. Subject to the provisions of this Section 29.36, Tenant shall be entitled to install, operate and maintain a generator and any other equipment related thereto, including, without limitation, a fuel system, wiring and shaft space ("**Generator**") next to the Building at Tenant's sole cost and expense (without paying any additional fee or rental to Landlord for the use thereof). Prior to the installation of the Generator, Tenant shall inspect the proposed location to determine a suitable location for the Generator, and Tenant shall submit written plans and specifications relative to the type, size and proposed location (including any proposed screening) of the Generator to Landlord for its review and written approval. Tenant shall be solely responsible for the cost of acquisition, installation, operation, and maintenance of the Generator; and Tenant shall install, maintain and operate the Generator in accordance with all federal, state, and local laws, statutes, ordinances, rules and regulations, including without limitation, obtaining and maintaining any and all permits, approvals and licenses required to install and operate the Generator by any governmental authority having jurisdiction. Landlord and Tenant agree that, upon the expiration of earlier termination of the Lease Term, Tenant shall not be required to remove the Generator, any associated cabling, wiring and screening or other improvements. Tenant shall not be entitled to grant or assign to any third party (other than a permitted assignee of Tenant's rights under the Lease or a permitted subtenant relative to the Premises (or a portion thereof)) the right to use the Generator without Landlord's prior written consent (which consent may be granted or withheld in Landlord's discretion). Upon reasonable advance notice to Tenant (and provided Landlord reasonably coordinates with Tenant and provides an alternate source of backup generator capacity during said transition), Landlord shall be entitled to cause the Generator to be moved to another location near the Building, at Landlord's cost and expense. Tenant shall pay all personal property taxes on the Generator. Tenant shall also pay any increases in the real property taxes of the Building due to the installation of the Generator within thirty (30) days of receipt of notice from Landlord which includes proof of such increase in taxes. Tenant's indemnity obligations under Section 5.4.1.5 of the Lease, relating to the use of Hazardous Materials, shall apply to the use and operation of the Generator. Finally, Tenant's insurance obligations under Section 10.3 of the Lease shall apply to the Generator.

IN WITNESS WHEREOF, Landlord and Tenant have caused this Lease to be executed the day and date first above written.

LANDLORD:

DURHAM TW ALEXANDER, LLC,
a Delaware limited liability company

By: /s/ Jamison N. Peschel

Name: Jamison N. Peschel

Its: Authorized Signatory

By:

Name:

Its:

TENANT:

PRECISION BIOSCIENCES, INC.,
a Delaware corporation

By: /s/ Matt Kane

Name: Matt Kane

Its: CEO

By:

Name:

Its:

EXHIBIT A

BIOPOINT INNOVATION LABS

FIRST OFFER SPACE

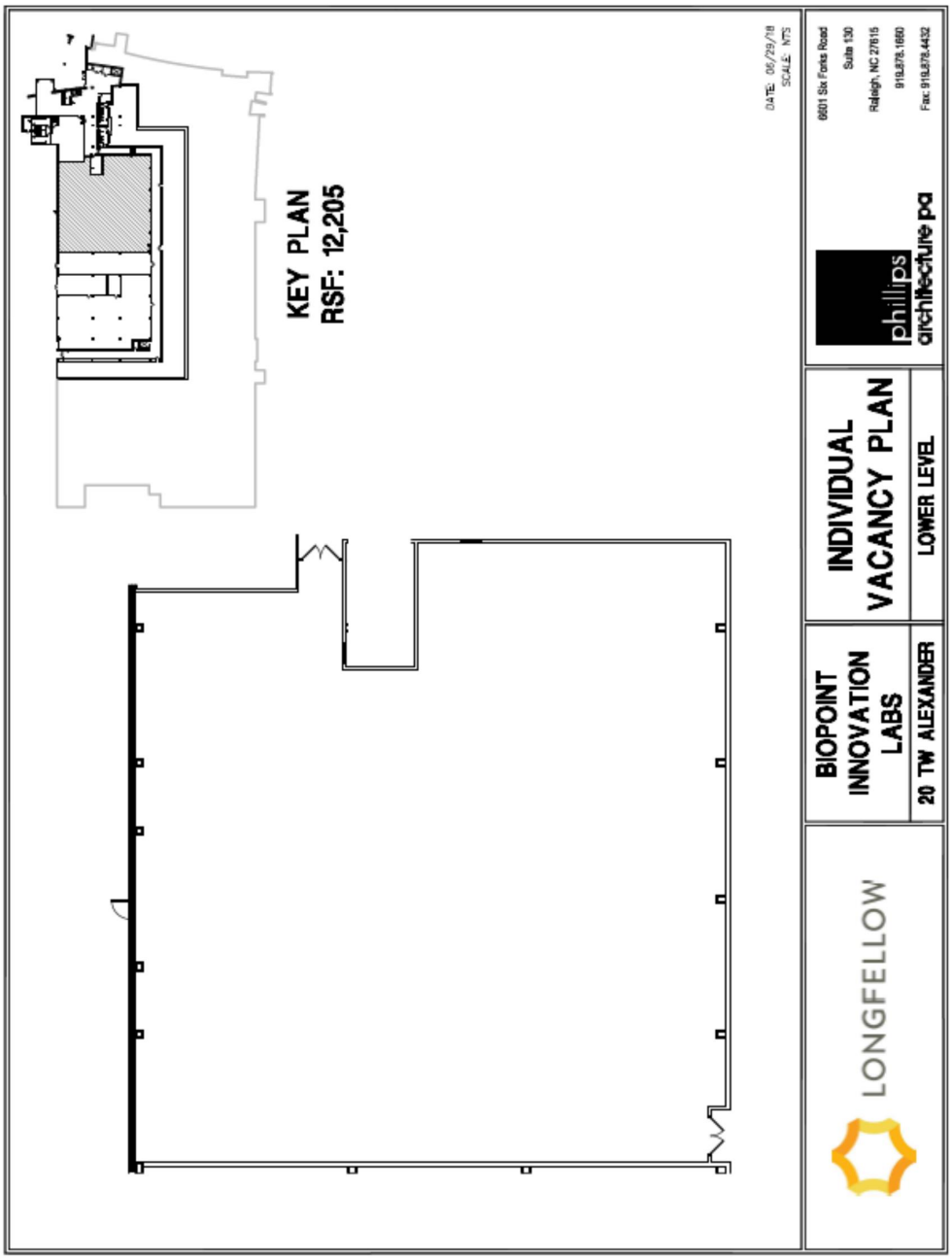

EXHIBIT B

NOTICE OF LEASE TERM DATES

To: _____
_____
_____
_____

Re: Lease dated _____, 20__ between _____, a _____ ("**Landlord**"), and _____, a _____ ("**Tenant**") concerning Suite _____ on floor(s) _____ of the office building located at **[INSERT BUILDING ADDRESS]**.

Gentlemen:

In accordance with the Lease (the "**Lease**"), we wish to advise you and/or confirm as follows:

1. The Lease Term shall commence on or has commenced on _____ for a term of _____ ending on _____.

2. Rent commenced to accrue on _____, in the amount of _____.

3. If the Lease Commencement Date is other than the first day of the month, the first billing will contain a pro rata adjustment. Each billing thereafter, with the exception of the final billing, shall be for the full amount of the monthly installment as provided for in the Lease.

4. Your rent checks should be made payable to _____ at _____.

5. The exact number of rentable/usable square feet within the Premises is _____ square feet.

6. Tenant's Share as adjusted based upon the exact number of usable square feet within the Premises is _____%.

"Landlord":

,
a

By:
Its:

Agreed to and Accepted as
of _____, 20_.

"Tenant":

a

By:
Its:

EXHIBIT C

PREMISES

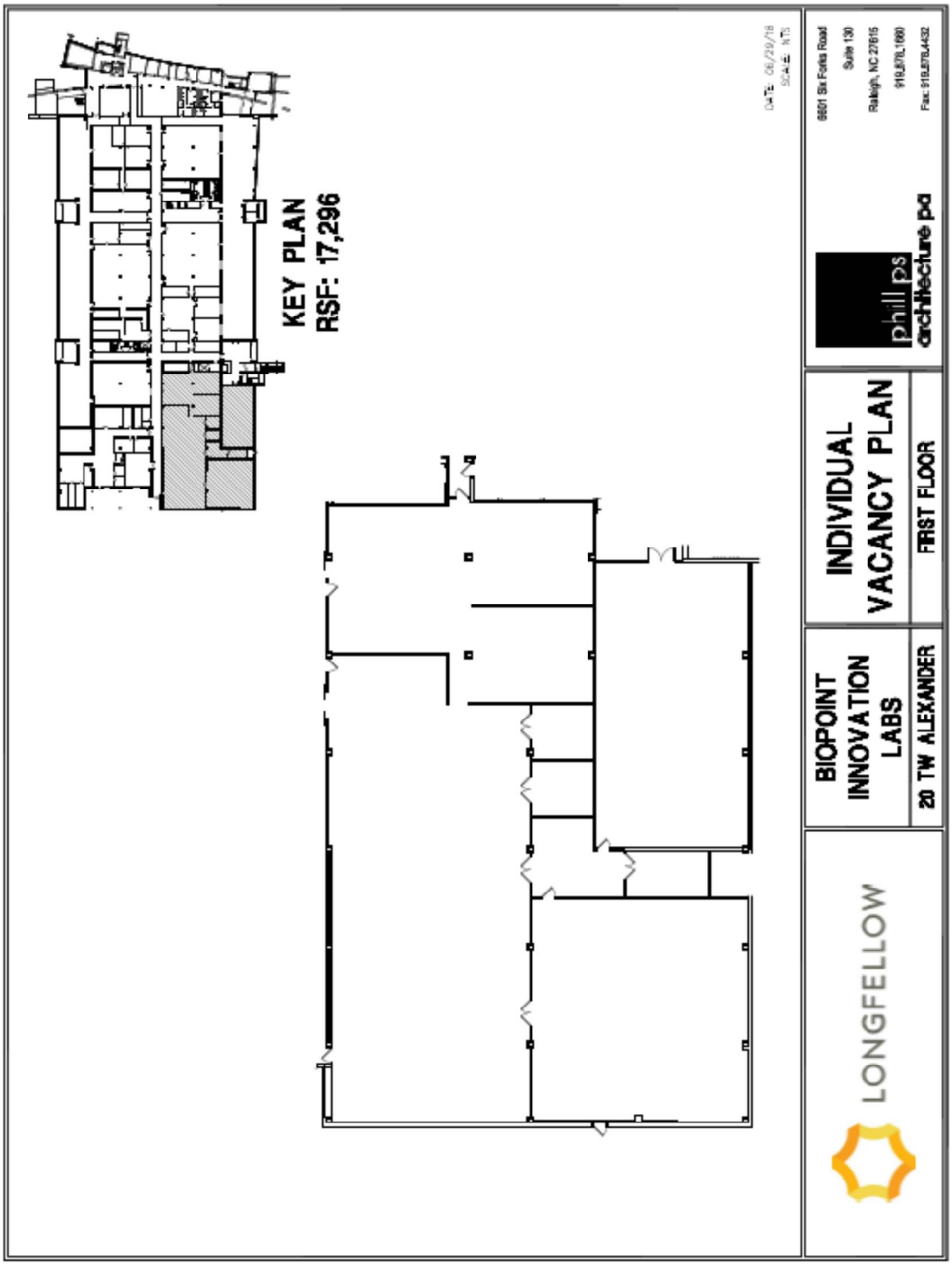

EXHIBIT D

TENANT WORK LETTER

This Tenant Work Letter sets forth the terms and conditions relating to the construction of the initial tenant improvements in the Premises. This Tenant Work Letter is essentially organized chronologically and addresses the issues of the construction of the Premises, in sequence, as such issues will arise during the actual construction of the Premises. All references in this Tenant Work Letter to Articles or Sections of "this Lease" shall mean the relevant portion of the Lease to which this Tenant Work Letter is attached as Exhibit D and of which this Tenant Work Letter forms a part, and all references in this Tenant Work Letter to Sections of "this Tenant Work Letter" shall mean the relevant portion of this Tenant Work Letter.

1. LANDLORD'S INITIAL CONSTRUCTION IN THE PREMISES

ıdlord's sole cost and expense, complete the work described on the attached Attachment 1 (collectively, the "Landlord Work"). The Landlord Work shall be performed in a first-class, workmanlike manner.

2. TENANT IMPROVEMENTS

ant shall be entitled to a tenant improvement allowance (the "Tenant Improvements Allowance") in the maximum aggregate amount of **$1,220,720.00** (in a total amount equivolent to $70.58 per rentable square foot of the entire Premises initially leased hereunder) and adjusted based on the actual square footage) (the "Maximum Allowance Amount") for the hard costs and customary soft costs, as noted below, incurred by Tenant, including, without limitation, architectural and engineering fees, construction contractor fees, Tenant's project management fees, a 2% fee payable to Landlord or its affiliates for oversight and administrative costs related to the Tenant Improvements ("Landlord's Project Oversight Fee"), permits, and such other costs arising from or relating to the design and construction of Tenant's improvements which are to be permanently affixed to the Premises in accordance with this Work Letter (the "Tenant Improvements"). Landlord's Project Oversight Fee shall be equivolent to, but not exceed, a total of 2% of the Tenant Improvement Allowance paid to Tenant. For the avoidance of any doubt, the purchase and installation of data and telecommunications cabling shall not be included in the definition of Tenant Improvements and there shall not be any Landlord's Project Oversight Fee payable with respect to costs and expenses related thereto. Tenant agrees to keep the Landlord advised as to the progress of the work by providing copies of the Contractor's applications for payment. In no event shall Landlord be obligated to make disbursements pursuant to this Tenant Work Letter in a total amount which exceeds the Maximum Allowance Amount. All Tenant Improvements for which the Tenant Improvements Allowance has been used to pay shall be deemed Landlord's property under the terms of the Lease.

ıents Allowance. Except as otherwise set forth in this Tenant Work Letter, the Tenant Improvements Allowance shall be disbursed by Landlord (each of which disbursements shall be made pursuant to Landlord's reasonable disbursement process) for costs incurred by Tenant related to the design and construction of the Tenant Improvements and for the following items and costs (collectively, the "Tenant Improvements Allowance Items"): (i) payment of the fees of the "Architect" as that term is defined in Section 3.1 of this Tenant Work Letter in connection with the preparation and review of the "Construction Documents," as that term is defined in Section 3.1 of this Tenant Work Letter; (ii) payment of the Landlord's Project Oversight Fee, (iii) the cost of any changes to the Construction Documents or Tenant Improvements required by all applicable building codes (the "Code") enacted after approval of the Construction Documents, (iv) costs payable to the Contractor and any subcontractors, and (v) other costs incurred in connection with the Tenant Improvements to the extent the same can be paid using the Tenant Improvements Allowance pursuant to the specific provisions of this Tenant Work Letter.

Once Landlord is required to disburse any portion of the Tenant Improvement Allowance as noted herein, Landlord shall disburse the applicable portion of the Tenant Improvements Allowance within thirty (30) calendar days of receiving from Tenant a Payment Request (as hereinafter defined), an amount equal to the portion of the actual costs and expenses Tenant has incurred and paid in connection with the design and construction of the Tenant

Improvements to date, over the amount Tenant is required to pay as noted in Section 4.3.1, which are to be paid for from the Tenant Improvement Allowance provided the following conditions have been satisfied:

ent Request") in a form reasonably satisfactory to Landlord specifying the work which has been completed; and

tted an application for payment and sworn statement substantially in the form of AIA Document G702 and AIA Document G703; and

n waivers from all contractors, first tier subcontractors, artchitects, and first tier materialmen who performed such work to cover the work included under the Payment Request and all prior work Tenant was required to pay for before utilizing the Tenant Improvements Allowance.

Notwithstanding anything herein to the contrary, the Tenant Improvements Allowance must be requested by Tenant, if at all, in accordance with this paragraph on or before the date that is one year following the Rent Commencement Date, and any portion not requested by such date may no longer be utilized by Tenant and shall be deemed forfeited to Landlord.

3. CONSTRUCTION DOCUMENTS

ocuments. 3.1 Landlord consents to Tenant retaining Integrated Design, PA (the "Architect") to prepare the "Construction Documents," as that term is defined in this Section 3.1 for the Tenant Improvements, together with the consulting engineers selected by the Architect and reasonably approved by Landlord. Tenant is not obligated to retain Integrated Design, PA and may retain another Architect or Architects from time to time, provided, however, that any such other Architects shall be subject to Landlord's reasonable approval. The plans and drawings to be prepared by Architect hereunder shall be known collectively as the "Construction Documents." All Construction Documents shall reasonably comply with the drawing format and specifications as reasonably determined by Landlord, and shall be subject to Landlord's and Tenant's approval. Landlord may hire an architectural firm to conduct a peer review, and the fees associated with this peer review shall be paid from the Landlord's Project Oversight Fee and shall not result in an additional charge to Tenant.

Landlord has no obligation to approve any Tenant Change or any Tenant Improvements not shown on the plans previously approved by Landlord and Tenant or reasonably inferable therefrom if, in Landlord's reasonable judgment, such Tenant Improvements (i) would materially increase the cost of performing any other work in the Building, not including the Tenant Improvements, unless in each case Tenant agrees to pay such costs based on Landlord's Change Estimate Notice (as defined below), (ii) are incompatible with the design, quality, equipment or systems of the Building or otherwise require a change to the existing Building systems or structure, each in a manner that would not otherwise be required in connection with the improvements contemplated by the Fit Plan (as defined below), (iii) is not consistent with the existing quality and nature of the Building, or (iv) otherwise do not comply with the provisions of the Lease.

nt have reviewed 3.2 and approved the preliminary space plan prepared by the Architect attached as Attachment 3 hereto (the "Fit Plan"). Tenant shall use commercially reasonable efforts to cause the Architect to prepare a space plan for the Premises which space plan shall be reasonably consistent with the Fit Plan and shall include a layout and designation of all labs, offices, rooms and other partitioning, their intended use, and equipment to be contained therein, and shall deliver the space plan to Landlord and Tenant for their approval. Landlord and Tenant shall review and provide any changes to the space plan within five Business Days of receipt thereof. Once Landlord and Tenant approve the final space plan, the space plan shall be considered final (the "Final Space Plan").

l cause the Architect 3.3 to complete final Construction Documents consistent with the Final Space Plan and shall submit the same to Landlord and Tenant for their approval. Landlord and Tenant shall review and provide any changes to the construction documents within five (5) Business Days of receipt thereof, and the Tenant shall use reasonable efforts to cause the Architect to prepare and circulate

modified documents within ten (10) Business Days of its receipt of any requested changes from Tenant or Landlord. Such process of submittal and response within the time frame specified in the preceding sentence shall continue until each of Landlord and Tenant gives written approval to such documents, and the Construction Documents shall be considered final once approved by the Landlord and the Tenant. In no event may either Tenant or Landlord require any changes that are inconsistent with the Final Space Plan. The Construction Documents shall comply with Applicable Laws existing on the date of this Tenant Work Letter and which may be enacted prior to approval of completed Construction Documents. Subject to the provisions of Sections 3.1 and 5.4 of this Work Letter, Tenant may, from time to time, by written request to Landlord on a form reasonably specified by Landlord ("Tenant Change"), request a change in the Tenant Improvements shown on the Construction Documents, which Landlord approval shall not be unreasonably withheld or conditioned, and shall be granted or denied within five (5) business days after delivery of such Tenant Change to Landlord.

as approved (or deemed approved) pursuant to Section 3.3 shall be the "Approved Working Drawings". Following approval or deemed approval of the Cost Proposal, as described below, Tenant shall promptly thereafter submit or cause to be submitted, the Approved Working Drawings to the appropriate municipal authorities for all applicable building permits necessary to allow "Contractor," as that term is defined in Section 4.1, below, to commence and fully complete the construction of the applicable Tenant Improvements (the "Permits").

. 3.5

4. CONSTRUCTION OF THE TENANT IMPROVEMENTS

r Tenant and reasonably approved by Landlord ("Contractor") shall construct the Tenant Improvements.

Working Drawings are approved by Landlord and Tenant, Tenant shall provide Landlord with a cost proposal (or cost proposals) in accordance with the Approved Working Drawings for Landlord's approval, which approval shall not be unreasonably withheld, which cost proposal(s) shall include, as nearly as possible, the cost of all Tenant Improvements Allowance Items to be incurred by Tenant in connection with the design and construction of the Tenant Improvements (the "Cost Proposal"). Tenant will consult with Landlord prior to approving the contractors to whom it will be bid and Landlord may review bid packages at Landlord's written request. The date on which Landlord approves the Cost Proposal shall be known hereafter as the "Cost Proposal Delivery Date".

by Contractor

4.3.1 Payment of Tenant Improvements Allowance. Tenant shall be responsible to fund the entire cost of the Tenant Improvements less the amount of the Tenant Improvements Allowance prior to Landlord being required to fund any portion of the Tenant Improvements Allowance. Once Tenant has funded the required portion of the Tenant Improvements, as verified with paid invoices, then Tenant may submit a Payment Request to Landlord seeking disbursement of the Tenant Improvements Allowance to fund Tenant Improvements costs incurred by Tenant up to but not to exceed the full value of the Tenant Improvements Allowance. Unless otherwise agreed by the parties, all Tenant Improvements paid for by the Tenant Improvements Allowance shall be deemed Landlord's property under the terms of the Lease. Tenant hereby acknowledges and agrees that Tenant shall be responsible for all costs associated with the Tenant Improvements to the extent the same exceed the Tenant Improvements Allowance.

4.3.2 Tenant's Retention of Contractor. Tenant shall independently retain Contractor to construct the Tenant Improvements in accordance with the applicable Approved Working Drawings and the applicable Cost Proposal. Landlord shall be entitled to review the Tenant's construction contract with the Contractor upon Landlord's written request. Tenant shall be responsible to ensure the Contractor performs the construction work in a good and workmanlike manner and shall endeavor to oversee the Contractor's performance of its work to protect Landlord from construction defects.

