Precision BioSciences Presents Preclinical Safety and Efficacy Data Supporting Repeat Dosing of PBGENE-HBV With a Goal of Curing Chronic