5. COMPLETION OF THE TENANT IMPROVEMENTS; LEASE COMMENCEMENT DATE

give Landlord at least twenty (20) days prior written notice of the date that Tenant reasonably anticipates that the Tenant Improvements will be Substantially Complete (as defined below). For purposes of this Lease, "Substantial Completion" shall occur upon the completion of the last of the following to occur: (i) the completion of construction of the Tenant Improvements substantially pursuant to the Approved Working Drawings for such Tenant Improvements (each as reasonably determined by the Architect and Tenant), with the exception of any punch list items which do not impair Tenant's ability to occupy the Premises for their contemplated use, (ii) the acquisition of a certificate of occupancy or its legal equivalent allowing occupancy of the Premises (a "Sign Off"), and (iii) delivery of a certificate of substantial completion from the Architect confirming the matters set forth in the foregoing clause (i). In the event that the Sign Off is not a final certificate of occupancy, Tenant shall diligently prosecute the work necessary to achieve a full certificate of occupancy and use commercially reasonable efforts to obtain such full certificate of occupancy as soon as reasonably practicable following Substantial Completion.

5.2

Tenant Improvements are Substantially Completed and prior to Tenant's move-in into the Premises, following two (2) days' advance written notice from Tenant to Landlord, Tenant shall cause the Contractor to inspect the Premises with a representative of Landlord and complete a punch list of unfinished items of the Tenant Improvements. After Landlord and Tenant have mutually agreed upon the punch list, authorized representatives for Landlord and Tenant shall execute said punch list. The items listed on such punch list shall be completed by the Contractor within thirty (30) days after the approval of such punch list or as soon thereafter as reasonably practicable, provided that in the event a punch list item reasonably requires longer than thirty (30) days to complete, then Tenant shall cause Contractor to commence the completion of such particular item within thirty (30) days and diligently pursue the same to completion. The terms of this Section 5.3 will not affect the occurrence of the Substantial Completion of the Premises or the occurrence of the Rent Commencement Date.

5.4

the Landlord for Tenant shall be considered to be in default of the provisions of this Tenant Work Letter for delays in performance due to Force Majeure.

5.6

5.7

6. MISCELLANEOUS

a condition to Tenant's entry into the Premises, Tenant shall comply with and perform, and shall cause its employees, agents, contractors, subcontractors, material suppliers and laborers to comply with and perform, all of Tenant's insurance and indemnity obligations and other obligations governing the conduct of Tenant at the Property under this Lease.

Any independent contractor of Tenant (or any employee or agent of Tenant) performing any work or invasive inspections in the Premises shall be reasonably subject to all of the terms, conditions and requirements contained in the Lease (including without limitation the provisions of Article 10) and, prior to such entry, Tenant shall provide Landlord with evidence of the insurance coverages required pursuant to Article 10. Tenant and any Tenant contractor performing any work or invasive inspections in the Premises shall use reasonable efforts not to interfere in any way with construction of, and shall not damage the Landlord Work or the common areas or other parts of the Building.

6.2 Tenant's Representative. Tenant has designated Sinu Bhandaru and Sam Stubbs as its sole representatives with respect to the matters set forth in this Tenant Work Letter, who, until further notice to Landlord, shall have full authority and responsibility to act on behalf of the Tenant as required in this Tenant Work Letter.

has designated Randal Long as its sole representative with respect to the matters set forth in this Tenant Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of the Landlord as required in this Tenant Work Letter.

6.3

6.4

6.5 General. This Work Letter shall not be deemed applicable to any additional space added to the Premises at any time or from time to time, whether by any options under the Lease or otherwise, or to any portion of the Premises or any additions to the Premises in the event of a renewal or extension of the original Lease Term, whether by any options under the Lease or otherwise, unless and to the extent expressly provided in the Lease or any amendment or supplement to the Lease that such additional space is to be delivered to Tenant in the same condition the initial Premises is to be delivered.

6.6 Insurance. In addition to the requirements of Article 8.5 and Article 10 of this Lease, prior to the commencement of the Tenant Improvements, Tenant shall provide Landlord with evidence that Tenant carries Builder's All Risk insurance in an amount reasonably approved by Landlord covering the construction of such Tenant Improvements, and such other insurance as Landlord may reasonably require, it being understood and agreed that all of such Tenant Improvements shall be insured by Tenant pursuant to Article 10 of this Lease immediately upon completion thereof. In addition, Tenant's contractors, subcontractors, and architects shall be required to carry Commercial General Liability Insurance in an amount approved by Landlord and otherwise in accordance with the requirements of Article 10 of this Lease and such general liability insurance shall name the Landlord Parties as additional insureds. In addition, Tenant's contractors and subcontractors shall be required to carry workers compensation insurance with a waiver of subrogation in favor of Landlord Parties.

ATTACHMENT 1

LANDLORD'S WORK

-Add one (1) 7' x 22' window to the Building which is similar to existing windows.
-Add one (1) 6' x 8' insulated electronically controlled roll-up door exiting onto the loading dock.

ATTACHMENT 2

Intentionally omitted

ATTACHMENT 3

PRELIMINARY PLANS

[to be attached]

EXHIBIT E

RULES AND REGULATIONS

Tenant shall faithfully observe and comply with the following Rules and Regulations. Landlord shall not be responsible to Tenant for the nonperformance of any of said Rules and Regulations by or otherwise with respect to the acts or omissions of any other tenants or occupants of the Project. In the event of any conflict between the Rules and Regulations and the other provisions of this Lease, the latter shall control.

1. Tenant shall not alter any lock or install any new or additional locks or bolts on any doors or windows of the Premises without obtaining Landlord's prior written consent, which shall not be unreasonably withheld, conditioned or delayed. If Tenant shall affix additional locks on doors then Tenant shall furnish Landlord with copies of keys or pass cards or similar devices for said locks. Tenant shall bear the cost of any lock changes or repairs required by Tenant. Two initial keys will be furnished by Landlord for the Premises, and any additional keys required by Tenant must be obtained from Landlord at a reasonable cost to be established by Landlord. Upon the termination of this Lease, Tenant shall restore to Landlord all keys of stores, offices, and toilet rooms, either furnished to, or otherwise procured by, Tenant and in the event of the loss of keys so furnished, Tenant shall pay to Landlord the cost of replacing same or of changing the lock or locks opened by such lost key if Landlord shall deem it necessary to make such changes.

2. All doors opening to public corridors shall be kept closed at all times except for normal ingress and egress to the Premises.

3. Landlord reserves the right to close and keep locked all entrance and exit doors of the Building during such hours as are customary for comparable buildings in the vicinity of the Building. Tenant, its employees and agents must be sure that the doors to the Building are securely closed and locked when leaving the Premises if it is after the normal hours of business for the Building. Any tenant, its employees, agents or any other persons entering or leaving the Building at any time when it is so locked, or any time when it is considered to be after normal business hours for the Building, may be required to sign the Building register. Access to the Building may be refused unless the person seeking access has proper identification or has a previously arranged pass for access to the Building. Landlord will furnish passes to persons for whom Tenant requests same in writing. Tenant shall be responsible for all persons for whom Tenant requests passes and shall be liable to Landlord for all acts of such persons. The Landlord and his agents shall in no case be liable for damages for any error with regard to the admission to or exclusion from the Building of any person. In case of invasion, mob, riot, public excitement, or other commotion, Landlord reserves the right to prevent access to the Building or the Project during the continuance thereof by any means it deems appropriate for the safety and protection of life and property.

4. Except for shipments by Tenant of its product or receipt by Tenant of goods in the ordinary course of the operation of its business, no furniture, freight or equipment of any kind shall be brought into the Building without prior notice to Landlord. All moving activity into or out of the Building shall be scheduled with Landlord and done only at such time and in such manner as Landlord reasonably designates. Landlord shall have the right to prescribe the weight, size and position of all safes and other heavy property brought into the Building and also the times and manner of moving the same in and out of the Building. Safes and other heavy objects shall, if considered necessary by Landlord, stand on supports of such thickness as is necessary to properly distribute the weight. Landlord will not be responsible for loss of or damage to any such safe or property in any case. Any damage to any part of the Building, its contents, occupants or visitors by moving or maintaining any such safe or other property shall be the sole responsibility and expense of Tenant.

5. Intentionally omitted.

6. The requirements of Tenant will be attended to only upon application at the management office for the Project or at such office location designated by Landlord. Employees of Landlord shall not perform any work or do anything outside their regular duties unless under special instructions from Landlord.

7. No sign, advertisement, notice or handbill shall be exhibited, distributed, painted or affixed by Tenant on any part of the Premises or the Building without the prior written consent of the Landlord. Tenant shall not disturb, solicit, peddle, or canvass any occupant of the Project and shall cooperate with Landlord and its agents of Landlord to prevent same.

8. The toilet rooms, urinals, wash bowls and other apparatus shall not be used for any purpose other than that for which they were constructed, and no foreign substance of any kind whatsoever shall be thrown therein. The expense of any breakage, stoppage or damage resulting from the violation of this rule shall be borne by the tenant who, or whose servants, employees, agents, visitors or licensees shall have caused same.

9. Discharge of industrial sewage to the Building plumbing system shall only be permitted if Tenant, at its sole expense, shall have obtained all necessary permits and licenses therefor, including without limitation permits from state and local authorities having jurisdiction thereof.

10. Tenant shall not overload the floor of the Premises, nor mark, drive nails or screws, or drill into the partitions, woodwork or drywall or in any way deface the Premises or any part thereof without Landlord's prior written consent; provided, however, that Landlord's prior written consent shall not be required for the hanging of normal and customary office artwork and personal items. Tenant shall not purchase spring water, ice, towel, linen, maintenance or other like services from any person or persons not included on an approved list that Landlord shall provide to Tenant upon request. Landlord reserves the right to have Landlord's structural engineer review Tenant's floor loads on the Building at Landlord's expense, unless such study reveals that Tenant has exceeded the floor loads, in which case Tenant shall pay the cost of such survey.

11. Except for vending machines intended for the sole use of Tenant's employees and invitees, no vending machine or machines other than fractional horsepower office machines shall be installed, maintained or operated upon the Premises without the written consent of Landlord.

12. Tenant shall not use or keep in or on the Premises, the Building, or the Project any kerosene, gasoline or other inflammable or combustible fluid, chemical, substance or material.

13. Tenant shall not without the prior written consent of Landlord (not to be unreasonably withheld, conditioned, or delayed) use any method of heating or air conditioning other than that supplied by Landlord (other than as part of the Tenant Improvements).

14. Tenant shall not use, keep or permit to be used or kept, any foul or noxious gas or substance in or on the Premises, or permit or allow the Premises to be occupied or used in a manner offensive or objectionable to Landlord or other occupants of the Project by reason of noise, odors, or vibrations, or interfere with other tenants or those having business therein, whether by the use of any musical instrument, radio, phonograph, or in any other way. Tenant shall not throw anything out of doors, windows or skylights or down passageways.

15. Tenant shall not bring into or keep within the Project, the Building or the Premises any animals (other than service animals), birds, aquariums, or, except in areas designated by Landlord, bicycles or other vehicles.

16. No cooking shall be done or permitted on the Premises, nor shall the Premises be used for the storage of merchandise, for lodging or for any improper, objectionable or immoral purposes. Notwithstanding the foregoing, Underwriters' laboratory-approved equipment and microwave ovens may be used in the Premises for heating food and brewing coffee, tea, hot chocolate and similar beverages for employees and visitors, provided that such use is in accordance with all applicable federal, state, county and city laws, codes, ordinances, rules and regulations.

17. The Premises shall not be used for manufacturing or for the storage of merchandise except as such storage may be incidental to the use of the Premises provided for in the Summary. Tenant shall not occupy or permit any portion of the Premises to be occupied as an office for a messenger-type operation or dispatch office, public stenographer or typist, or for the manufacture or sale of liquor, narcotics, or tobacco in any form, or as a medical office, or as a barber or manicure shop, or as an employment bureau without the express prior written consent of

Landlord. Tenant shall not engage or pay any employees on the Premises except those actually working for such tenant on the Premises nor advertise for laborers giving an address at the Premises.

18. Landlord reserves the right to exclude or expel from the Project any person who, in the judgment of Landlord, is intoxicated or under the influence of liquor or drugs, or who shall in any manner do any act in violation of any of these Rules and Regulations.

19. Tenant, its employees and agents shall not loiter in or on the entrances, corridors, sidewalks, lobbies, courts, halls, stairways, vestibules or any Common Areas for the purpose of smoking tobacco products or for any other purpose, nor in any way obstruct such areas, and shall use them only as a means of ingress and egress for the Premises.

20. Tenant shall not waste electricity, water or air conditioning and agrees to reasonably cooperate with Landlord to ensure the most effective operation of the Building's heating and air conditioning system, and shall refrain from attempting to adjust any controls.

21. Tenant shall store all its trash and garbage within the interior of the Premises. No material shall be placed in the trash boxes or receptacles if such material is of such nature that it may not be disposed of in the ordinary and customary manner of removing and disposing of trash and garbage in the city in which the Building is located without violation of any law or ordinance governing such disposal. All trash, garbage and refuse disposal shall be made only through entry-ways provided for such purposes at such times as Landlord shall designate.

22. Tenant shall comply with all safety, fire protection and evacuation procedures and regulations established by Landlord or any governmental agency.

23. Any persons employed by Tenant to do janitorial work shall be subject to the prior written approval of Landlord (not to be unreasonably withheld, conditioned, or delayed), and while in the Building and outside of the Premises, shall be subject to and under the control and direction of the Building manager (but not as an agent or servant of such manager or of Landlord), and Tenant shall be responsible for all acts of such persons.

24. No awnings or other projection shall be attached to the outside walls of the Building without the prior written consent of Landlord (not to be unreasonably withheld, conditioned, or delayed), and no curtains, blinds, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Premises other than Landlord standard drapes. All electrical ceiling fixtures hung in the Premises or spaces along the perimeter of the Building must be fluorescent and/or of a quality, type, design and a warm white bulb color approved in advance in writing by Landlord. Neither the interior nor exterior of any windows shall be coated or otherwise sunscreened without the prior written consent of Landlord. Tenant shall abide by Landlord's regulations concerning the opening and closing of window coverings which are attached to the windows in the Premises, if any, which have a view of any interior portion of the Building or Building Common Areas.

25. The sashes, sash doors, skylights, windows, and doors that reflect or admit light and air into the halls, passageways or other public places in the Building shall not be covered or obstructed by Tenant, nor shall any bottles, parcels or other articles be placed on the windowsills.

26. Tenant must comply with requests by the Landlord concerning the informing of their employees of items of importance to the Landlord.

27. No smoking is permitted in the Building or on the Project.

28. Tenant hereby acknowledges that Landlord shall have no obligation to provide guard service or other security measures for the benefit of the Premises, the Building or the Project. Tenant hereby assumes all responsibility for the protection of Tenant and its agents, employees, contractors, invitees and guests, and the property thereof, from acts of third parties, including keeping doors locked and other means of entry to the Premises closed, whether or not Landlord, at its option, elects to provide security protection for the Project or any portion thereof. Tenant further assumes the risk that any safety and security devices, services and programs which Landlord elects, in its sole discretion, to provide may not be effective, or may malfunction or be circumvented by an unauthorized third

party, and Tenant shall, in addition to its other insurance obligations under this Lease, obtain its own insurance coverage to the extent Tenant desires protection against losses related to such occurrences. Tenant shall cooperate in any reasonable safety or security program developed by Landlord or required by law.

29. All non-standard office equipment of any electrical or mechanical nature shall be placed by Tenant in the Premises in settings approved by Landlord, to absorb or prevent any vibration, noise and annoyance.

30. Tenant shall not use in any space or in the public halls of the Building, any hand trucks except those equipped with rubber tires and rubber side guards.

31. No auction, liquidation, fire sale, going-out-of-business or bankruptcy sale shall be conducted in the Premises without the prior written consent of Landlord.

32. No tenant shall use or permit the use of any portion of the Premises for living quarters, sleeping apartments or lodging rooms.

Landlord reserves the right at any time to change or rescind any one or more of these Rules and Regulations, or to make such other and further reasonable Rules and Regulations as in Landlord's judgment may from time to time be necessary for the management, safety, care and cleanliness of the Premises, Building, the Common Areas and the Project, and for the preservation of good order therein, as well as for the convenience of other occupants and tenants therein. Landlord may waive any one or more of these Rules and Regulations for the benefit of any particular tenants, but no such waiver by Landlord shall be construed as a waiver of such Rules and Regulations in favor of any other tenant, nor prevent Landlord from thereafter enforcing any such Rules or Regulations against any or all tenants of the Project. Tenant shall be deemed to have read these Rules and Regulations and to have agreed to abide by them as a condition of its occupancy of the Premises.

EXHIBIT F

[*Property Center Name*]

FORM OF TENANT'S ESTOPPEL CERTIFICATE

The undersigned as Tenant under that certain Lease (the "**Lease**") made and entered into as of _____, 201_ by and between _____ as Landlord, and the undersigned as Tenant, for Premises on the _____ floor(s) of the office building located at **[INSERT BUILDING ADDRESS]**, certifies as follows:

1. Attached hereto as **Exhibit F** is a true and correct copy of the Lease and all amendments and modifications thereto. The documents contained in **Exhibit F** represent the entire agreement between the parties as to the Premises.

2. The undersigned currently occupies the Premises described in the Lease, the Lease Term commenced on _____, and the Lease Term expires on _____, and the undersigned has no option to terminate or cancel the Lease or to purchase all or any part of the Premises, the Building and/or the Project.

3. Base Rent became payable on _____.

4. The Lease is in full force and effect and has not been modified, supplemented or amended in any way except as provided in **Exhibit F**.

5. Tenant has not transferred, assigned, or sublet any portion of the Premises nor entered into any license or concession agreements with respect thereto except as follows:

6. Intentionally Omitted.

7. All monthly installments of Base Rent, all Additional Rent and all monthly installments of estimated Additional Rent have been paid when due through _____. The current monthly installment of Base Rent is $_____.

8. All conditions of the Lease to be performed by Landlord necessary to the enforceability of the Lease have been satisfied and, to Tenant's actual knowledge, Landlord is not in default thereunder. In addition, the undersigned has not delivered any notice to Landlord regarding a default by Landlord thereunder.

9. No rental has been paid more than thirty (30) days in advance and no security has been deposited with Landlord except as provided in the Lease.

10. As of the date hereof, there are no existing defenses or offsets, or, to the undersigned's knowledge, claims or any basis for a claim, that the undersigned has against Landlord.

11. If Tenant is a corporation or partnership, each individual executing this Estoppel Certificate on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in North Carolina and that Tenant has full right and authority to execute and deliver this Estoppel Certificate and that each person signing on behalf of Tenant is authorized to do so.

12. There are no actions pending against the undersigned under the bankruptcy or similar laws of the United States or any state.

13. To Tenant's actual knowledge, Tenant is in full compliance with all federal, state and local laws, ordinances, rules and regulations affecting its use of the Premises, including, but not limited to, those laws, ordinances, rules or regulations relating to hazardous or toxic materials. Tenant has never permitted or suffered, nor does Tenant have any knowledge of, the generation, manufacture, treatment, use, storage, disposal or discharge of any hazardous,

toxic or dangerous waste, substance or material in, on, under or about the Project or the Premises or any adjacent premises or property in violation of any federal, state or local law, ordinance, rule or regulation.

14. To the undersigned's knowledge, all tenant improvement work to be performed by Landlord under the Lease has been completed in accordance with the Lease and has been accepted by the undersigned and all reimbursements and allowances due to the undersigned under the Lease in connection with any tenant improvement work have been paid in full. All work (if any) in the common areas required by the Lease to be completed by Landlord has been completed and all parking spaces required by the Lease have been furnished and/or all parking ratios required by the Lease have been met.

The undersigned acknowledges that this Estoppel Certificate may be delivered to Landlord or to a prospective mortgagee or prospective purchaser, and acknowledges that said prospective mortgagee or prospective purchaser will be relying upon the statements contained herein in making the loan or acquiring the property of which the Premises are a part and that receipt by it of this certificate is a condition of making such loan or acquiring such property.

Executed at _____ on the ____ day of _____, 201__.

"Tenant":

,
a

By:
Its:

By:
Its:

EXHIBIT G

[*Property Center Name*]

ENVIRONMENTAL QUESTIONNAIRE

ENVIRONMENTAL QUESTIONNAIRE
FOR COMMERCIAL AND INDUSTRIAL PROPERTIES

Property Name:

Property Address:

Instructions: The following questionnaire is to be completed by the Lessee representative with knowledge of the planned operations for the specified building/location. Please print clearly and attach additional sheets as necessary.

1.0 PROCESS INFORMATION

Describe planned use, and include brief description of manufacturing processes employed.

2.0 HAZARDOUS MATERIALS

Are hazardous materials used or stored? If so, continue with the next question. If not, go to Section 3.0.

2.1 Are any of the following materials handled on the Property?Yes ☐ No ☐

(A material is handled if it is used, generated, processed, produced, packaged, treated, stored, emitted, discharged, or disposed.) If so, complete this section. If this question is not applicable, skip this section and go on to Section 5.0.

☐ Explosives	☐ Fuels	☐ Oils
☐ Solvents	☐ Oxidizers	☐ Organics/Inorganics
☐ Acids	☐ Bases	☐ Pesticides
☐ Gases	☐ PCBs	☐ Radioactive Materials
☐ Other (please specify)		

22. If any of the groups of materials checked in Section 2.1, please list the specific material(s), use(s), and quantity of each chemical used or stored on the site in the Table below. If convenient, you may substitute a chemical inventory and list the uses of each of the chemicals in each category separately.

Material	Physical State (Solid, Liquid, or Gas)	Usage	Container Size	Number of Containers	Total Quantity

23. Describe the planned storage area location(s) for these materials. Please include site maps and drawings as appropriate.

3.0 HAZARDOUS WASTES

Are hazardous wastes generated? Yes ☐ No ☐

If yes, continue with the next question. If not, skip this section and go to section 4.0.

3.1 Are any of the following wastes generated, handled, or disposed of (where applicable) on the Property?

☐ Hazardous wastes ☐ Industrial Wastewater
☐ Waste oils ☐ PCBs
☐ Air emissions ☐ Sludges
☐ Regulated Wastes ☐ Other (please specify)

32. List and quantify the materials identified in Question 3-1 of this section.

WASTE GENERATED	RCRA listed Waste?	SOURCE	APPROXIMATE MONTHLY QUANTITY	WASTE CHARACTERIZATION	DISPOSITION

33. Please include name, location, and permit number (e.g. EPA ID No.) for transporter and disposal facility, if applicable). Attach separate pages as necessary.

Transporter/Disposal Facility Name	Facility Location	Transporter (T) or Disposal (D) Facility	Permit Number

34. Are pollution controls or monitoring employed in the process to prevent or minimize the release of wastes into the environment?Yes ☐ No ☐

35. If so, please describe.

4.0 USTS/ASTS

4.1 Are underground storage tanks (USTs), aboveground storage tanks (ASTs), or associated pipelines used for the storage of petroleum products, chemicals, or liquid wastes present on site (lease renewals) or required for planned operations (new tenants)?Yes___No___

If not, continue with section 5.0. If yes, please describe capacity, contents, age, type of the USTs or ASTs, as well any associated leak detection/spill prevention measures. Please attach additional pages if necessary.

Capacity	Contents	Year Installed	Type (Steel, Fiberglass, etc)	Associated Leak Detection / Spill Prevention Measures*

*Note: The following are examples of leak detection / spill prevention measures:

Integrity testing	Inventory reconciliation	Leak detection system
Overfill spill protection	Secondary containment	Cathodic protection

42. Please provide copies of written tank integrity test results and/or monitoring documentation, if available.

43. Is the UST/AST registered and permitted with the appropriate regulatory agencies?Yes ☐ No ☐
If so, please attach a copy of the required permits.

44. If this Questionnaire is being completed for a lease renewal, and if any of the USTs/ASTs have leaked, please state the substance released, the media(s) impacted (e.g., soil, water, asphalt, etc.), the actions taken, and all remedial responses to the incident.

45. If this Questionnaire is being completed for a lease renewal, have USTs/ASTs been removed from the Property?Yes ☐ No ☐

If yes, please provide any official closure letters or reports and supporting documentation (e.g., analytical test results, remediation report results, etc.).

46. For Lease renewals, are there any above or below ground pipelines on site used to transfer chemicals or wastes?Yes ☐ No ☐

For new tenants, are installations of this type required for the planned operations?

Yes ☐ No ☐

If yes to either question, please describe.

5.0 ASBESTOS CONTAINING BUILDING MATERIALS

Please be advised that an asbestos survey may have been performed at the Property. If provided, please review the information that identifies the locations of known asbestos containing material or presumed asbestos containing material. All personnel and appropriate subcontractors should be notified of the presence of these materials, and informed not to disturb these materials. Any activity that involves the disturbance or removal of these materials must be done by an appropriately trained individual/contractor.

6.0 REGULATORY

61. Does the operation have or require a National Pollutant Discharge Elimination System (NPDES) or equivalent permit?Yes ☐ No ☐
If so, please attach a copy of this permit.

62. Has a Hazardous Materials Business Plan been developed for the site?Yes ☐ No ☐
If so, please attach a copy.

CERTIFICATION

I am familiar with the real property described in this questionnaire. By signing below, I represent and warrant that the answers to the above questions are complete and accurate to the best of my knowledge. I also understand that Lessor will rely on the completeness and accuracy of my answers in assessing any environmental liability risks associated with the property.

Signature:

Name:

Title:

Date:

Telephone:

BioPoint Responsibility Matrix

Landlord Held Contracts (to be billed through CAM)	
Janitorial	Common Areas
Pest Control	Exterior & Common Areas
Access System	Common Areas
Electric	Common Areas, Exterior
Gas	HVAC
Water	Common Areas
Window Cleaning	Exterior Only
Elevators	PM Contract
HVAC	Common Areas
Lighting	Common Areas
Roof	Repairs & Maintenance
Plumbing	Common Areas
FL&S	Entire Building
Landscaping	Exterior maintenance
Fitness Center	Equipment maintenance
Exterior Maintenance	All exterior maintenance
Snow Removal	Parking lot and sidewalks
Trash & Recycling	From common dumpsters
Generator Maintenance	Quarterly PM Service
Security	Nightly roving patrol checks

Billed Monthly Based on Actuals	
Electric	Metered Usage
Water	Metered Usage
HVAC	Tenant will be responsible for repairs within their space
Fire Life Safety	Tenant Space

Tenant Held Contracts	
Janitorial	Tenant Space
Pest Control	Tenant Space
Access System - tied into building system	Tenant Space
Lighting	Tenant Space
Trash & Recycling	Tenant Space
Gas	Tenant Equipment
Plumbing	Tenant Space

EXHIBIT H

RESPONSIBILITY MATRIX

EXHIBIT I

STORAGE AREA

FIRST AMENDMENT TO LEASE

THIS FIRST AMENDMENT TO LEASE (this "***Amendment***") is made and entered into as of the 23 day of December 2019 (the "***Effective Date***"), by and between **DURHAM TW ALEXANDER, LLC**, a Delaware limited liability company ("***Landlord***"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation (formerly a North Carolina corporation) ("***Tenant***").

STATEMENT OF PURPOSE

WHEREAS, Landlord and Tenant entered into that certain Lease dated October 2, 2018 (the "***Existing Lease***"), for certain premises containing approximately 17,296 rentable square feet on the first (1st) floor (the "***Existing Premises***") located in the building known as Biopoint Innovation Labs located at 20 TW Alexander Drive, Research Triangle Park, North Carolina 27709 (the "***Building***"), as more particularly described in the Lease.

WHEREAS, Landlord and Tenant desire to amend the terms of the Existing Lease: (i) to expand the Existing Premises, (ii) to extend the Lease Term, and (iii) to modify certain other terms of the Lease. For purposes hereof, the Existing Lease as amended by this Amendment is referred to as the "***Lease***." All capitalized terms not otherwise defined herein shall have the meanings set forth in the Existing Lease.

NOW, THEREFORE, in consideration of the statement of purpose, the mutual covenants contained herein and other valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. **Recitals**. The recitals shall form a part of this Amendment.

2. **Expansion of the Premises**.

(a) Tenant desires to expand the Existing Premises to include an additional approximately 16,339 rentable square feet commonly known as Suite 140 located in the first (1st) floor of the Building, all as further shown on **Exhibit A** attached hereto and incorporated herein by reference (the "***Expansion Premises***"). For avoidance of ambiguity, Section 1.2 of the Existing Lease shall also apply to the measurement of the Expansion Premises. Effective as of the Expansion Premises Rent Commencement Date (as defined in Section 2(b) below), the Existing Premises shall be expanded by adding the Expansion Premises and the term "Premises" under the Lease shall be redefined to be that area shown on **Exhibit A** as the Existing Premises plus the Expansion Premises, totaling approximately 33,635 rentable square feet of space (the "***Revised Premises***").

(b) The Expansion Premises shall be added to the Lease on the "***Expansion Premises Rent Commencement Date***" which shall be defined as the earlier of: (i) delivery of the certificate of occupancy for the Expansion Premises; or (ii) July 1, 2020. Notwithstanding the foregoing, Landlord shall allow limited beneficial occupancy of up to ten (10) Tenant employees in that area of the Expansion Premises as shown on **Exhibit D** ("***Limited Occupancy Space***"**)**. Tenant shall ensure that such limited beneficial occupancy falls under an existing certificate of occupancy and complies with any and all occupancy laws and applicable regulations.

3. **First Extension Term**.

(a) The Lease Term for the Existing Premises is hereby extended for a period commencing on the Expansion Premises Rent Commencement Date and expiring on August 31, 2027 (the "***First Extension Term Expiration Date***"), which comprises a period of approximately eighty-six (86) months (the "***Existing Premises Extension Term***").

(b) The Lease Term with respect to the Expansion Premises shall commence on the Expansion Premises Rent Commencement Date and shall expire on the First Extension Term Expiration Date (the "***Expansion Premises Term***" and together with the Existing Premises Extension Term, collectively, the "***First Extension Term***").

(c) Landlord and Tenant hereby acknowledge that Tenant's option to extend the Lease Term as set forth in Section 2.2 of the Lease remains in full force and effect and is not modified by this Amendment.

4. **Base Rent**.

(a) As of the Effective Date Tenant shall pay Base Rent for the Existing Premises in accordance with the following rent schedule. (The schedule below is the same as the Base Rent schedule listed in the Existing Lease with an extended period added to cover the full First Extension Term):

Time Period	Annual Base Rent	Monthly Installment of Base Rent	Annual Base Rent per Rentable Square Foot
07/01/2019 - 06/30/2020	$449,696.04	$37,474.67	$26.00
07/01/2020 - 06/30/2021	$463,186.92	$38,598.91	$26.78
07/01/2021 - 06/30/2022	$477,023.64	$39,751.97	$27.58
07/01/2022 - 06/30/2023	$491,379.36	$40,948.28	$28.41
07/01/2023 - 06/30/2024	$506,080.92	$42,173.41	$29.26
07/01/2024 - 06/30/2025	$521,301.48	$43,441.79	$30.14
07/01/2025 - 06/30/2026	$537,040.80	$44,753.40	$31.05
07/01/2026 - 06/30/2027	$553,126.08	$46,093.84	$31.98
07/01/2027 - 08/31/2027	$569,730.24	$47,477.52	$32.94

(b) Notwithstanding anything contained in the Lease to the contrary, commencing on the Expansion Premises Rent Commencement Date and continuing through the First Extension Term Expiration Date, Tenant shall, at the time and in the manner provided in the Lease, pay to Landlord as Base Rent for the Expansion Premises, the amounts set forth in the following rent schedule, plus any applicable tax thereon:

Time Period*	Annual Base Rent	Monthly Installment of Base Rent	Annual Base Rent per Rentable Square Foot
07/01/2020 - 06/30/2021**	$457,491.96	$38,124.33	$28.00
07/01/2021 - 06/30/2022	$471,216.72	$39,268.06	$28.84
07/01/2022 - 06/30/2023	$485,431.68	$40,452.64	$29.71
07/01/2023 - 06/30/2024	$499,973.40	$41,664.45	$30.60
07/01/2024 - 06/30/2025	$514,841.88	$42,903.49	$31.51
07/01/2025 - 06/30/2026	$530,364.00	$44,197.00	$32.46
07/01/2026 - 06/30/2027	$546,212.76	$45,517.73	$33.43
07/01/2027 - 08/31/2027	$562,715.16	$46,892.93	$34.44

*Note: Notwithstanding the above table, the dates of the time periods set forth therein will be adjusted based on the actual Expansion Premises Rent Commencement Date if such date occurs on a date earlier than July 1, 2020, but the

final date shall remain the same.

Note: Provided Tenant is not in monetary default of the terms of this Lease, after expiration of any applicable notice and cure period, Tenant shall have no obligation to pay any Base Rent attributable to: (i) the first two (2) months of for the Expansion Premises, and only the Expansion Premises, following the Expansion Premises Rent Commencement Date (the "*Expansion Premises Abatement Period***"). Tenant shall be obligated to pay all of Tenant's Share of Direct Expenses attributable to the Expansion Premises during the Expansion Premises Abatement Period.

5. **Additional Rent**.

(a) Tenant shall continue to pay Tenant's Share of Direct Expenses for the Existing Premises in accordance with the Lease until the Expansion Premises Rent Commencement Date.

(b) Commencing on the Expansion Premises Rent Commencement Date and continuing until the First Extension Term Expiration Date, as may be extended, Tenant shall pay Tenant's Share of Direct Expenses for the Revised Premises, as more particularly described in Article 4 of the Lease with an updated Tenant's Share. The term "Tenant's Share" under the Lease shall be redefined to be 22.58% as of the Expansion Premises Rent Commencement Date.

6. **Delivery of Expansion Premises**. Tenant shall accept the Expansion Premises and all components thereof including, but not limited to, electrical and mechanical in its presently existing "as-is", "where-is", with all faults condition and Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Expansion Premises except as otherwise expressly set forth in the Tenant Work Letter attached hereto as **Exhibit C** attached hereto and incorporated herein by reference. The acceptance of the Expansion Premises in "as-is" condition shall in no way limit Landlord's repair obligations set forth in the Lease.

7. **Security Deposit**. Prior to the Effective Date, Tenant shall provide an additional One Hundred Fifty-Two Thousand Four Hundred Ninety-Seven and 32/100 Dollars ($152,497.32) (which is four (4) months Base Rent for the Expansion Premises at a rate of $38,124.33 per month) to be added to the Security Deposit under the Lease, which shall mean the total Security Deposit amount required under the Lease shall be Three Hundred Two Thousand Three Hundred Ninety-Six and 00/100 Dollars ($302,396.00) (the "***Revised Premises Security Deposit***"). For the avoidance of doubt, the Revised Premises Security Deposit shall be held pursuant to Article 21 of the Lease and this Section 7 shall control future reductions of the Revised Premises Security Deposit. So long as Tenant has not been in default beyond any applicable notice and cure period at any time during the Term of the Lease, then at the end of the third (3rd) Lease Year, the Revised Premises Security Deposit shall be reduced to Two Hundred Twenty-Six Thousand Seven Hundred Ninety-Seven and 00/100 Dollars ($226,797.00). So long as Tenant has not been in default beyond any applicable notice and cure period at any time during the Term of the Lease, then at the end of the fifth (5th) Lease Year, the Revised Premises Security Deposit shall be reduced to One Hundred Fifty-One Thousand One Hundred Ninety-Eight and 00/100 Dollars ($151,198.00) for the remainder of the Lease Term, as extended.

8. **Additional Right of First Offer**.

(a) The right of first offer provided in Section 1.3 of the Existing Lease for Tenant shall continue to apply as stated therein.

(b) Beginning on the Effective Date, Landlord hereby grants to the Original Tenant, a one-time right of first offer with respect to **Suite 100 containing 29,191 rentable square feet** located in the Building as set forth in **Exhibit B** attached hereto, (the "***Suite 100 First Offer Space***"). Notwithstanding the foregoing, such first offer right of Tenant shall commence only following the expiration or earlier termination of the initial lease (including renewals) of the Suite 100 First Offer Space, and such right of first offer shall be subordinate to all rights of which are set forth in leases of space in the Project as of the date hereof, including any renewal, extension or expansion rights set forth in such leases, regardless of whether such renewal, extension or expansion rights are executed strictly in accordance with their terms, or pursuant to a lease amendment or a new lease (collectively, the "***Superior Right Holders***") with respect to such Suite 100 First Offer Space. Tenant's right of first offer shall not be applicable during any Option Term. Tenant's right of first offer shall be on the terms and conditions set forth in this Section 8.

(c) **Procedure for Offer**. Landlord shall notify Tenant (the "***Suite 100 First Offer Notice***") when the Suite 100 First Offer Space, any portion thereof, or such larger space that includes the Suite 100 First Offer Space becomes available for lease to third parties, provided that no Superior Right Holder wishes to lease such space. Pursuant to such Suite 100 First Offer Notice, Landlord shall offer to lease to Tenant the then available Suite 100 First Offer Space and any additional space noted within the Suite 100 First Offer Notice. The Suite 100 First Offer Notice shall describe the space so offered to Tenant (which the parties acknowledge may include a portion of the Suite 100 First Offer Space, only the Suite 100 First Offer Space, or the Suite 100 First Offer Space plus additional contiguous space the Landlord is offering for lease) and shall set forth the "Suite 100 First Offer Rent," as that term is defined in Section 8(e) below, and the other economic terms upon which Landlord is willing to lease such space to Tenant.

(d) **Procedure for Acceptance**. If Tenant wishes to exercise Tenant's right of first offer with respect to the space described in the Suite 100 First Offer Notice, then within ten (10) business days of delivery of the Suite 100 First Offer Notice to Tenant, Tenant shall deliver notice to Landlord of Tenant's election to exercise its right of first offer with respect to the entire space described in the Suite 100 First Offer Notice on the terms contained in such notice. If Tenant does not so notify Landlord within the ten (10) business day period, then Landlord shall be free to lease the space described in the Suite 100 First Offer Notice to anyone to whom Landlord desires on any terms Landlord desires. Notwithstanding anything to the contrary contained herein, Tenant must elect to exercise its right of first offer, if at all, with respect to all of the space offered by Landlord to Tenant at any particular time, and Tenant may not elect to lease only a portion thereof.

(e) **Suite 100 First Offer Space Rent**. The "Rent" payable by Tenant for the Suite 100 First Offer Space (the "***Suite 100 First Offer Rent***") shall be equal to the Fair Rental Value (as defined in Section 2.2.2 of the Lease) as of the "Suite 100 First Offer Commencement Date," as that term is defined in Section 8(g), below.

(f) **Construction In Suite 100 First Offer Space**. Tenant shall take the Suite 100 First Offer Space in its "as is" condition (subject to Landlord's repair obligations in the Lease), subject to any improvement allowance granted as a component of the Fair Rental Value, and the construction of improvements in the Suite 100 First Offer Space shall comply with the terms of the Lease for Alterations.

(g) **Amendment to Lease**. If Tenant timely exercises Tenant's right to lease the Suite 100 First Offer Space as set forth herein, Landlord and Tenant shall promptly thereafter execute an amendment to this Lease for such Suite 100 First Offer Space upon the terms and conditions as set forth in the Suite 100 First Offer Notice and this Section 8. Tenant shall commence payment of Rent for the Suite 100 First Offer Space, and the term of the Suite 100 First Offer Space shall commence upon the date of delivery of the Suite 100 First Offer Space to Tenant (the "***Suite 100 First Offer Commencement Date***") and terminate on the date set forth in the Suite 100 First Offer Notice.

(h) **Termination of Suite 100 Right of First Offer**. The rights contained in this Section 8 shall be personal to the Original Tenant and its Permitted Assignees, and may only be exercised by the Original Tenant or a Permitted Assignee (and not any other assignee, sublessee or other transferee of the Original Tenant's interest in this Lease) if the Original Tenant occupies the majority of the Revised Premises. The right of first offer granted herein shall terminate as to particular Suite 100 First Offer Space upon the failure by Tenant to exercise its right of first offer with respect to such Suite 100 First Offer Space as offered by Landlord. Tenant shall not have the right to lease Suite 100 First Offer Space, as provided in this Section 8, if, as of the date of the attempted exercise of any right of first offer by Tenant, or as of the scheduled date of delivery of such Suite 100 First Offer Space to Tenant, Tenant is in default under this Lease, after the expiration of any applicable notice and cure period, or Tenant has previously been in default, after the expiration of any applicable notice and cure period, under this Lease more than twice.

9. **Brokers**. Landlord and Tenant hereby warrant to each other that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Amendment, excepting only the real estate brokers or agents specified in Section 13 of the Existing Lease Summary (the "**Brokers**"), and that it knows of no other real estate broker or agent which represented said party who is entitled to a commission in connection with this Amendment. Landlord and Tenant each agree to indemnify and defend each other against and hold the indemnified party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation

alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party.

10. **Counterparts/Signatures**. This Amendment may be executed in counterparts. All executed counterparts shall constitute one agreement, and each counterpart shall be deemed an original. The parties hereby acknowledge and agree that electronic signatures, facsimile signatures or signatures transmitted by electronic mail in so-called "pdf" format shall be legal and binding and shall have the same full force and effect as if an original of this Amendment had been delivered. Landlord and Tenant (i) intend to be bound by the signatures (whether original, faxed or electronic) on any document sent by facsimile or electronic mail, (ii) are aware that the other party will rely on such signatures, and (iii) hereby waive any defenses to the enforcement of the terms of this Amendment based on the foregoing forms of signature.

11. **Miscellaneous**. This Amendment shall become effective only upon full execution and delivery of this Amendment by Landlord and Tenant. This Amendment contains the parties' entire agreement regarding the subject matter covered by this Amendment, and supersedes all prior correspondence, negotiations, and agreements, if any, whether oral or written, between the parties concerning such subject matter. There are no contemporaneous oral agreements, and there are no representations or warranties between the parties not contained in this Amendment. This Amendment shall be construed and enforced in accordance with the laws of the State of North Carolina. Except as modified by this Amendment, the terms and provisions of the Lease shall remain in full force and effect, and the Lease, as modified by this Amendment, shall be binding upon and shall inure to the benefit of the parties hereto, their successors and permitted assigns.

[***Signature Page Follows***]

[***The remainder of this page has been intentionally left blank***]

LANDLORD AND TENANT enter into this Amendment as of the Effective Date above.

LANDLORD:

DURHAM TW ALEXANDER, LLC,
a Delaware limited liability company

By: /s/Adam B. Sichol

Name: Adam B. Sichol

Title: Authorized Signatory

TENANT:

PRECISION BIOSCIENCES, INC.,
a Delaware corporation

By: /s/ Matt Kane

Name: Matt Kane

Title: CEO

EXHIBIT A

THE EXPANSION PREMISES

Suite 140

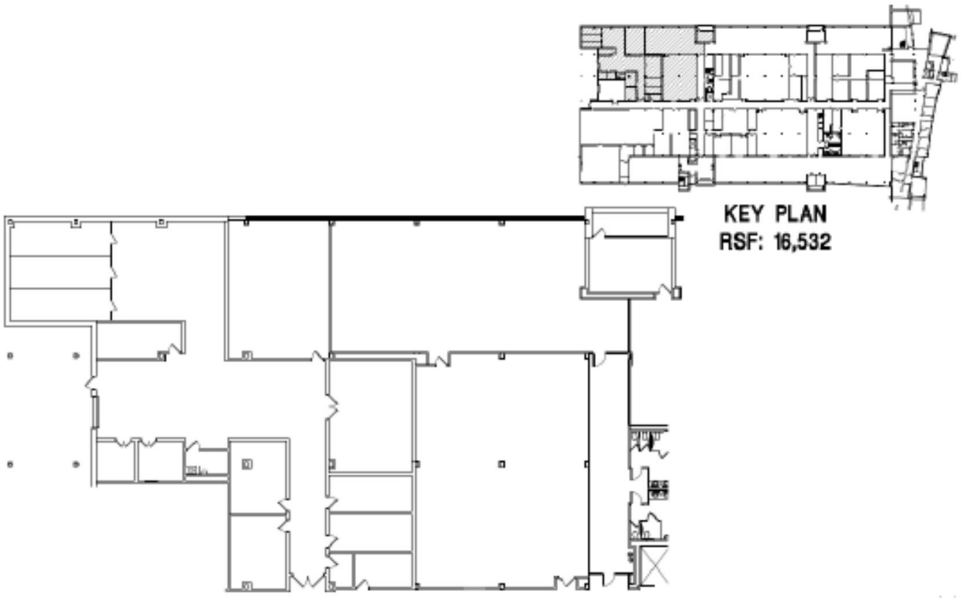

EXHIBIT B

FIRST OFFER SPACE

Suite 100

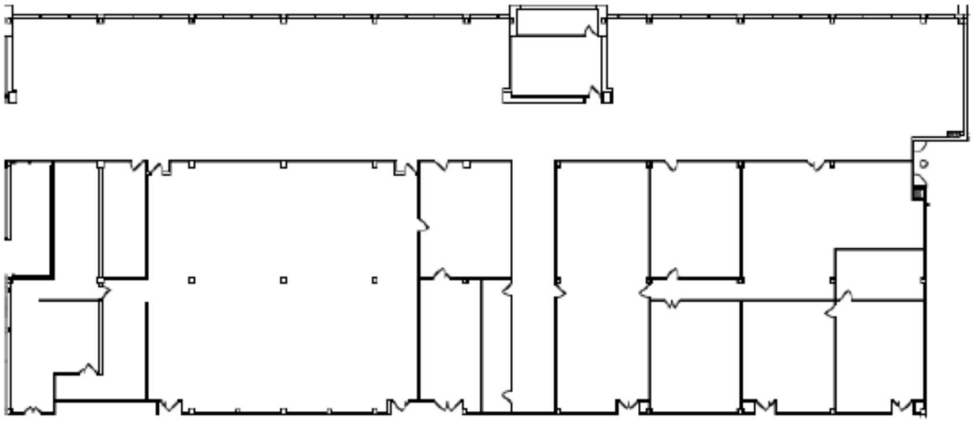

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EXHIBIT C

TENANT WORK LETTER

This Tenant Work Letter sets forth the terms and conditions relating to the construction of improvements in the Expansion Premises. All references in this Tenant Work Letter to Articles or Sections of "this Lease" shall mean the relevant portion of the Existing Lease.

1. LANDLORD'S INITIAL CONSTRUCTION IN THE PREMISES

andlord Work1.1 Tenant accepts the Expansion Premises in its "as-is", "where-is" condition. The acceptance of the Expansion Premises in "as-is" condition shall in no way limit Landlord's repair obligations set forth in the Lease.

2. TENANT IMPROVEMENTS

long as Tenant2.1 is not in default, Tenant shall be entitled to an one-time tenant improvements allowance (the "Tenant Improvements Allowance") in the maximum aggregate amount of: (i) **$898,645.00** for the Expansion Premises (*i.e.*, **$55.00** per rentable square foot of the Expansion Premises) (the "Maximum Allowance Amount") for the hard costs and customary soft costs, as noted below, incurred by Tenant including, without limitation out-of-pocket architectural and engineering fees, construction contractor fees, Tenant's project management fees, and a two percent (2%) project management fee payable to Landlord or its affiliates ("Landlord's Project Oversight Fee"), and permits, and such other costs arising from or relating to the design and construction of Tenant's improvements which are to be permanently affixed to the Expansion Premises in accordance with this Work Letter (the "Tenant Improvements"). Landlord's Project Oversight Fee shall be equivolent to, but not exceed, a total of 2% of the Tenant Improvement Allowance paid to Tenant. In no event shall Tenant be permitted to use any excess Tenant Improvements Allowance toward the Base Rent or any soft costs that are not directly related to the design and construction within the Expansion Premises. For the avoidance of any doubt, the purchase and installation of data and telecommunications cabling shall not be included in the definition of Tenant Improvements and there shall not be any Landlord's Project Oversight Fee payable with respect to costs and expenses related thereto. The Tenant agrees to keep the Landlord advised as to the progress of the work by providing copies of the Contractor's applications for payment. In no event shall Landlord be obligated to make disbursements pursuant to this Tenant Work Letter in a total amount which exceeds the Maximum Allowance Amount and in no event shall Tenant be entitled to any credit for any unused portion of the Tenant Improvements Allowance. All Tenant Improvements for which the Tenant Improvements Allowance has been made available shall be deemed Landlord's property under the terms of the Lease.

ents Allowance2.2. Except as otherwise set forth in this Tenant Work Letter, the Tenant Improvements Allowance shall be disbursed by Landlord (each of which disbursements shall be made pursuant to Landlord's reasonable disbursement process) for costs incurred and paid by Tenant related to the design and construction of the Tenant Improvements and for the following items and costs (collectively, the "Tenant Improvements Allowance Items"): (i) payment of the fees of the "Architect" as that term is defined in Section 3.1 of this Tenant Work Letter in connection with the preparation and review of the "Construction Documents," as that term is defined in Section 3.1 of this Tenant Work Letter; (ii) payment of the Landlord's Project Oversight Fee, (iii) the cost of any changes to the Construction Documents or Tenant Improvements required by all applicable building codes (the "Code") enacted after approval of the Construction Documents, (iv) costs payable to the Contractor and any subcontractors, and (v) other costs incurred in connection with the Tenant Improvements to the extent the same can be paid using the Tenant Improvements Allowance pursuant to the specific provisions of this Tenant Work Letter.

Once Landlord is required to disburse any portion of the Tenant Improvements Allowance as noted above, Landlord shall disburse the applicable portion of the Tenant Improvements Allowance within thirty (30) calendar days of receiving from Tenant a Payment Request (as hereinafter defined), an amount equal to the lesser of: (A) the amounts so requested by Tenant of the actual costs and expenses Tenant has incurred and paid in connection with the design and construction of the Tenant Improvements to date less a ten percent (10%) retention (the aggregate amount of such

retentions to be known as the "Final Retention"), and (B) the balance of any remaining available portion of the Tenant Improvements Allowance (not including the Final Retention) provided the following conditions have been satisfied:

ent Request") in a form reasonably satisfactory to Landlord specifying the work which has been completed; and

tted an application for payment and sworn statement substantially in the form of AIA Document G702 and AIA Document G703; and

waivers from all contractors, first tier subcontractors, artchitects, and first tier materialmen who performed such work to cover the work included under the Payment Request and all prior work Tenant was required to pay for before utilizing the Tenant Improvements Allowance.

Notwithstanding anything herein to the contrary, the Tenant Improvements Allowance must be requested in writing by Tenant, if at all, in accordance with this paragraph on or before the date that is one year following the Effective Date of this Amendment, and any portion not requested by such date may no longer be utilized by Tenant and shall be deemed forfeited to Landlord.

to the provisions of this Tenant Work Letter, a check for the Final Retention payable to Tenant shall be delivered by Landlord to Tenant not later than thirty (30) days following the completion of construction of the Expansion Premises, provided that (i) Tenant delivers to Landlord properly executed mechanics lien releases in compliance with the applicable laws in the state where the Building is located, (ii) Landlord has reasonably determined that no defective work exists which adversely affects the mechanical, electrical, plumbing, heating, ventilating and air conditioning, life-safety or other systems of the Building, the curtain wall of the Building, the structure or exterior appearance of the Building, or any other tenant's use of such other tenant's leased premises in the Building and (iii) Architect delivers to Landlord a certificate, in a form reasonably acceptable to Landlord, certifying that the construction of the Tenant Improvements in the Expansion Premises has been substantially completed.

3. CONSTRUCTION DOCUMENTS

cuments. Landlord consents to Tenant retaining Integrated Design, PA (collectively, the "Architect") to prepare the "Construction Documents," as that term is defined in this Section 3.1 for the Tenant Improvements. Tenant shall also retain the engineering consultants designated by Landlord (the "Engineers") to prepare all plans and engineering working drawings relating to the structural, mechanical, electrical, plumbing, HVAC and lifesafety work of the Tenant Improvements. The plans and drawings to be prepared by Architect and the Engineers hereunder shall be known collectively as the "Construction Documents." All Construction Documents shall reasonably comply with the drawing format and specifications as reasonably determined by Landlord, and shall be subject to Landlord's reasonable approval. Tenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the base building plans, and Tenant and Architect shall be solely responsible for the same, and Landlord shall have no responsibility in connection therewith. Landlord's review of the Construction Documents as set forth in this Section 3, shall be for its sole purpose and shall not imply Landlord's review of the same, or obligate Landlord to review the same, for quality, design, Code compliance or other like matters. Accordingly, notwithstanding that any Construction Documents are reviewed by Landlord or its space planner, architect, engineers and consultants, and notwithstanding any advice or assistance which may be rendered to Tenant by Landlord or Landlord's space planner, architect, engineers, and consultants, Landlord shall have no liability whatsoever in connection therewith and shall not be responsible for any omissions or errors contained in the Construction Documents. Landlord may hire an architectural firm to conduct a peer review, and the fees associated with this peer review shall be paid from the Landlord's Project Oversight Fee and shall not result in an additional charge to Tenant.

Landlord has no obligation to approve or perform any Tenant Change or any Tenant Improvements not shown on the plans previously approved by Landlord and Tenant or reasonably inferable therefrom if, in Landlord's reasonable judgment, such Tenant Improvements (i) would materially increase the cost of performing any other work in the Building, not including the Tenant Improvements, unless in each case Tenant agrees to pay such costs based on

Landlord's Change Estimate Notice (as defined below), (ii) are incompatible with the design, quality, equipment or systems of the Building or otherwise require a change to the existing Building systems or structure, each in a manner that would not otherwise be required in connection with the improvements contemplated by the Fit Plan (as defined below), (iii) is not consistent with the existing quality and nature of the Building, or (iv) otherwise do not comply with the provisions of the Lease.

1 the preliminary 3.2 space plan prepared by the Architect attached as Attachment 1 hereto (the "Fit Plan"). Tenant shall use commercially reasonable efforts to cause the Architect to prepare a space plan for the Expansion Premises which space plan shall be reasonably consistent with the Fit Plan and shall include a layout and designation of all labs, offices, rooms and other partitioning, their intended use, and equipment to be contained therein, and shall deliver the space plan to Landlord and Tenant for their approval. Landlord and Tenant shall review and provide any changes to the space plan within five (5) Business Days of receipt thereof. Once Landlord and Tenant approve the final space plan, the space plan shall be considered final (the "Final Space Plan").

l cause the Architect 3.3 to complete final Construction Documents consistent with the Final Space Plan and shall submit the same to Landlord and Tenant for their approval. Landlord and Tenant shall review and provide any changes to the construction documents within five (5) Business Days of receipt thereof, and the Tenant shall use reasonable efforts to cause the Architect to prepare and circulate modified documents within five (5) Business Days of its receipt of any requested changes from Tenant or Landlord. Such process of submittal and response within the time frame specified in the preceding sentence shall continue until each of Landlord and Tenant gives written approval to such documents, and the Construction Documents shall be considered final once approved by the Landlord and the Tenant. In no event may either Tenant or Landlord require any changes that are inconsistent with the Final Space Plan. The Construction Documents shall comply with Applicable Laws existing on the date of this Tenant Work Letter and which may be enacted prior to approval of completed Construction Documents. Subject to the provisions of Sections 3.1 and 5.4 of this Work Letter, Tenant may, from time to time, by written request to Landlord on a form reasonably specified by Landlord ("Tenant Change"), request a change in the Tenant Improvements shown on the Construction Documents, which approval shall not be unreasonably withheld or conditioned, and shall be granted or denied within five (5) Business Days after delivery of such Tenant Change to Landlord.

as approved (or 3.4 deemed approved) pursuant to Section 3.3 shall be the "Approved Working Drawings". Following approval or deemed approval of the Cost Proposal, as described below, Tenant shall promptly thereafter submit or cause to be submitted, the Approved Working Drawings to the appropriate municipal authorities for all applicable building permits necessary to allow "Contractor," as that term is defined in Section 4.1, below, to commence and fully complete the construction of the applicable Tenant Improvements (the "Permits").

. 3.5

4. CONSTRUCTION OF THE TENANT IMPROVEMENTS

/ Tenant and 4.1 reasonably approved by Landlord ("Contractor") shall construct the Tenant Improvements.

Vorking Drawings 4.2 are approved by Landlord and Tenant, Tenant shall provide Landlord with a cost proposal (or cost proposals) in accordance with the Approved Working Drawings for Landlord's approval, which approval shall not be unreasonably withheld, which cost proposal(s) shall include, as nearly as possible, the cost of all Tenant Improvements Allowance Items to be incurred by Tenant in connection with the design and construction of the Tenant Improvements (the "Cost Proposal"). Tenant will consult with Landlord prior to approving the contractors to whom it will be bid and Landlord may review bid packages at Landlord's written request. The date on which Landlord approves the Cost Proposal shall be known hereafter as the "Cost Proposal Delivery Date".

by Contractor4.3

4.3.1 Intentionally Deleted.

4.3.2 Tenant's Retention of Contractor. Tenant shall independently retain Contractor to construct the Tenant Improvements in accordance with the applicable Approved Working Drawings and the applicable Cost Proposal. Landlord shall be entitled to review the Tenant's construction contract with the Contractor upon Landlord's written request. Tenant shall be responsible to ensure the Contractor performs the construction work in a good and workmanlike manner and shall endeavor to oversee the Contractor's performance of its work to protect Landlord from construction defects.

5. COMPLETION OF THE TENANT IMPROVEMENTS; LEASE COMMENCEMENT DATE

give Landlord at5.1 least twenty (20) days prior written notice of the date that Tenant reasonably anticipates that the Tenant Improvements will be Substantially Complete (as defined below). For purposes of this Lease, "Substantial Completion" shall occur upon the completion of the last of the following to occur: (i) the completion of construction of the Tenant Improvements substantially pursuant to the Approved Working Drawings for such Tenant Improvements (each as reasonably determined by Tenant and Architect), with the exception of any punch list items which do not impair Tenant's ability to occupy the Expansion Premises for their contemplated use, (ii) the acquisition of a certificate of occupancy or its legal equivalent allowing occupancy of the Expansion Premises (a "Sign Off"), and (iii) delivery of a certificate of substantial completion from the Architect confirming the matters set forth in the foregoing clause (i). In the event that the Sign Off is not a final certificate of occupancy, Tenant shall diligently prosecute the work necessary to achieve a full certificate of occupancy and use commercially reasonable efforts to obtain such full certificate of occupancy as soon as reasonably practicable following Substantial Completion.

5.2

e Tenant Improvements5.3 are Substantially Completed and prior to Tenant's move-in into the Expansion Premises, following two (2) days' advance written notice from Tenant to Landlord, Tenant shall cause the Contractor to inspect the Expansion Premises with a representative of Landlord and complete a punch list of unfinished items of the Tenant Improvements. After Landlord and Tenant have mutually agreed upon the punch list, authorized representatives for Landlord and Tenant shall execute said punch list. The items listed on such punch list shall be completed by the Contractor within thirty (30) days after the approval of such punch list or as soon thereafter as reasonably practicable, provided that in the event a punch list item reasonably requires longer than thirty (30) days to complete, then Tenant shall cause Contractor to commence the completion of such particular item within thirty (30) days and diligently pursue the same to completion. The terms of this Section 5.3 will not affect the occurrence of the Substantial Completion of the Expansion Premises or the occurrence of the Expansion Premises Rent Commencement Date.

onably approve5.4 any Tenant Change on the condition that Tenant shall pay in full, in advance (or cause to be paid in full from the Tenant Improvements Allowance), any and all additional costs or expenses associated with the approval of said Tenant Change.

the Landlord or5.5 Tenant shall be considered to be in default of the provisions of this Tenant Work Letter for delays in performance due to Force Majeure.

6. MISCELLANEOUS

emises. As a6.1 condition to Tenant's entry into the Expansion Premises, Tenant shall comply with and perform, and shall cause its employees, agents, contractors, subcontractors,

material suppliers and laborers to comply with and perform, all of Tenant's insurance and indemnity obligations and other obligations governing the conduct of Tenant at the Property under this Lease.

6.2 Tenant's Representative. Tenant has designated Sinu Bhandaru as its sole representative with respect to the matters set forth in this Tenant Work Letter, who, until further notice to Landlord, shall have full authority and responsibility to act on behalf of the Tenant as required in this Tenant Work Letter.

6.3 Landlord has designated Jim McGlade as its sole representative with respect to the matters set forth in this Tenant Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of the Landlord as required in this Tenant Work Letter.

6.4

6.5 General. This Work Letter shall not be deemed applicable to any additional space added to the Expansion Premises at any time or from time to time, whether by any options under the Lease or otherwise, or to any portion of the Expansion Premises or any additions to the Expansion Premises in the event of a renewal or extension of the original Lease Term, whether by any options under the Lease or otherwise, unless and to the extent expressly provided in the Lease or any amendment or supplement to the Lease that such additional space is to be delivered to Tenant in the same condition the initial Expansion Premises is to be delivered.

6.6 Insurance. In addition to the requirements of Article 8.5 and Article 10 of the Lease, prior to the commencement of the Tenant Improvements, Tenant shall provide Landlord with evidence that Tenant carries Builder's All Risk insurance in an amount reasonably approved by Landlord covering the construction of such Tenant Improvements, and such other insurance as Landlord may reasonably require, it being understood and agreed that all of such Tenant Improvements shall be insured by Tenant pursuant to Article 10 of the Lease immediately upon completion thereof. In addition, Tenant's contractors, subcontractors, and architects shall be required to carry Commercial General Liability Insurance in an amount reasonably approved by Landlord and otherwise in accordance with the requirements of Article 10 of the Lease and such general liability insurance shall name the Landlord Parties as additional insureds. In addition, Tenant's contractors and subcontractors shall be required to carry workers compensation insurance with a waiver of subrogation in favor of Landlord Parties.

ATTACHMENT 1

FIT PLAN

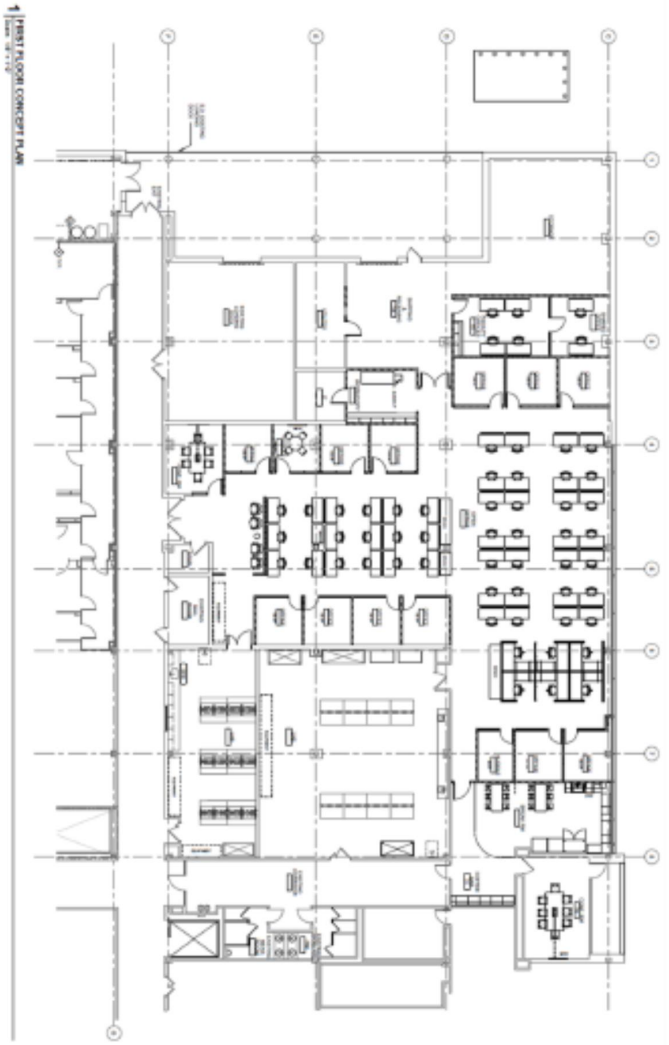
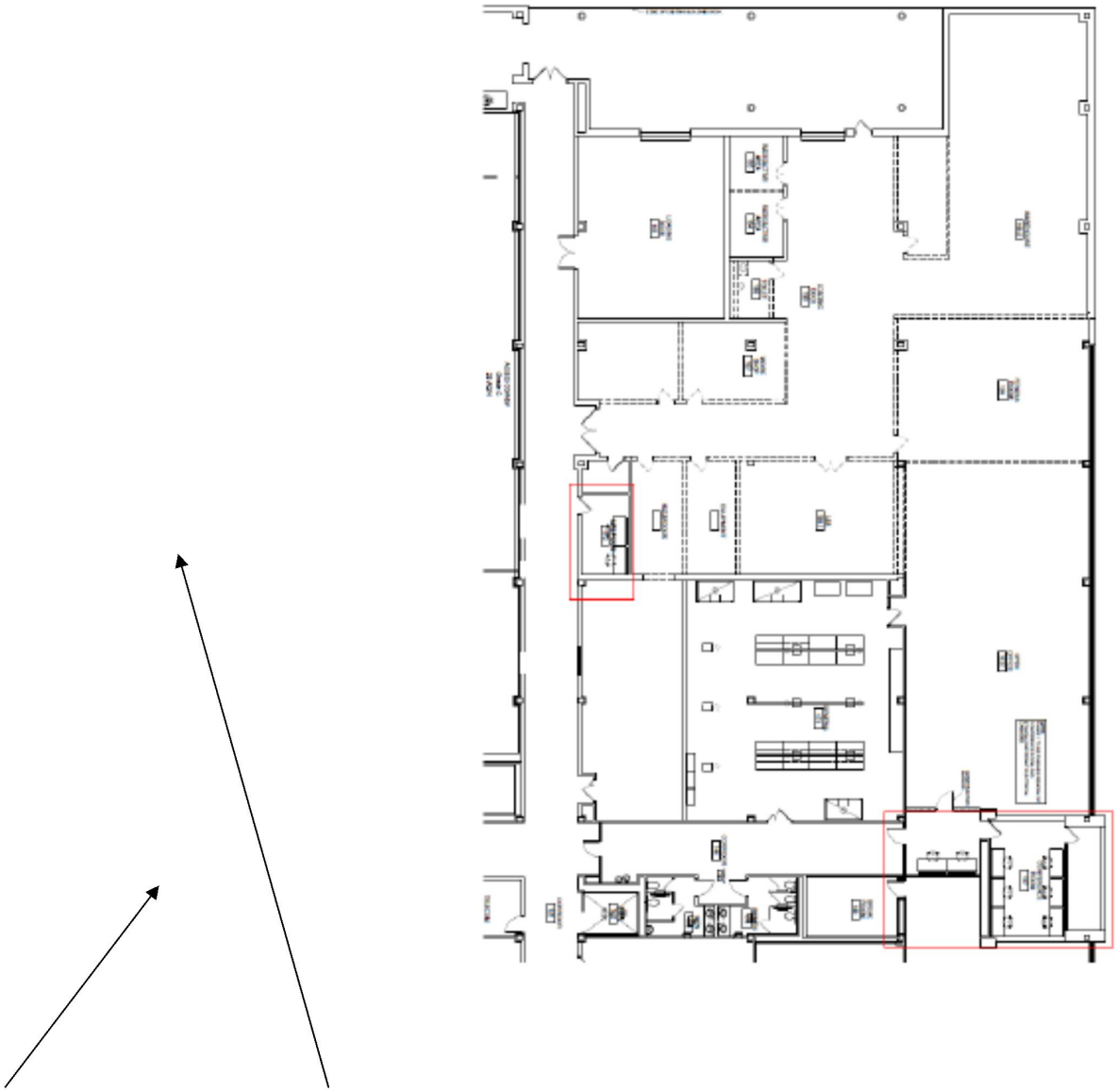


EXHIBIT D

LIMITED OCCUPANCY SPACE



Limited Occupancy Space

SECOND AMENDMENT TO LEASE

THIS SECOND AMENDMENT TO LEASE (this "***Amendment***") is made and entered into as of the 13th day of March, 2020 (the "***Effective Date***"), by and between **DURHAM TW ALEXANDER, LLC**, a Delaware limited liability company ("***Landlord***"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation (formerly a North Carolina corporation) ("***Tenant***").

STATEMENT OF PURPOSE

WHEREAS, Landlord and Tenant entered into that certain Lease dated October 2, 2018 ("***Initial Lease***") as amended by that certain First Amendment to Lease dated December 23, 2019 ("***First Amendment***" and together with the Initial Lease, the "***Existing Lease***"), for certain premises containing approximately 33,635 rentable square feet on the first (1st) floor (the "***Existing Premises***") located in the building known as Biopoint Innovation Labs located at 20 TW Alexander Drive, Research Triangle Park, North Carolina 27709 (the "***Building***"), as more particularly described in the Lease.

WHEREAS, Landlord and Tenant desire to amend the terms of the Existing Lease: (i) to expand the Existing Premises, and (ii) to modify certain other terms of the Existing Lease. For purposes hereof, the Lease as amended by this Amendment is referred to as the "***Lease***." All capitalized terms not otherwise defined herein shall have the meanings set forth in the Existing Lease.

NOW, THEREFORE, in consideration of the statement of purpose, the mutual covenants contained herein and other valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

12. **Recitals**. The recitals shall form a part of this Amendment.

13. **Expansion of the Premises**. As of the Effective Date, Exhibit A to the First Amendment is hereby deleted in its entirety and replaced with Exhibit A attached hereto, and Section 2(a) of the First Amendment is hereby deleted in its entirety and replaced with the following:

(a) Tenant desires to expand the Existing Premises to include an additional approximately 16,532 rentable square feet commonly known as Suite 140 along with an adjoining mailroom located on the first (1st) floor of the Building, all as further shown on **Exhibit A** attached hereto and incorporated herein by reference (the "***Expansion Premises***"). For avoidance of ambiguity, Section 1.2 of the Existing Lease shall also apply to the measurement of the Expansion Premises. Effective as of the Expansion Premises Rent Commencement Date (as defined in Section 2(b) of the First Amendment), the Existing Premises shall be expanded by adding the Expansion Premises and the term "Premises" under the Lease shall be redefined to be approximately 33,828 rentable square feet of space (the "***Revised Premises***").

14. **Base Rent**. Tenant shall continue pay Base Rent for the Existing Premises in accordance with Section 4(a) of the First Amendment. As of the Effective Date Section 4(b) of the First Amendment which provides the Base Rent for the Expansion Premises is hereby deleted in its entirety and replaced with the following:

(b) Notwithstanding anything contained in the Lease to the contrary, commencing on the Expansion Premises Rent Commencement Date and continuing through the First Extension Term Expiration Date, Tenant shall, at the time and in the manner provided in the Lease, pay to Landlord as Base Rent for the Expansion Premises, the amounts set forth in the following rent

schedule, plus any applicable tax thereon:

Time Period*	Annual Base Rent	Monthly Installment of Base Rent	Annual Base Rent per Rentable Square Foot
07/01/2020 - 06/30/2021**	$462,896.04	$38,574.67	$28.00
07/01/2021 - 06/30/2022	$476,782.92	$39,731.91	$28.84
07/01/2022 - 06/30/2023	$491,165.76	$40,930.48	$29.71
07/01/2023 - 06/30/2024	$505,879.20	$42,156.60	$30.60
07/01/2024 - 06/30/2025	$520,923.36	$43,410.28	$31.51
07/01/2025 - 06/30/2026	$536,628.72	$44,719.06	$32.46
07/01/2026 - 06/30/2027	$552,664.80	$46,055.40	$33.43
07/01/2027 - 08/31/2027	$569,362.08	$47,446.84	$34.44

*Note: Notwithstanding the above table, the dates of the time periods set forth therein will be adjusted based on the actual Expansion Premises Rent Commencement Date if such date occurs on a date earlier than July 1, 2020, but the final date shall remain the same.

Note: Provided Tenant is not in monetary default of the terms of this Lease, after expiration of any applicable notice and cure period, Tenant shall have no obligation to pay any Base Rent attributable to: (i) the first two (2) months of for the Expansion Premises, and only the Expansion Premises, following the Expansion Premises Rent Commencement Date (the "*Expansion Premises Abatement Period***"). Tenant shall be obligated to pay all of Tenant's Share of Direct Expenses attributable to the Expansion Premises during the Expansion Premises Abatement Period.

15. **Additional Rent**. The term "Tenant's Share" under the Lease shall be redefined to be 22.71% as of the Expansion Premises Rent Commencement Date.

16. **Security Deposit**. Prior to the Effective Date, Tenant shall provide an additional One Thousand Eight Hundred One and 36/100 Dollars ($1,801.36) (which is four (4) months Base Rent for the Expansion Premises at a rate of $38,574.67 per month less the Security Deposit required under Section 7 of the First Amendment) to be added to the Security Deposit under the Lease, which shall mean the total Security Deposit amount required under the Lease shall be Three Hundred Four Thousand One Hundred Ninety-Seven and 36/100 Dollars ($304,197.36) (the "***Revised Premises Security Deposit***"). For the avoidance of doubt, the Revised Premises Security Deposit shall be held pursuant to Article 21 of the Initial Lease and this Section 5 shall control future reductions of the Revised Premises Security Deposit. So long as Tenant has not been in default beyond any applicable notice and cure period at any time during the Term of the Lease, then at the end of the third (3rd) Lease Year, the Revised Premises Security Deposit shall be reduced to Two Hundred Twenty-Eight Thousand One Hundred Forty-Eight and 02/100 Dollars ($228,148.02). So long as Tenant has not been in default beyond any applicable notice and cure period at any time during the Term of the Lease, then at the end of the fifth (5th) Lease Year, the Revised Premises Security Deposit shall be reduced to One Hundred Fifty-Two Thousand Ninety-Eight and 68/100 Dollars ($152,098.68) for the remainder of the Lease Term, as extended.

17. **Tenant Improvements Allowance**. As of the Effective Date, the term "Tenant Improvements Allowance" under Section 2.1 of Exhibit C to the First Amendment shall be redefined to be **$909,260.00** for the Expansion Premises (*i.e.*, **$55.00** per rentable square foot of the Expansion Premises).

18. **Updated Fit Plan.** As of the Effective Date, the Fit Plan attached as Attachment 1 to Exhibit C of the First Amendment is hereby deleted and replaced with **Attachment 1** attached to this Amendment.

19. **Brokers**. Landlord and Tenant hereby warrant to each other that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Amendment, excepting only the real estate brokers or agents specified in Section 13 of the Initial Lease Summary (the "**Brokers**"), and that it knows of no other real estate broker or agent which represented said party who is entitled to a commission in connection with this Amendment. Landlord and Tenant each agree to indemnify and defend each other against and hold the indemnified party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party.

20. **Counterparts/Signatures**. This Amendment may be executed in counterparts. All executed counterparts shall constitute one agreement, and each counterpart shall be deemed an original. The parties hereby acknowledge and agree that electronic signatures, facsimile signatures or signatures transmitted by electronic mail in so-called "pdf" format shall be legal and binding and shall have the same full force and effect as if an original of this Amendment had been delivered. Landlord and Tenant (i) intend to be bound by the signatures (whether original, faxed or electronic) on any document sent by facsimile or electronic mail, (ii) are aware that the other party will rely on such signatures, and (iii) hereby waive any defenses to the enforcement of the terms of this Amendment based on the foregoing forms of signature.

21. **Miscellaneous**. This Amendment shall become effective only upon full execution and delivery of this Amendment by Landlord and Tenant. This Amendment contains the parties' entire agreement regarding the subject matter covered by this Amendment, and supersedes all prior correspondence, negotiations, and agreements, if any, whether oral or written, between the parties concerning such subject matter. There are no contemporaneous oral agreements, and there are no representations or warranties between the parties not contained in this Amendment. This Amendment shall be construed and enforced in accordance with the laws of the State of North Carolina. Except as modified by this Amendment, the terms and provisions of the Lease shall remain in full force and effect, and the Lease, as modified by this Amendment, shall be binding upon and shall inure to the benefit of the parties hereto, their successors and permitted assigns.

[***Signature Page Follows***]

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LANDLORD AND TENANT enter into this Amendment as of the Effective Date above.

LANDLORD:

DURHAM TW ALEXANDER, LLC,
A DELAWARE LIMITED LIABILITY COMPANY

By: /s/Jamison N. Peschel

Name: JAMISON PESCHEL

Title: Authorized Signatory

TENANT:

PRECISION BIOSCIENCES, INC.,
a Delaware corporation

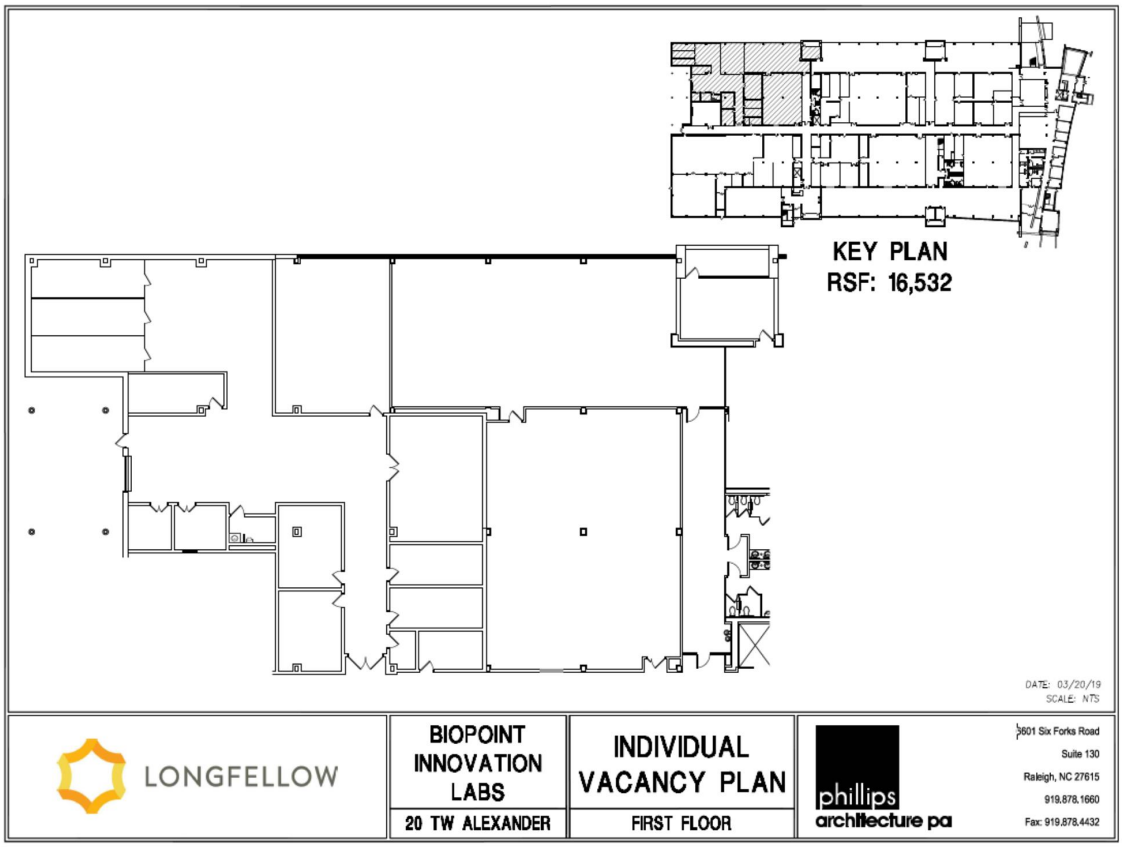
By: /s/ Sinu Bhandaru

Name: Sinu Bhandaru

Title: Vice President Operations & IT

EXHIBIT A

THE EXPANSION PREMISES



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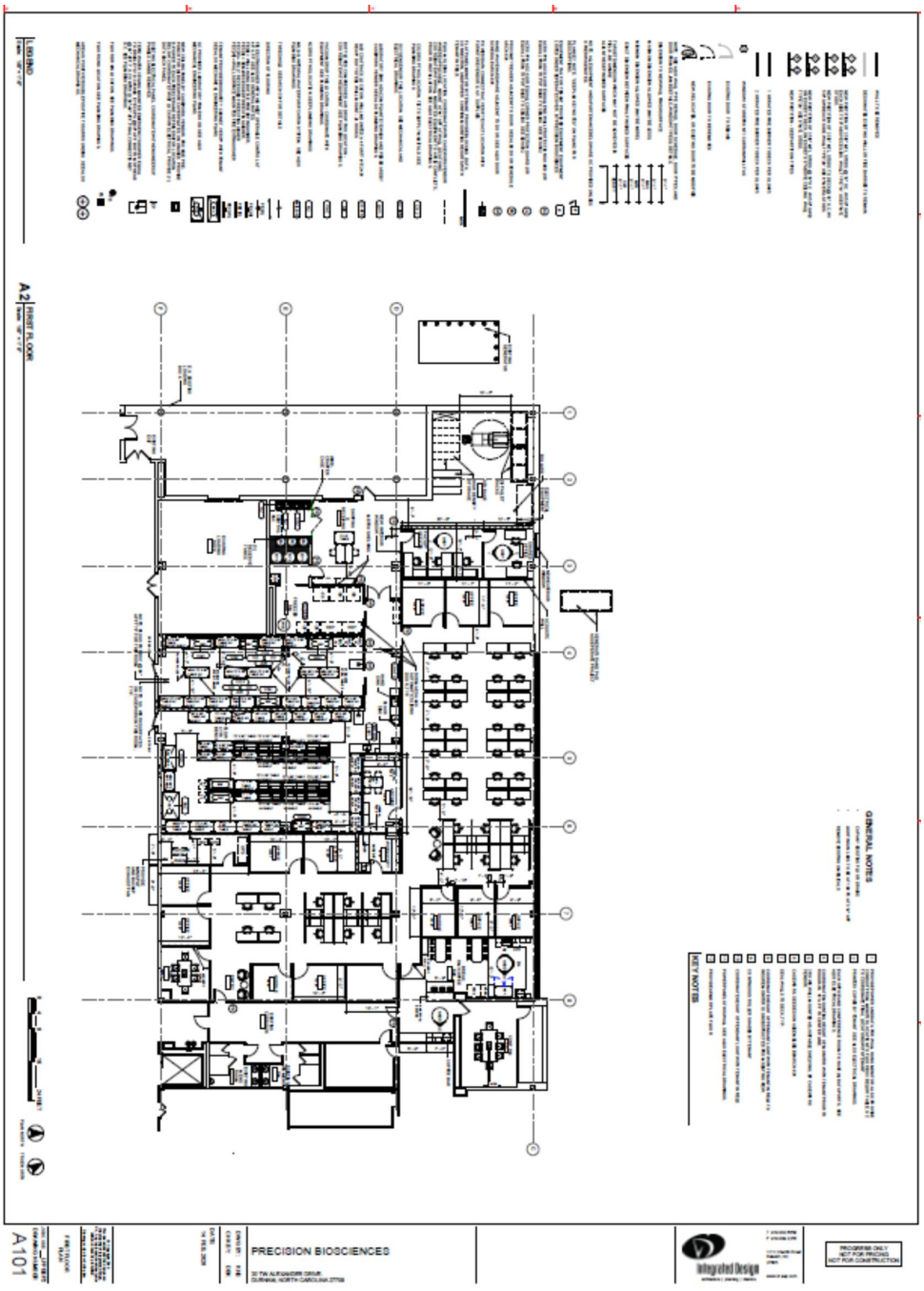
ATTACHMENT 1

FIT PLAN



THIRD AMENDMENT TO LEASE

THIS THIRD AMENDMENT TO LEASE (this "***Amendment***") is made and entered into as of the 15th day of June, 2020 (the "***Effective Date***"), by and between **DURHAM TW ALEXANDER, LLC**, a Delaware limited liability company ("***Landlord***"), and **PRECISION BIOSCIENCES, INC.**, a Delaware corporation (formerly a North Carolina corporation) ("***Tenant***").

STATEMENT OF PURPOSE

WHEREAS, Landlord and Tenant entered into that certain Lease dated October 2, 2018 ("***Initial Lease***") as amended by that certain First Amendment to Lease dated December 23, 2019 (***"First Amendment")*** and as further amended by that certain Second Amendment to Lease dated March 13, 2020 ***("Second Amendment")*** (as amended, the "***Existing Lease***"), for certain premises containing approximately 33,828 rentable square feet on the first (1st) floor (the "***Premises***") located in the building known as Biopoint Innovation Labs located at 20 TW Alexander Drive, Research Triangle Park, North Carolina 27709 (the "***Building***"), as more particularly described in the Lease.

WHEREAS, Landlord and Tenant desire to amend the terms of the Existing Lease: (i) to extend the date by which Tenant must utilize the Tenant Improvements Allowance, as defined in the First Amendment, and (ii) to modify certain other terms of the Existing Lease. For purposes hereof, the Lease as amended by this Amendment is referred to as the "***Lease***." All capitalized terms not otherwise defined herein shall have the meanings set forth in the Existing Lease.

NOW, THEREFORE, in consideration of the statement of purpose, the mutual covenants contained herein and other valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

22. **Recitals**. The recitals shall form a part of this Amendment.

23. **Extension of the Tenant Improvements Allowance Disbursement Deadline**. Due to various delays in the performance of the Tenant Improvements, as defined in the First Amendment, Landlord and Tenant hereby agree that the deadline for Tenant to request disbursements from the Tenant Improvement Allowance under Section 2.2 of Exhibit C of the First Amendment shall be extended until June 30, 2021. For purposes of clarity, Landlord also hereby acknowledges and agrees that Tenant's delayed occupancy of the Premises and construction timeline does not constitute abandonment under Section 19.1.3 of the Lease.

24. **Counterparts/Signatures**. This Amendment may be executed in counterparts. All executed counterparts shall constitute one agreement, and each counterpart shall be deemed an original. The parties hereby acknowledge and agree that electronic signatures, facsimile signatures or signatures transmitted by electronic mail in so-called "pdf" format shall be legal and binding and shall have the same full force and effect as if an original of this Amendment had been delivered. Landlord and Tenant (i) intend to be bound by the signatures (whether original, faxed or electronic) on any document sent by facsimile or electronic mail, (ii) are aware that the other party will rely on such signatures, and (iii) hereby waive any defenses to the enforcement of the terms of this Amendment based on the foregoing forms of signature.

25. **Miscellaneous**. This Amendment shall become effective only upon full execution and delivery of this Amendment by Landlord and Tenant. This Amendment contains the parties' entire agreement regarding the subject matter covered by this Amendment, and supersedes all prior correspondence, negotiations, and agreements, if any, whether oral or written, between the parties concerning such subject matter. There are no contemporaneous oral agreements, and there are no representations or warranties between the parties not contained in this Amendment. This Amendment shall be construed and enforced in accordance with the laws of the State of North Carolina. Except as modified by this Amendment, the terms and provisions of the Lease shall remain in full force and effect, and the Lease, as modified by this Amendment, shall be binding upon and shall inure to the benefit of the parties hereto, their successors and permitted assigns.

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LANDLORD AND TENANT enter into this Amendment as of the Effective Date above.

LANDLORD:

DURHAM TW ALEXANDER, LLC,
A DELAWARE LIMITED LIABILITY COMPANY

By: /s/ Jamison Peschel

Name: Jamison Peschel

Title: Authorized Signatory

TENANT:

PRECISION BIOSCIENCES, INC.,
a Delaware corporation

By: /s/ Sinu Bhandaru

Name: Sinu Bhandaru

Title: VP Operations & IT

PRECISION BIOSCIENCES, INC.
2019 INCENTIVE AWARD PLAN

ARTICLE I.
PURPOSE

The Plan's purpose is to enhance the Company's ability to attract, retain and motivate persons who make (or are expected to make) important contributions to the Company by providing these individuals with equity ownership opportunities. Capitalized terms used in the Plan are defined in Article XI.

ARTICLE II.
ELIGIBILITY

Service Providers are eligible to be granted Awards under the Plan, subject to the limitations described herein.

ARTICLE III.
ADMINISTRATION AND DELEGATION

3.1 Administration. The Plan is administered by the Administrator. The Administrator has authority to determine which Service Providers receive Awards, grant Awards and set Award terms and conditions, subject to the conditions and limitations in the Plan. The Administrator also has the authority to take all actions and make all determinations under the Plan, to interpret the Plan and Award Agreements and to adopt, amend and repeal Plan administrative rules, guidelines and practices as it deems advisable. The Administrator may correct defects and ambiguities, supply omissions and reconcile inconsistencies in the Plan or any Award as it deems necessary or appropriate to administer the Plan and any Awards. The Administrator's determinations under the Plan are in its sole discretion and will be final and binding on all persons having or claiming any interest in the Plan or any Award.

3.2 Appointment of Committees. To the extent Applicable Laws permit, the Board may delegate any or all of its powers under the Plan to one or more Committees or officers of the Company or any of its Subsidiaries. The Board may abolish any Committee or re-vest in itself any previously delegated authority at any time.

ARTICLE IV.
STOCK AVAILABLE FOR AWARDS

4.1 Number of Shares. Subject to adjustment under Article VIII and the terms of this Article IV, Awards may be made under the Plan covering up to the Overall Share Limit. As of the Plan's effective date under Section 10.3, the Company will cease granting awards under the Prior Plans; however, Prior Plan Awards will remain subject to the terms of the applicable Prior Plan. Shares issued under the Plan may consist of authorized but unissued Shares, Shares purchased on the open market or treasury Shares.

4.2 Share Recycling. If all or any part of an Award or Prior Plan Award expires, lapses or is terminated, exchanged for cash, surrendered, repurchased, canceled without having been fully exercised or forfeited, in any case, in a manner that results in the Company acquiring Shares covered by the Award or Prior Plan Award at a price not greater than the price (as adjusted to reflect any Equity Restructuring) paid by the Participant for such Shares or not issuing any Shares covered by the Award or Prior Plan Award, the unused Shares covered by the Award or Prior Plan Award will, as applicable, become or again be available for Award grants under the Plan. Further, Shares delivered (either by actual delivery or attestation) to the Company by a Participant to satisfy the applicable exercise or purchase price of an Award or Prior Plan Award and/or to satisfy any applicable tax withholding obligation (including Shares retained by the Company from the Award or Prior Plan Award being exercised or purchased and/or creating the tax obligation) will, as applicable, become or again be available for Award grants under the Plan. The payment of Dividend Equivalents in cash in conjunction with any outstanding Awards or Prior Plan Awards shall not count against the Overall Share Limit.

4.3 Incentive Stock Option Limitations. Notwithstanding anything to the contrary herein, no more than 5,000,000 Shares may be issued pursuant to the exercise of Incentive Stock Options.

4.4 Substitute Awards. In connection with an entity's merger or consolidation with the Company or the Company's acquisition of an entity's property or stock, the Administrator may grant Awards in substitution for any options or other stock or stock-based awards granted before such merger or consolidation by such entity or its affiliate. Substitute Awards may be granted on such terms as the Administrator deems appropriate, notwithstanding limitations on Awards in the Plan. Substitute Awards will not count against the Overall Share Limit (nor shall Shares subject to a Substitute Award be added to the Shares available for Awards under the Plan as provided above), except that Shares acquired by exercise of substitute Incentive Stock Options will count against the maximum number of Shares that may be issued pursuant to the exercise of Incentive Stock Options under the Plan. Additionally, in the event that a company acquired by the Company or any Subsidiary or with which the Company or any Subsidiary combines has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may be used for Awards under the Plan and shall not reduce the Shares authorized for grant under the Plan (and Shares subject to such Awards shall not be added to the Shares available for Awards under the Plan as provided above); provided that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not Employees or Directors prior to such acquisition or combination.

4.5 Non-Employee Director Compensation. Notwithstanding any provision to the contrary in the Plan, the Administrator may establish compensation for non-employee Directors from time to time, subject to the limitations in the Plan. The Administrator will from time to time determine the terms, conditions and amounts of all such non-employee Director compensation in its discretion and pursuant to the exercise of its business judgment, taking into account such factors, circumstances and considerations as it shall deem relevant from time to time, provided that the sum of any cash compensation, or other compensation, and the value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of Awards granted to a non-employee Director as compensation for services as a non-employee Director during any fiscal year of the Company may not exceed $750,000. The Administrator may make exceptions to this limit for individual non-employee Directors in extraordinary circumstances, as the Administrator may determine in its discretion, provided that the non-employee Director receiving such additional compensation may not participate in the decision to award such compensation or in other contemporaneous compensation decisions involving non-employee Directors.

ARTICLE V.
STOCK OPTIONS AND STOCK APPRECIATION RIGHTS

5.1 General. The Administrator may grant Options or Stock Appreciation Rights to Service Providers subject to the limitations in the Plan, including any limitations in the Plan that apply to Incentive Stock Options. The Administrator will determine the number of Shares covered by each Option and Stock Appreciation Right, the exercise price of each Option and Stock Appreciation Right and the conditions and limitations applicable to the exercise of each Option and Stock Appreciation Right. A Stock Appreciation Right will entitle the Participant (or other person entitled to exercise the Stock Appreciation Right) to receive from the Company upon exercise of the exercisable portion of the Stock Appreciation Right an amount determined by multiplying the excess, if any, of the Fair Market Value of one Share on the date of exercise over the exercise price per Share of the Stock Appreciation Right by the number of Shares with respect to which the Stock Appreciation Right is exercised, subject to any limitations of the Plan or that the Administrator may impose and payable in cash, Shares valued at Fair Market Value or a combination of the two as the Administrator may determine or provide in the Award Agreement.

5.2 Exercise Price. The Administrator will establish each Option's and Stock Appreciation Right's exercise price and specify the exercise price in the Award Agreement. The exercise price will not be less than 100% of the Fair Market Value on the grant date of the Option or Stock Appreciation Right.

5.3 Duration. Each Option or Stock Appreciation Right will be exercisable at such times and as specified in the Award Agreement, provided that the term of an Option or Stock Appreciation Right will not exceed ten years. Notwithstanding the foregoing, if the Participant, prior to the end of the term of an Option or Stock Appreciation Right, violates the non-competition, non-solicitation, confidentiality or other similar restrictive covenant provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company or any of its Subsidiaries, the right of the Participant and the Participant's transferees to exercise any Option or Stock Appreciation Right issued to the Participant shall terminate immediately upon such violation, unless the Company otherwise determines. In addition, if, prior to the end of the term of an Option or Stock Appreciation Right, the Participant is given notice by the Company or any of its Subsidiaries of the Participant's Termination of Service by the Company or any of its Subsidiaries for Cause, and the effective date of such Termination of Service is subsequent to the date of the delivery of such notice, the right of the Participant and the Participant's transferees to exercise any Option or Stock Appreciation Right issued to the Participant shall be suspended from the time of the delivery of such notice until the earlier of (i) such time as it is determined or otherwise agreed that the Participant's service as a Service Provider will not be terminated for Cause as provided in such notice or (ii) the effective date of the Participant's Termination of Service by the Company or any of its Subsidiaries for Cause (in which case the right of the Participant and the Participant's transferees to exercise any Option or Stock Appreciation Right issued to the Participant will terminate immediately upon the effective date of such termination of Service).

5.4 Exercise. Options and Stock Appreciation Rights may be exercised by delivering to the Company a written notice of exercise, in a form the Administrator approves (which may be electronic), signed by the person authorized to exercise the Option or Stock Appreciation Right, together with, as applicable, payment in full (i) as specified in Section 5.5 for the number of Shares for which the Award is exercised and (ii) as specified in Section 9.5 for any applicable taxes. Unless the Administrator otherwise determines, an Option or Stock Appreciation Right may not be exercised for a fraction of a Share.

5.5 Payment Upon Exercise. Subject to Section 10.8, any Company insider trading policy (including blackout periods) and Applicable Laws, the exercise price of an Option must be paid by:

(a) cash, wire transfer of immediately available funds or by check payable to the order of the Company, provided that the Company may limit the use of one of the foregoing payment forms if one or more of the payment forms below is permitted;

(b) if there is a public market for Shares at the time of exercise, unless the Company otherwise determines, (A) delivery (including telephonically to the extent permitted by the Company) of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to

the Company sufficient funds to pay the exercise price, or (B) the Participant's delivery to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price; provided that such amount is paid to the Company at such time as may be required by the Administrator;

(c) to the extent permitted by the Administrator, delivery (either by actual delivery or attestation) of Shares owned by the Participant valued at their Fair Market Value;

(d) to the extent permitted by the Administrator, surrendering Shares then issuable upon the Option's exercise valued at their Fair Market Value on the exercise date;

(e) to the extent permitted by the Administrator, delivery of a promissory note or any other property that the Administrator determines is good and valuable consideration; or

(f) to the extent permitted by the Company, any combination of the above payment forms approved by the Administrator.

ARTICLE VI.
RESTRICTED STOCK; RESTRICTED STOCK UNITS

6.1 General. The Administrator may grant Restricted Stock, or the right to purchase Restricted Stock, to any Service Provider, subject to the Company's right to repurchase all or part of such shares at their issue price or other stated or formula price from the Participant (or to require forfeiture of such shares) if conditions the Administrator specifies in the Award Agreement are not satisfied before the end of the applicable restriction period or periods that the Administrator establishes for such Award. In addition, the Administrator may grant to Service Providers Restricted Stock Units, which may be subject to vesting and forfeiture conditions during the applicable restriction period or periods, as set forth in an Award Agreement. The Administrator will determine and set forth in the Award Agreement the terms and conditions for each Restricted Stock and Restricted Stock Unit Award, subject to the conditions and limitations contained in the Plan.

6.2 Restricted Stock.

(a) Dividends. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such Shares, unless the Administrator provides otherwise in the Award Agreement. In addition, unless the Administrator provides otherwise, if any dividends or distributions are paid in Shares, or consist of a dividend or distribution to holders of Common Stock of property other than an ordinary cash dividend, the Shares or other property will be subject to the same restrictions on transferability and forfeitability as the shares of Restricted Stock with respect to which they were paid.

(b) Stock Certificates. The Company may require that the Participant deposit in escrow with the Company (or its designee) any stock certificates issued in respect of shares of Restricted Stock, together with a stock power endorsed in blank.

6.3 Restricted Stock Units.

(a) Settlement. The Administrator may provide that settlement of Restricted Stock Units will occur upon or as soon as reasonably practicable after the Restricted Stock Units vest or will instead be deferred, on a mandatory basis or at the Participant's election, in a manner intended to comply with Section 409A.

(b) Stockholder Rights. A Participant will have no rights of a stockholder with respect to Shares subject to any Restricted Stock Unit unless and until the Shares are delivered in settlement of the Restricted Stock Unit.

(c) Dividend Equivalents. If the Administrator provides, a grant of Restricted Stock Units may provide a Participant with the right to receive Dividend Equivalents. Dividend Equivalents may be paid currently or credited to an account for the Participant, settled in cash or Shares and subject to the same restrictions on transferability and forfeitability as the Restricted Stock Units with respect to which the Dividend Equivalents are granted and subject to other terms and conditions as set forth in the Award Agreement.

ARTICLE VII.
OTHER STOCK OR CASH BASED AWARDS

Other Stock or Cash Based Awards may be granted to Participants, including Awards entitling Participants to receive Shares to be delivered in the future and including annual or other periodic or long-term cash bonus awards (whether based on specified Performance Criteria or otherwise), in each case subject to any conditions and limitations in the Plan. Such Other Stock or Cash Based Awards will also be available as a payment form in the settlement of other Awards, as standalone payments and as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock or Cash Based Awards may be paid in Shares, cash or other property, as the Administrator determines. Subject to the provisions of the Plan, the Administrator will determine the terms and conditions of each Other Stock or Cash Based Award, including any purchase price, performance goal (which may be based on the Performance Criteria), transfer restrictions, and vesting conditions, which will be set forth in the applicable Award Agreement.

ARTICLE VIII.
ADJUSTMENTS FOR CHANGES IN COMMON STOCK AND CERTAIN OTHER EVENTS

8.1 Equity Restructuring(a) . In connection with any Equity Restructuring, notwithstanding anything to the contrary in this Article VIII, the Administrator will equitably adjust each outstanding Award as it deems appropriate to reflect the Equity Restructuring, which may include adjusting the number and type of securities subject to each outstanding Award and/or the Award's exercise price or grant price (if applicable), granting new Awards to Participants, and making a cash payment to Participants. The adjustments provided under this Section 8.1 will be nondiscretionary and final and binding on the affected Participant and the Company; provided that the Administrator will determine whether an adjustment is equitable.

8.2 Corporate Transactions. In the event of any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, combination, amalgamation, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of all or substantially all of the assets of the Company, or sale or exchange of Common Stock or other securities of the Company, Change in Control, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, other similar corporate transaction or event, other unusual or nonrecurring transaction or event affecting the Company or its financial statements or any change in any Applicable Laws or accounting principles, the Administrator, on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken prior to the occurrence of such transaction or event (except that action to give effect to a change in Applicable Law or accounting principles may be made within a reasonable period of time after such change) and either automatically or upon the Participant's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to (x) prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award granted or issued under the Plan, (y) to facilitate such transaction or event or (z) give effect to such changes in Applicable Laws or accounting principles:

(a) To provide for the cancellation of any such Award in exchange for either an amount of cash or other property with a value equal to the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights under the vested

portion of such Award, as applicable; provided that, if the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights, in any case, is equal to or less than zero, then the Award may be terminated without payment;

(b) To provide that such Award shall vest and, to the extent applicable, be exercisable as to all shares covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Award;

(c) To provide that such Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and/or applicable exercise or purchase price, in all cases, as determined by the Administrator;

(d) To make adjustments in the number and type of shares of Common Stock (or other securities or property) subject to outstanding Awards and/or with respect to which Awards may be granted under the Plan (including, but not limited to, adjustments of the limitations in Article IV hereof on the maximum number and kind of shares which may be issued) and/or in the terms and conditions of (including the grant or exercise price), and the criteria included in, outstanding Awards;

(e) To replace such Award with other rights or property selected by the Administrator; and/or

(f) To provide that the Award will terminate and cannot vest, be exercised or become payable after the applicable event.

8.3 Administrative Stand Still. In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other extraordinary transaction or change affecting the Shares or the share price of Common Stock, including any Equity Restructuring or any securities offering or other similar transaction, for administrative convenience, the Administrator may refuse to permit the exercise of any Award for up to sixty days before or after such transaction.

8.4 General. Except as expressly provided in the Plan or the Administrator's action under the Plan, no Participant will have any rights due to any subdivision or consolidation of Shares of any class, dividend payment, increase or decrease in the number of Shares of any class or dissolution, liquidation, merger, or consolidation of the Company or other corporation. Except as expressly provided with respect to an Equity Restructuring under Section 8.1 above or the Administrator's action under the Plan, no issuance by the Company of Shares of any class, or securities convertible into Shares of any class, will affect, and no adjustment will be made regarding, the number of Shares subject to an Award or the Award's grant or exercise price. The existence of the Plan, any Award Agreements and the Awards granted hereunder will not affect or restrict in any way the Company's right or power to make or authorize (i) any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, (ii) any merger, consolidation dissolution or liquidation of the Company or sale of Company assets or (iii) any sale or issuance of securities, including securities with rights superior to those of the Shares or securities convertible into or exchangeable for Shares. The Administrator may treat Participants and Awards (or portions thereof) differently under this Article VIII.

ARTICLE IX.
GENERAL PROVISIONS APPLICABLE TO AWARDS

9.1 Transferability. Except as the Administrator may determine or provide in an Award Agreement or otherwise for Awards other than Incentive Stock Options, Awards may not be sold, assigned, transferred, pledged or otherwise encumbered, either voluntarily or by operation of law, except by will or the laws of descent and distribution, or, subject to the Administrator's consent, pursuant to a domestic relations order, and, during the life of the Participant, will be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, will include references to a Participant's authorized transferee that the Administrator specifically approves.

9.2 Documentation. Each Award will be evidenced in an Award Agreement, which may be written or electronic, as the Administrator determines. Each Award may contain terms and conditions in addition to those set forth in the Plan.

9.3 Discretion. Except as the Plan otherwise provides, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award to a Participant need not be identical, and the Administrator need not treat Participants or Awards (or portions thereof) uniformly.

9.4 Termination of Status. The Administrator will determine how the disability, death, retirement, authorized leave of absence or any other change or purported change in a Participant's Service Provider status affects an Award and the extent to which, and the period during which, the Participant, the Participant's legal representative, conservator, guardian or Designated Beneficiary may exercise rights under the Award, if applicable.

9.5 Withholding. Each Participant must pay the Company, or make provision satisfactory to the Administrator for payment of, any taxes required by law to be withheld in connection with such Participant's Awards by the date of the event creating the tax liability. The Company may deduct an amount sufficient to satisfy such tax obligations based on the applicable statutory withholding rates (or such other rate as may be determined by the Company after considering any accounting consequences or costs) from any payment of any kind otherwise due to a Participant. Subject to Section 10.8 and any Company insider trading policy (including blackout periods), Participants may satisfy such tax obligations (i) in cash, by wire transfer of immediately available funds, by check made payable to the order of the Company, provided that the Company may limit the use of the foregoing payment forms if one or more of the payment forms below is permitted, (ii) to the extent permitted by the Administrator, in whole or in part by delivery of Shares, including Shares retained from the Award creating the tax obligation, valued at their Fair Market Value, (iii) if there is a public market for Shares at the time the tax obligations are satisfied, unless the Company otherwise determines, (A) delivery (including telephonically to the extent permitted by the Company) of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to

satisfy the tax obligations, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to satisfy the tax withholding; provided that such amount is paid to the Company at such time as may be required by the Administrator, or (iv) to the extent permitted by the Company, any combination of the foregoing payment forms approved by the Administrator. If any tax withholding obligation will be satisfied under clause (ii) of the immediately preceding sentence by the Company's retention of Shares from the Award creating the tax obligation and there is a public market for Shares at the time the tax obligation is satisfied, the Company may elect to instruct any brokerage firm determined acceptable to the Company for such purpose to sell on the applicable Participant's behalf some or all of the Shares retained and to remit the proceeds of the sale to the Company or its designee, and each Participant's acceptance of an Award under the Plan will constitute the Participant's authorization to the Company and instruction and authorization to such brokerage firm to complete the transactions described in this sentence.

9.6 Amendment of Award; Repricing. The Administrator may amend, modify or terminate any outstanding Award, including by substituting another Award of the same or a different type, changing the exercise or settlement date, and converting an Incentive Stock Option to a Non-Qualified Stock Option. The Participant's consent to such action will be required unless (i) the action, taking into account any related action, does not materially and adversely affect the Participant's rights under the Award, or (ii) the change is permitted under Article VIII or pursuant to Section 10.6. Notwithstanding the foregoing or anything in the Plan to the contrary, the Administrator may not except pursuant to Article VIII, without the approval of the stockholders of the Company, reduce the exercise price per share of outstanding Options or Stock Appreciation Rights or cancel outstanding Options or Stock Appreciation Rights in exchange for cash, other Awards or Options or Stock Appreciation Rights with an exercise price per share that is less than the exercise price per share of the original Options or Stock Appreciation Rights.

9.7 Conditions on Delivery of Stock. The Company will not be obligated to deliver any Shares under the Plan or remove restrictions from Shares previously delivered under the Plan until (i) all Award conditions have been met or removed to the Company's satisfaction, (ii) as determined by the Company, all other legal matters regarding the issuance and delivery of such Shares have been satisfied, including any applicable securities laws and stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Administrator deems necessary or appropriate to satisfy any Applicable Laws. The Company's inability to obtain authority from any regulatory body having jurisdiction, which the Administrator determines is necessary to the lawful issuance and sale of any securities, will relieve the Company of any liability for failing to issue or sell such Shares as to which such requisite authority has not been obtained.

9.8 Acceleration. The Administrator may at any time provide that any Award will become immediately vested and fully or partially exercisable, free of some or all restrictions or conditions, or otherwise fully or partially realizable.

9.9 Additional Terms of Incentive Stock Options. The Administrator may grant Incentive Stock Options only to employees of the Company, any of its present or future parent or subsidiary corporations, as defined in Sections 424(e) or (f) of the Code, respectively, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code. If an Incentive Stock Option is granted to a Greater Than 10% Stockholder, the exercise price will not be less than 110% of the Fair Market Value on the Option's grant date, and the term of the Option will not exceed five years. All Incentive Stock Options will be subject to and construed consistently with Section 422 of the Code. By accepting an Incentive Stock Option, the Participant agrees to give prompt notice to the Company of dispositions or other transfers (other than in connection with a Change in Control) of Shares acquired under the Option made within (i) two years from the grant date of the Option or (ii) one year after the transfer of such Shares to the Participant, specifying the date of the disposition or other transfer and the amount the Participant realized, in cash, other property, assumption of indebtedness or other consideration, in such disposition or other transfer. Neither the Company nor the Administrator will be liable to a Participant, or any other party, if an Incentive Stock Option fails or ceases to qualify as an "incentive stock option" under Section 422 of the Code. Any Incentive Stock Option or portion thereof that fails to qualify as an "incentive stock option" under Section 422 of the Code for any reason, including becoming exercisable with respect to Shares having a fair market value exceeding the $100,000 limitation under Treasury Regulation Section 1.422-4, will be a Non-Qualified Stock Option.

ARTICLE X.

MISCELLANEOUS

10.1 No Right to Employment or Other Status. No person will have any claim or right to be granted an Award, and the grant of an Award will not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan or any Award, except as expressly provided in an Award Agreement.

10.2 No Rights as Stockholder; Certificates. Subject to the Award Agreement, no Participant or Designated Beneficiary will have any rights as a stockholder with respect to any Shares to be distributed under an Award until becoming the record holder of such Shares. Notwithstanding any other provision of the Plan, unless the Administrator otherwise determines or Applicable Laws require, the Company will not be required to deliver to any Participant certificates evidencing Shares issued in connection with any Award and instead such Shares may be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator). The Company may place legends on stock certificates issued under the Plan that the Administrator deems necessary or appropriate to comply with Applicable Laws.

10.3 Effective Date and Term of Plan. Unless earlier terminated by the Board, the Plan will become effective on the day prior to the Public Trading Date and will remain in effect until the tenth anniversary of the earlier of (i) the date the Board adopted the Plan or (ii) the date the Company's stockholders approved the Plan, but Awards previously granted may extend beyond that date in accordance with the Plan. If the Plan is not approved by the Company's stockholders, the Plan will not become effective, no Awards will be granted under the Plan and the Prior Plans will continue in full force and effect in accordance with their terms.

10.4 Amendment of Plan. The Administrator may amend, suspend or terminate the Plan at any time; provided that no amendment, other than an increase to the Overall Share Limit, may materially and adversely affect any Award outstanding at the time of such amendment without the affected Participant's consent. No Awards may be granted under the Plan during any suspension period or after Plan termination. Awards outstanding at the time of any Plan suspension or termination will continue to be governed by the Plan and the Award Agreement, as in effect before such suspension or termination. The Board will obtain stockholder approval of any Plan amendment to the extent necessary to comply with Applicable Laws.

10.5 Provisions for Foreign Participants. The Administrator may modify Awards granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to address differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

10.6 Section 409A.

(a) General. The Company intends that all Awards be structured to comply with, or be exempt from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply. Notwithstanding anything in the Plan or any Award Agreement to the contrary, the Administrator may, without a Participant's consent, amend this Plan or Awards, adopt policies and procedures, or take any other actions (including amendments, policies, procedures and retroactive actions) as are necessary or appropriate to preserve the intended tax treatment of Awards, including any such actions intended to (A) exempt this Plan or any Award from Section 409A, or (B) comply with Section 409A, including regulations, guidance, compliance programs and other interpretative authority that may be issued after an Award's grant date. The Company makes no representations or warranties as to an Award's tax treatment under Section 409A or otherwise. The Company will have no obligation under this Section 10.6 or otherwise to avoid the taxes, penalties or interest under Section 409A with respect to any Award and will have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute noncompliant "nonqualified deferred compensation" subject to taxes, penalties or interest under Section 409A.

(b) Separation from Service. If an Award constitutes "nonqualified deferred compensation" under Section 409A, any payment or settlement of such Award upon a termination of a Participant's Service Provider relationship will, to the extent necessary to avoid taxes under Section 409A, be made only upon the Participant's "separation from service" (within the meaning of Section 409A), whether such "separation from service" occurs upon or after the termination of the Participant's Service Provider relationship. For purposes of this Plan or any Award Agreement relating to any such payments or benefits, references to a "termination," "termination of employment" or like terms means a "separation from service."

(c) Payments to Specified Employees. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of "nonqualified deferred compensation" required to be made under an Award to a "specified employee" (as defined under Section 409A and as the Administrator determines) due to his or her "separation from service" will, to the extent necessary to avoid taxes under Section 409A(a)(2)(B)(i) of the Code, be delayed for the six-month period immediately following such "separation from service" (or, if earlier, until the specified employee's death) and will instead be paid (as set forth in the Award Agreement) on the day immediately following such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of "nonqualified deferred compensation" under such Award payable more than six months following the Participant's "separation from service" will be paid at the time or times the payments are otherwise scheduled to be made.

10.7 Limitations on Liability. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, other employee or agent of the Company or any Subsidiary will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan or any Award, and such individual will not be personally liable with respect to the Plan because of any contract or other instrument executed in his or her capacity as an Administrator, director, officer, other employee or agent of the Company or any Subsidiary. The Company will indemnify and hold harmless each director, officer, other employee and agent of the Company or any Subsidiary that has been or will be granted or delegated any duty or power relating to the Plan's administration or interpretation, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Administrator's approval) arising from any act or omission concerning this Plan unless arising from such person's own fraud or bad faith.

10.8 Lock-Up Period. The Company may, at the request of any underwriter representative or otherwise, in connection with registering the offering of any Company securities under the Securities Act, prohibit Participants from, directly or indirectly, selling or otherwise transferring any Shares or other Company securities during a period of up to one hundred eighty days following the effective date of a Company registration statement filed under the Securities Act, or such longer period as determined by the underwriter.

10.9 Data Privacy. As a condition for receiving any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this section by and among the Company and its Subsidiaries and affiliates exclusively for implementing, administering and managing the Participant's participation in the Plan. The Company and its Subsidiaries and affiliates may hold certain personal information about a Participant, including the Participant's name, address and telephone number; birthdate; social security, insurance number or other identification number; salary; nationality; job title(s); any Shares held in the Company or its Subsidiaries and affiliates; and Award details, to implement, manage and administer the Plan and Awards (the "***Data***"). The Company and its Subsidiaries and affiliates may transfer the Data amongst themselves as necessary to implement, administer and manage a Participant's participation in the Plan, and the Company and its Subsidiaries and affiliates may transfer the Data to third parties assisting the Company with Plan implementation, administration and management. These recipients may be located in the Participant's country, or elsewhere, and the Participant's country may have different data privacy laws and protections than the recipients' country. By accepting an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, to implement, administer and manage the Participant's participation in the Plan, including any required Data transfer to a broker or other third party with whom the Company or the Participant may elect to deposit any Shares. The Data related to a Participant will be held only as long as necessary to implement, administer, and manage the Participant's participation in the Plan. A Participant may, at any time, view the Data that the Company holds regarding such Participant, request additional information about the storage and processing of the Data regarding such Participant, recommend any necessary corrections to the Data regarding the Participant or refuse or withdraw the consents in this Section 10.9 in writing, without cost, by contacting the local human resources representative. The Company may cancel Participant's ability to participate in the Plan and, in the Administrator's discretion, the Participant may forfeit any outstanding Awards if the Participant refuses or withdraws the consents in this Section 10.9. For more information on the consequences of refusing or withdrawing consent, Participants may contact their local human resources representative.

10.10 Severability. If any portion of the Plan or any action taken under it is held illegal or invalid for any reason, the illegality or invalidity will not affect the remaining parts of the Plan, and the Plan will be construed and enforced as if the illegal or invalid provisions had been excluded, and the illegal or invalid action will be null and void.

10.11 Governing Documents. If any contradiction occurs between the Plan and any Award Agreement or other written agreement between a Participant and the Company (or any Subsidiary) that the Administrator has approved, the Plan will govern, unless it is expressly specified in such Award Agreement or other written document that a specific provision of the Plan will not apply.

10.12 Governing Law. The Plan and all Awards will be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding any state's choice-of-law principles requiring the application of a jurisdiction's laws other than the State of Delaware.

10.13 Claw-back Provisions. All Awards (including any proceeds, gains or other economic benefit the Participant actually or constructively receives upon receipt or exercise of any Award or the receipt or resale of any Shares underlying the Award) will be subject to any Company claw-back policy, including any claw-back policy adopted to comply with Applicable Laws (including the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules or regulations promulgated thereunder) as set forth in such claw-back policy or the Award Agreement.

10.14 Titles and Headings. The titles and headings in the Plan are for convenience of reference only and, if any conflict, the Plan's text, rather than such titles or headings, will control.

10.15 Conformity to Securities Laws. Participant acknowledges that the Plan is intended to conform to the extent necessary with Applicable Laws. Notwithstanding anything herein to the contrary, the Plan and all Awards will be administered only in conformance with Applicable Laws. To the extent Applicable Laws permit, the Plan and all Award Agreements will be deemed amended as necessary to conform to Applicable Laws.

10.16 Relationship to Other Benefits. No payment under the Plan will be taken into account in determining any benefits under any pension, retirement, savings, profit sharing, group insurance, welfare or other benefit plan of the Company or any Subsidiary except as expressly provided in writing in such other plan or an agreement thereunder.

10.17 Broker-Assisted Sales. In the event of a broker-assisted sale of Shares in connection with the payment of amounts owed by a Participant under or with respect to the Plan or Awards, including amounts to be paid under the final sentence of Section 9.5: (a) any Shares to be sold through the broker-assisted sale will be sold on the day the payment first becomes due, or as soon thereafter as practicable; (b) such Shares may be sold as part of a block trade with other Participants in the Plan in which all participants receive an average price; (c) the applicable Participant will be responsible for all broker's fees and other costs of sale, and by accepting an Award, each Participant agrees to indemnify and hold the Company harmless from any losses, costs, damages, or expenses relating to any such sale; (d) to the extent the Company or its designee receives proceeds of such sale that exceed the amount owed, the Company will pay such excess in cash to the applicable Participant as soon as reasonably practicable; (e) the Company and its designees are under no obligation to arrange for such sale at any particular price; and (f) in the event the proceeds of such sale are insufficient to satisfy the Participant's applicable obligation, the Participant may be required to pay immediately upon demand to the Company or its designee an amount in cash sufficient to satisfy any remaining portion of the Participant's obligation.

ARTICLE XI.

DEFINITIONS

As used in the Plan, the following words and phrases will have the following meanings:

11.1 "***Administrator***" means the Board or a Committee to the extent that the Board's powers or authority under the Plan have been delegated to such Committee.

11.2 "***Applicable Laws***" means the requirements relating to the administration of equity incentive plans under U.S. federal and state securities, tax and other applicable laws, rules and regulations, the applicable rules of any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws and rules of any foreign country or other jurisdiction where Awards are granted.

11.3 "***Award***" means, individually or collectively, a grant under the Plan of Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units or Other Stock or Cash Based Awards.

11.4 "***Award Agreement***" means a written agreement evidencing an Award, which may be electronic, that contains such terms and conditions as the Administrator determines, consistent with and subject to the terms and conditions of the Plan.

11.5 "***Board***" means the Board of Directors of the Company.

11.6 "***Cause***" means (i) if a Participant is a party to a written employment or consulting agreement with the Company or any of its Subsidiaries or an Award Agreement in which the term "cause" is defined (a "***Relevant Agreement***"), "Cause" as defined in the Relevant Agreement, and (ii) if no Relevant Agreement exists, (A) the Administrator's determination that the Participant failed to substantially perform the Participant's duties (other than a failure resulting from the Participant's Disability); (B) the Administrator's determination that the Participant failed to carry out, or comply with any lawful and

reasonable directive of the Board or the Participant's immediate supervisor; (C) the occurrence of any act or omission by the Participant that could reasonably be expected to result in (or has resulted in) the Participant's conviction, plea of no contest, plea of nolo contendere, or imposition of unadjudicated probation for any felony or indictable offense or crime involving moral turpitude; (D) the Participant's unlawful use (including being under the influence) or possession of illegal drugs on the premises of the Company or any of its Subsidiaries or while performing the Participant's duties and responsibilities for the Company or any of its Subsidiaries; or (E) the Participant's commission of an act of fraud, embezzlement, misappropriation, misconduct, or breach of fiduciary duty against the Company or any of its Subsidiaries.

11.7 "***Change in Control***" means and includes each of the following:

(a) A transaction or series of transactions (other than an offering of Common Stock to the general public through a registration statement filed with the Securities and Exchange Commission or a transaction or series of transactions that meets the requirements of clauses (i) and (ii) of subsection (c) below) whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than the Company, any of its Subsidiaries, an employee benefit plan maintained by the Company or any of its Subsidiaries or a "person" that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new Director(s) (other than a Director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in subsections (a) or (c)) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the Directors then still in office who either were Directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company's assets or otherwise succeeds to the business of the Company (the Company or such person, the "***Successor Entity***")) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction, and

(ii) after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; provided, however, that no person or group shall be treated for purposes of this clause (ii) as beneficially owning 50% or more of the combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction.

Notwithstanding the foregoing, if a Change in Control constitutes a payment event with respect to any Award (or portion of any Award) that provides for the deferral of compensation that is subject to Section 409A, to the extent required to avoid the imposition of additional taxes under Section 409A, the

transaction or event described in subsection (a), (b) or (c) with respect to such Award (or portion thereof) shall only constitute a Change in Control for purposes of the payment timing of such Award if such transaction also constitutes a "change in control event," as defined in Treasury Regulation Section 1.409A-3(i)(5).

The Administrator shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control has occurred pursuant to the above definition, the date of the occurrence of such Change in Control and any incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a "change in control event" as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

11.8 "***Code***" means the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

11.9 "***Committee***" means one or more committees or subcommittees of the Board, which may include one or more Company directors or executive officers, to the extent Applicable Laws permit. To the extent required to comply with the provisions of Rule 16b-3, it is intended that each member of the Committee will be, at the time the Committee takes any action with respect to an Award that is subject to Rule 16b-3, a "non-employee director" within the meaning of Rule 16b-3; however, a Committee member's failure to qualify as a "non-employee director" within the meaning of Rule 16b-3 will not invalidate any Award granted by the Committee that is otherwise validly granted under the Plan.

11.10 "***Common Stock***" means the common stock of the Company.

11.11 "***Company***" means Precision BioSciences, Inc., a Delaware corporation, or any successor.

11.12 "***Consultant***" means any person, including any adviser, engaged by the Company or its parent or Subsidiary to render services to such entity if the consultant or adviser: (i) renders bona fide services to the Company; (ii) renders services not in connection with the offer or sale of securities in a capital-raising transaction and does not directly or indirectly promote or maintain a market for the Company's securities; and (iii) is a natural person.

11.13 "***Designated Beneficiary***" means the beneficiary or beneficiaries the Participant designates, in a manner the Administrator determines, to receive amounts due or exercise the Participant's rights if the Participant dies or becomes incapacitated. Without a Participant's effective designation, "Designated Beneficiary" will mean the Participant's estate.

11.14 "***Director***" means a Board member.

11.15 "***Disability***" means a permanent and total disability under Section 22(e)(3) of the Code, as amended.

11.16 "***Dividend Equivalents***" means a right granted to a Participant under the Plan to receive the equivalent value (in cash or Shares) of dividends paid on Shares.

11.17 "***Employee***" means any employee of the Company or its Subsidiaries.

11.18 "***Equity Restructuring***" means a nonreciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off or recapitalization through a large, nonrecurring cash dividend, that affects the number or kind of Shares (or other Company securities) or the share price of

Common Stock (or other Company securities) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

11.19 "***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

11.20 "***Fair Market Value***" means, as of any date, the value of Common Stock determined as follows: (i) if the Common Stock is listed on any established stock exchange, its Fair Market Value will be the closing sales price for such Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the last day preceding such date during which a sale occurred, as reported in The Wall Street Journal or another source the Administrator deems reliable; (ii) if the Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the closing sales price on such date, or if no sales occurred on such date, then on the last date preceding such date during which a sale occurred, as reported in The Wall Street Journal or another source the Administrator deems reliable; or (iii) without an established market for the Common Stock, the Administrator will determine the Fair Market Value in its discretion. Notwithstanding the foregoing, with respect to any Award granted on the pricing date of the Company's initial public offering, the Fair Market Value shall mean the initial public offering price of a Share as set forth in the Company's final prospectus relating to its initial public offering filed with the Securities and Exchange Commission.

11.21 "***Greater Than 10% Stockholder***" means an individual then owning (within the meaning of Section 424(d) of the Code) more than 10% of the total combined voting power of all classes of stock of the Company or its parent or subsidiary corporation, as defined in Section 424(e) and (f) of the Code, respectively.

11.22 "***Incentive Stock Option***" means an Option intended to qualify as an "incentive stock option" as defined in Section 422 of the Code.

11.23 "***Non-Qualified Stock Option***" means an Option not intended or not qualifying as an Incentive Stock Option.

11.24 "***Option***" means an option to purchase Shares.

11.25 "***Other Stock or Cash Based Awards***" means cash awards, awards of Shares, and other awards valued wholly or partially by referring to, or are otherwise based on, Shares or other property.

11.26 "***Overall Share Limit***" means the sum of (i) 4,750,000 Shares; (ii) any shares of Common Stock which are subject to Prior Plan Awards which become available for issuance under the Plan pursuant to Article IV and (iii) an annual increase on the first day of each calendar year beginning January 1, 2020 and ending on and including January 1, 2029, equal to the lesser of (A) 4% of the aggregate number of shares of Common Stock outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of Shares as is determined by the Board.

11.27 "***Participant***" means a Service Provider who has been granted an Award.

11.28 "***Performance Criteria***" mean the criteria (and adjustments) that the Administrator may select for an Award to establish performance goals for a performance period, which may include the following: net earnings or losses (either before or after one or more of interest, taxes, depreciation, amortization, and non-cash equity-based compensation expense); gross or net sales or revenue or sales or revenue growth; net income (either before or after taxes) or adjusted net income; profits (including but not limited to gross profits, net profits, profit growth, net operation profit or economic profit), profit return ratios or operating margin; budget or operating earnings (either before or after taxes or before or after

allocation of corporate overhead and bonus); cash flow (including operating cash flow and free cash flow or cash flow return on capital); return on assets; return on capital or invested capital; cost of capital; return on stockholders' equity; total stockholder return; return on sales; costs, reductions in costs and cost control measures; expenses; working capital; earnings or loss per share; adjusted earnings or loss per share; price per share or dividends per share (or appreciation in or maintenance of such price or dividends); regulatory achievements or compliance; implementation, completion or attainment of objectives relating to research, development, regulatory, commercial, or strategic milestones or developments; market share; economic value or economic value added models; division, group or corporate financial goals; customer satisfaction/growth; customer service; employee satisfaction; recruitment and maintenance of personnel; human resources management; supervision of litigation and other legal matters; strategic partnerships and transactions; financial ratios (including those measuring liquidity, activity, profitability or leverage); debt levels or reductions; sales-related goals; financing and other capital raising transactions; cash on hand; acquisition activity; investment sourcing activity; and marketing initiatives, any of which may be measured in absolute terms or as compared to any incremental increase or decrease. Such performance goals also may be based solely by reference to the Company's performance or the performance of a Subsidiary, division, business segment or business unit of the Company or a Subsidiary, or based upon performance relative to performance of other companies or upon comparisons of any of the indicators of performance relative to performance of other companies. The Committee may provide for exclusion of the impact of an event or occurrence which the Committee determines should appropriately be excluded, including (a) restructurings, discontinued operations, extraordinary items, and other unusual, infrequently occurring or non-recurring charges or events, (b) asset write-downs, (c) litigation or claim judgments or settlements, (d) acquisitions or divestitures, (e) reorganization or change in the corporate structure or capital structure of the Company, (f) an event either not directly related to the operations of the Company, Subsidiary, division, business segment or business unit or not within the reasonable control of management, (g) foreign exchange gains and losses, (h) a change in the fiscal year of the Company, (i) the refinancing or repurchase of bank loans or debt securities, (j) unbudgeted capital expenditures, (k) the issuance or repurchase of equity securities and other changes in the number of outstanding shares, (l) conversion of some or all of convertible securities to Common Stock, (m) any business interruption event (n) the cumulative effects of tax or accounting changes in accordance with U.S. generally accepted accounting principles, or (o) the effect of changes in other laws or regulatory rules affecting reported results.

11.29 "***Plan***" means this 2019 Incentive Award Plan.

11.30 "***Prior Plans***" means, collectively, the Company's 2015 Stock Incentive Plan, 2006 Stock Incentive Plan, and any prior equity incentive plans of the Company or its predecessor.

11.31 "***Prior Plan Award***" means an award outstanding under the Prior Plans as of the Plan's effective date in Section 10.3.

11.32 "***Public Trading Date***" means the first date upon which the Common Stock is listed (or approved for listing) upon notice of issuance on any securities exchange or designated (or approved for designation) upon notice of issuance as a national market security on an interdealer quotation system, or, if earlier, the date on which the Company becomes a "publicly held corporation" for purposes of Treasury Regulation Section 1.162-27(c)(1).

11.33 "***Restricted Stock***" means Shares awarded to a Participant under Article VI subject to certain vesting conditions and other restrictions.

11.34 "***Restricted Stock Unit***" means an unfunded, unsecured right to receive, on the applicable settlement date, one Share or an amount in cash or other consideration determined by the Administrator to be of equal value as of such settlement date, subject to certain vesting conditions and other restrictions.

11.35 "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act.

11.36 "***Section 409A***" means Section 409A of the Code and all regulations, guidance, compliance programs and other interpretative authority thereunder.

11.37 "***Securities Act***" means the Securities Act of 1933, as amended.

11.38 "***Service Provider***" means an Employee, Consultant or Director.

11.39 "***Shares***" means shares of Common Stock.

11.40 "***Stock Appreciation Right***" means a stock appreciation right granted under Article V.

11.41 "***Subsidiary***" means any entity (other than the Company), whether domestic or foreign, in an unbroken chain of entities beginning with the Company if each of the entities other than the last entity in the unbroken chain beneficially owns, at the time of the determination, securities or interests representing at least 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

11.42 "***Substitute Awards***" shall mean Awards granted or Shares issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, in each case by a company acquired by the Company or any Subsidiary or with which the Company or any Subsidiary combines.

11.43 "***Termination of Service***" means the date the Participant ceases to be a Service Provider.

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PRECISION BIOSCIENCES, INC.
2019 INCENTIVE AWARD PLAN

STOCK OPTION GRANT NOTICE

Capitalized terms not specifically defined in this Stock Option Grant Notice (the "***Grant Notice***") have the meanings given to them in the 2019 Incentive Award Plan (as amended from time to time, the "***Plan***") of Precision BioSciences, Inc. (the "***Company***").

The Company has granted to the participant listed below ("***Participant***") the stock option described in this Grant Notice (the "***Option***"), subject to the terms and conditions of the Plan and the Stock Option Agreement attached as **Exhibit A** (the "***Agreement***"), both of which are incorporated into this Grant Notice by reference.

Participant:	
Grant Date:	
Exercise Price per Share:	
Shares Subject to the Option:	
Final Expiration Date:	
Vesting Commencement Date:	
Vesting Schedule:	[To be specified in individual award agreements]
Type of Option	[Incentive Stock Option/Non-Qualified Stock Option]

By Participant's signature below, Participant agrees to be bound by the terms of this Grant Notice, the Plan and the Agreement. Participant has reviewed the Plan, this Grant Notice and the Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, this Grant Notice and the Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement.

PRECISION BIOSCIENCES, INC.	**PARTICIPANT**
By: _____	_____
Name: _____	[Participant Name]
Title: _____	

STOCK OPTION AGREEMENT

Capitalized terms not specifically defined in this Agreement have the meanings specified in the Grant Notice or, if not defined in the Grant Notice, in the Plan.

ARTICLE I.
GENERAL

1.1 Grant of Option. The Company has granted to Participant the Option effective as of the grant date set forth in the Grant Notice (the "***Grant Date***").

1.2 Incorporation of Terms of Plan. The Option is subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.

ARTICLE II.
PERIOD OF EXERCISABILITY

2.1 Commencement of Exercisability. The Option will vest and become exercisable according to the vesting schedule in the Grant Notice (the "***Vesting Schedule***") except that any fraction of a Share as to which the Option would be vested or exercisable will be accumulated and will vest and become exercisable only when a whole Share has accumulated. Notwithstanding anything in the Grant Notice, the Plan or this Agreement to the contrary, unless the Administrator otherwise determines, the Option will immediately expire and be forfeited as to any portion that is not vested and exercisable as of Participant's Termination of Service for any reason.

2.2 Duration of Exercisability. The Vesting Schedule is cumulative. Any portion of the Option which vests and becomes exercisable will remain vested and exercisable until the Option expires. The Option will be forfeited immediately upon its expiration.

2.3 Expiration of Option. The Option may not be exercised to any extent by anyone after, and will expire on, the first of the following to occur:

(a) The final expiration date in the Grant Notice;

(b) Except as the Administrator may otherwise approve, the expiration of three (3) months from the date of Participant's Termination of Service, unless Participant's Termination of Service is for Cause or by reason of Participant's death or Disability;

(c) Except as the Administrator may otherwise approve, the expiration of one (1) year from the date of Participant's Termination of Service by reason of Participant's death or Disability; and

(d) Except as the Administrator may otherwise approve, Participant's Termination of Service for Cause.

ARTICLE III.
EXERCISE OF OPTION

3.1 Person Eligible to Exercise. During Participant's lifetime, only Participant may exercise the Option. After Participant's death, any exercisable portion of the Option may, prior to the time the Option expires, be exercised by Participant's Designated Beneficiary as provided in the Plan.

3.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised, in whole or in part, according to the procedures in the Plan at any time prior to the time the Option or portion thereof expires, except that the Option may only be exercised for whole Shares.

3.3 Tax Withholding.

(a) The Company has the right and option, but not the obligation, to treat Participant's failure to provide timely payment in accordance with the Plan of any withholding tax arising in connection with the Option as Participant's election to satisfy all or any portion of the withholding tax by requesting the Company retain Shares otherwise issuable under the Option.

(b) Participant acknowledges that Participant is ultimately liable and responsible for all taxes owed in connection with the Option, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the Option. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or exercise of the Option or the subsequent sale of

Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure the Option to reduce or eliminate Participant's tax liability.

ARTICLE IV.
OTHER PROVISIONS

4.1 Adjustments. Participant acknowledges that the Option is subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan.

4.2 Notices. Any notice to be given under the terms of this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Secretary at the Company's principal office or the Secretary's then-current email address or facsimile number. Any notice to be given under the terms of this Agreement to Participant must be in writing and addressed to Participant (or, if Participant is then deceased, to the person entitled to exercise the Option) at Participant's last known mailing address, email address or facsimile number in the Company's personnel files. By a notice given pursuant to this Section, either party may designate a different address for notices to be given to that party. Any notice will be deemed duly given when actually received, when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, when delivered by a nationally recognized express shipping company or upon receipt of a facsimile transmission confirmation.

4.3 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.4 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

4.5 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement will inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

4.6 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the Grant Notice, this Agreement and the Option will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

4.7 Entire Agreement. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

4.8 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

4.9 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Option, and rights no greater than the right to receive the Shares as a general unsecured creditor with respect to the Option, as and when exercised pursuant to the terms hereof.

4.10 Not a Contract of Employment. Nothing in the Plan, the Grant Notice or this Agreement confers upon Participant any right to continue in the employ or service of the Company or any Subsidiary or interferes with or restricts in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

4.11 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

4.12 Incentive Stock Options. If the Option is designated as an Incentive Stock Option:

(a) Participant acknowledges that to the extent the aggregate fair market value of shares (determined as of the time the option with respect to the shares is granted) with

respect to which stock options intended to qualify as "incentive stock options" under Section 422 of the Code, including the Option, are exercisable for the first time by Participant during any calendar year exceeds $100,000 or if for any other reason such stock options do not qualify or cease to qualify for treatment as "incentive stock options" under Section 422 of the Code, such stock options (including the Option) will be treated as non-qualified stock options. Participant further acknowledges that the rule set forth in the preceding sentence will be applied by taking the Option and other stock options into account in the order in which they were granted, as determined under Section 422(d) of the Code. Participant acknowledges that amendments or modifications made to the Option pursuant to the Plan that would cause the Option to become a Non-Qualified Stock Option will not materially or adversely affect Participant's rights under the Option, and that any such amendment or modification shall not require Participant's consent. Participant also acknowledges that if the Option is exercised more than three (3) months after Participant's Termination of Service as an Employee, other than by reason of death or disability, the Option will be taxed as a Non-Qualified Stock Option.

(b) Participant will give prompt written notice to the Company of any disposition or other transfer of any Shares acquired under this Agreement if such disposition or other transfer is made (a) within two (2) years from the Grant Date or (b) within one (1) year after the transfer of such Shares to Participant. Such notice will specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by Participant in such disposition or other transfer.

* * * * *

PRECISION BIOSCIENCES, INC.
2019 INCENTIVE AWARD PLAN

RESTRICTED STOCK GRANT NOTICE

Capitalized terms not specifically defined in this Restricted Stock Grant Notice (the "***Grant Notice***") have the meanings given to them in the 2019 Incentive Award Plan (as amended from time to time, the "***Plan***") of Precision BioSciences, Inc. (the "***Company***").

The Company has granted to the participant listed below ("***Participant***") the shares of Restricted Stock described in this Grant Notice (the "***Restricted Shares***"), subject to the terms and conditions of the Plan and the Restricted Stock Agreement attached as **Exhibit A** (the "***Agreement***"), both of which are incorporated into this Grant Notice by reference.

Participant:

Grant Date:

Number of Restricted Shares:

Vesting Commencement Date:

Vesting Schedule: [To be specified in individual award agreements]

By Participant's signature below, Participant agrees to be bound by the terms of this Grant Notice, the Plan and the Agreement. Participant has reviewed the Plan, this Grant Notice and the Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, this Grant Notice and the Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement.

PRECISION BIOSCIENCES, INC.	**PARTICIPANT**
By: _____	_____
Name: _____	[Participant Name]
Title: _____	

RESTRICTED STOCK AGREEMENT

Capitalized terms not specifically defined in this Agreement have the meanings specified in the Grant Notice or, if not defined in the Grant Notice, in the Plan.

ARTICLE I.
GENERAL

1.1 Issuance of Restricted Shares. The Company will issue the Restricted Shares to the Participant effective as of the grant date set forth in the Grant Notice and will cause (a) a stock certificate or certificates representing the Restricted Shares to be registered in Participant's name or (b) the Restricted Shares to be held in book-entry form. If a stock certificate is issued, the certificate will be delivered to, and held in accordance with this Agreement by, the Company or its authorized representatives and will bear the restrictive legends required by this Agreement. If the Restricted Shares are held in book-entry form, then the book-entry will indicate that the Restricted Shares are subject to the restrictions of this Agreement.

1.2 Incorporation of Terms of Plan. The Restricted Shares are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.

ARTICLE II.
VESTING, FORFEITURE AND ESCROW

2.1 Vesting. The Restricted Shares will become vested Shares (the "***Vested Shares***") according to the vesting schedule in the Grant Notice except that any fraction of a Share that would otherwise become a Vested Share will be accumulated and will become a Vested Share only when a whole Vested Share has accumulated.

2.2 Forfeiture. In the event of Participant's Termination of Service for any reason, Participant will immediately and automatically forfeit to the Company any Shares that are not Vested Shares (the "***Unvested Shares***") at the time of Participant's Termination of Service, except as otherwise determined by the Administrator or provided in a binding written agreement between Participant and the Company. Upon forfeiture of Unvested Shares, the Company will become the legal and beneficial owner of the Unvested Shares and all related interests and Participant will have no further rights with respect to the Unvested Shares.

2.3 Escrow.

(a) Unvested Shares will be held by the Company or its authorized representatives until (i) they are forfeited, (ii) they become Vested Shares or (iii) this Agreement is no longer in effect. By accepting this Award, Participant appoints the Company and its authorized representatives as Participant's attorney(s)-in-fact to take all actions necessary to effect any transfer of forfeited Unvested Shares (and Retained Distributions (as defined below), if any, paid on such forfeited Unvested Shares) to the Company as may be required pursuant to the Plan or this Agreement and to execute such representations or other documents or assurances as the Company or such representatives deem necessary or advisable in connection with any such transfer. The Company, or its authorized representative, will not be liable for any good faith act or omission with respect to the holding in escrow or transfer of the Restricted Shares.

(b) All cash dividends and other distributions made or declared with respect to Unvested Shares ("***Retained Distributions***") will be held by the Company until the time (if ever) when the Unvested Shares to which such Retained Distributions relate become Vested Shares. The Company will establish a separate Retained Distribution bookkeeping account ("***Retained Distribution Account***") for each Unvested Share with respect to which Retained Distributions have been made or declared in cash and credit the Retained Distribution Account (without interest) on the date of payment with the amount of such cash made or declared with respect to the Unvested Share. Retained Distributions (including any Retained Distribution Account balance) will immediately and automatically be forfeited upon forfeiture of the Unvested Share with respect to which the Retained Distributions were paid or declared.

(c) As soon as reasonably practicable following the date on which an Unvested Share becomes a Vested Share, the Company will (i) cause the certificate (or a new certificate without the legend required by this Agreement, if Participant so requests) representing the Share to be delivered to Participant or, if the Share is held in book-entry form, cause the notations indicating the Share is subject to the restrictions of this Agreement to be removed and (ii) pay to Participant the Retained Distributions relating to the Share.

2.4 Rights as Stockholder. Except as otherwise provided in this Agreement or the Plan, upon issuance of the Restricted Shares by the Company, Participant will have all the rights of a stockholder with respect to the Restricted Shares, including the right to vote the Restricted Shares and to receive dividends or other distributions paid or made with respect to the Restricted Shares.

ARTICLE III.
TAXATION AND TAX WITHHOLDING

3.1 Representation. Participant represents to the Company that Participant has reviewed with Participant's own tax advisors the tax consequences of the Restricted Shares and the transactions contemplated by the Grant Notice and this Agreement. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents.

3.2 Section 83(b) Election. If Participant makes an election under Section 83(b) of the Code with respect to the Restricted Shares, Participant will deliver a copy of the election to the Company promptly after filing the election with the Internal Revenue Service.

3.3 Tax Withholding.

(a) The Company has the right and option, but not the obligation, to treat Participant's failure to provide timely payment in accordance with the Plan of any withholding tax arising in connection with the Restricted Shares as Participant's election to satisfy all or any portion of the withholding tax by requesting the Company retain Shares otherwise deliverable under the Award.

(b) Participant acknowledges that Participant is ultimately liable and responsible for all taxes owed in connection with the Restricted Shares, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the Restricted Shares. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or payment of the Restricted Shares or the subsequent sale of the Restricted Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure this Award to reduce or eliminate Participant's tax liability.

ARTICLE IV.
RESTRICTIVE LEGENDS AND TRANSFERABILITY

4.1 Legends. Any certificate representing a Restricted Share will bear the following legend until the Restricted Share becomes a Vested Share:

> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO FORFEITURE IN FAVOR OF THE COMPANY AND MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF A RESTRICTED STOCK AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

4.2 Transferability. The Restricted Shares and any Retained Distributions are subject to the restrictions on transfer in the Plan and may not be sold, assigned or transferred in any manner unless and until they become Vested Shares. Any attempted transfer or disposition of Unvested Shares or related Retained Distributions prior to the time the Unvested Shares become Vested Shares will be null and void. The Company will not be required to (a) transfer on its books any Restricted Share that has been sold or otherwise transferred in violation of this Agreement or (b) treat as owner of such Restricted Share or accord the right to vote or pay dividends to any purchaser or other transferee to whom such Restricted Share has been so transferred. The Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, or make appropriate notations to the same effect in its records.

ARTICLE V.

OTHER PROVISIONS

5.1 Adjustments. Participant acknowledges that the Restricted Shares are subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan.

5.2 Notices. Any notice to be given under the terms of this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Secretary at the Company's principal office or the Secretary's then-current email address or facsimile number. Any notice to be given under the terms of this Agreement to Participant must be in writing and addressed to Participant at Participant's last known mailing address, email address or facsimile number in the Company's personnel files. By a notice given pursuant to this Section, either party may designate a different address for notices to be given to that party. Any notice will be deemed duly given when actually received, when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, when delivered by a nationally recognized express shipping company or upon receipt of a facsimile transmission confirmation.

5.3 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

5.4 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

5.5 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement will inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in this Agreement or the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

5.6 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the Grant Notice, this Agreement and the Restricted Shares will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

5.7 Entire Agreement. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

5.8 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

5.9 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Award.

5.10 Not a Contract of Employment. Nothing in the Plan, the Grant Notice or this Agreement confers upon Participant any right to continue in the employ or service of the Company or any Subsidiary or interferes with or restricts in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

5.11 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

* * * * *

PRECISION BIOSCIENCES, INC.
2019 INCENTIVE AWARD PLAN

RESTRICTED STOCK UNIT GRANT NOTICE

Capitalized terms not specifically defined in this Restricted Stock Unit Grant Notice (the "***Grant Notice***") have the meanings given to them in the 2019 Incentive Award Plan (as amended from time to time, the "***Plan***") of Precision BioSciences, Inc. (the "***Company***").

The Company has granted to the participant listed below ("***Participant***") the Restricted Stock Units described in this Grant Notice (the "***RSUs***"), subject to the terms and conditions of the Plan and the Restricted Stock Unit Agreement attached as **Exhibit A** (the "***Agreement***"), both of which are incorporated into this Grant Notice by reference.

Participant:

Grant Date:

Number of RSUs:

Vesting Commencement Date:

Vesting Schedule: [To be specified in individual award agreements]

By Participant's signature below, Participant agrees to be bound by the terms of this Grant Notice, the Plan and the Agreement. Participant has reviewed the Plan, this Grant Notice and the Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, this Grant Notice and the Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement.

PRECISION BIOSCIENCES, INC.	**PARTICIPANT**
By: _____	_____
Name: _____	[Participant Name]
Title: _____	

RESTRICTED STOCK UNIT AGREEMENT

Capitalized terms not specifically defined in this Agreement have the meanings specified in the Grant Notice or, if not defined in the Grant Notice, in the Plan.

ARTICLE I.
GENERAL

1.1 Award of RSUs and Dividend Equivalents.

(a) The Company has granted the RSUs to Participant effective as of the grant date set forth in the Grant Notice (the "***Grant Date***"). Each RSU represents the right to receive one Share or, at the option of the Company, an amount of cash, in either case, as set forth in this Agreement. Participant will have no right to the distribution of any Shares or payment of any cash until the time (if ever) the RSUs have vested.

(b) The Company hereby grants to Participant, with respect to each RSU, a Dividend Equivalent for ordinary cash dividends paid to substantially all holders of outstanding Shares with a record date after the Grant Date and prior to the date the applicable RSU is settled, forfeited or otherwise expires. Each Dividend Equivalent entitles Participant to receive the equivalent value of any such ordinary cash dividends paid on a single Share. The Company will establish a separate Dividend Equivalent bookkeeping account (a "***Dividend Equivalent Account***") for each Dividend Equivalent and credit the Dividend Equivalent Account (without interest) on the applicable dividend payment date with the amount of any such cash paid.

1.2 Incorporation of Terms of Plan. The RSUs are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.

1.3 Unsecured Promise. The RSUs and Dividend Equivalents will at all times prior to settlement represent an unsecured Company obligation payable only from the Company's general assets.

ARTICLE II.
VESTING; FORFEITURE AND SETTLEMENT

2.1 Vesting; Forfeiture. The RSUs will vest according to the vesting schedule in the Grant Notice except that any fraction of an RSU that would otherwise be vested will be accumulated and will vest only when a whole RSU has accumulated. In the event of Participant's Termination of Service for any reason, all unvested RSUs will immediately and automatically be cancelled and forfeited, except as otherwise determined by the Administrator or provided in a binding written agreement between Participant and the Company. Dividend Equivalents (including any Dividend Equivalent Account balance) will vest or be forfeited, as applicable, upon the vesting or forfeiture of the RSU with respect to which the Dividend Equivalent (including the Dividend Equivalent Account) relates.

2.2 Settlement.

(a) RSUs and Dividend Equivalents (including any Dividend Equivalent Account balance) will be paid in Shares or cash at the Company's option as soon as administratively practicable after the vesting of the applicable RSU, but in no event more than sixty (60) days after the RSU's vesting date. Notwithstanding the foregoing, the Company may delay any payment under this Agreement that the Company reasonably determines would violate Applicable Law until the earliest date the Company reasonably determines the making of the payment will not cause such a violation (in accordance with Treasury Regulation Section 1.409A-2(b)(7)(ii)), provided the Company reasonably believes the delay will not result in the imposition of excise taxes under Section 409A.

(b) If an RSU is paid in cash, the amount of cash paid with respect to the RSU will equal the Fair Market Value of a Share on the day immediately preceding the payment date. If a Dividend Equivalent is paid in Shares, the number of Shares paid with respect to the Dividend Equivalent will equal

the quotient, rounded down to the nearest whole Share, of the Dividend Equivalent Account balance divided by the Fair Market Value of a Share on the day immediately preceding the payment date.

ARTICLE III.
TAXATION AND TAX WITHHOLDING

3.1 Representation. Participant represents to the Company that Participant has reviewed with Participant's own tax advisors the tax consequences of this Award and the transactions contemplated by the Grant Notice and this Agreement. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents.

3.2 Tax Withholding.

(a) The Company has the right and option, but not the obligation, to treat Participant's failure to provide timely payment in accordance with the Plan of any withholding tax arising in connection with the RSUs or Dividend Equivalents as Participant's election to satisfy all or any portion of the withholding tax by requesting the Company retain Shares otherwise issuable under the Award.

(b) Participant acknowledges that Participant is ultimately liable and responsible for all taxes owed in connection with the RSUs and the Dividend Equivalents, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the RSUs or Dividend Equivalents. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or payment of the RSUs or the Dividend Equivalents or the subsequent sale of Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure the RSUs or Dividend Equivalents to reduce or eliminate Participant's tax liability.

ARTICLE IV.
OTHER PROVISIONS

4.1 Adjustments. Participant acknowledges that the RSUs, the Shares subject to the RSUs and the Dividend Equivalents are subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan.

4.2 Notices. Any notice to be given under the terms of this Agreement to the Company must be in writing and addressed to the Company in care of the Company's Secretary at the Company's principal office or the Secretary's then-current email address or facsimile number. Any notice to be given under the terms of this Agreement to Participant must be in writing and addressed to Participant at Participant's last known mailing address, email address or facsimile number in the Company's personnel files. By a notice given pursuant to this Section, either party may designate a different address for notices to be given to that party. Any notice will be deemed duly given when actually received, when sent by email, when sent by certified mail (return receipt requested) and deposited with postage prepaid in a post office or branch post office regularly maintained by the United States Postal Service, when delivered by a nationally recognized express shipping company or upon receipt of a facsimile transmission confirmation.

4.3 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.4 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

4.5 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement will inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

4.6 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the Grant Notice, this Agreement, the RSUs and the Dividend Equivalents will be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent Applicable Laws permit, this Agreement will be deemed amended as necessary to conform to such applicable exemptive rule.

4.7 Entire Agreement. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

4.8 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

4.9 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and may not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the RSUs and Dividend Equivalents, and rights no greater than the right to receive cash or the Shares as a general unsecured creditor with respect to the RSUs and Dividend Equivalents, as and when settled pursuant to the terms of this Agreement.

4.10 Not a Contract of Employment. Nothing in the Plan, the Grant Notice or this Agreement confers upon Participant any right to continue in the employ or service of the Company or any Subsidiary or interferes with or restricts in any way the rights of the

Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

4.11 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which will be deemed an original and all of which together will constitute one instrument.

* * * * *

SUBSIDIARIES OF PRECISION BIOSCIENCES, INC.

Legal Name of Subsidiary	**Jurisdiction of Organization**
Elo Life Systems, Inc.	Delaware
Elo Life Systems Australia Pty Ltd	Queensland, Australia
Precision BioSciences UK Limited	England and Wales

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-230671 on Form S-8 and Registration Statement No. 333-238857 on Form S-3 of our report dated March 18, 2021, relating to the financial statements of Precision BioSciences, Inc., appearing in this Annual Report on Form 10-K for the year ended December 31, 2020.

/s/ Deloitte & Touche LLP

Raleigh, North Carolina
March 18, 2021

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew Kane, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2020 of Precision BioSciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 18, 2021

By: /s/ Matthew Kane

Matthew Kane
President, Chief Executive Officer and Director
(principal executive officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Alexander Kelly, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2020 of Precision BioSciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 18, 2021

By: /s/ John Alexander Kelly
John Alexander Kelly
Interim Chief Financial Officer
(principal financial officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Precision BioSciences, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 18, 2021

By: /s/ Matthew Kane

Matthew Kane
President, Chief Executive Officer and Director
(principal executive officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Precision BioSciences, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 18, 2021

By: /s/ John Alexander Kelly

John Alexander Kelly
Interim Chief Financial Officer
(principal financial officer)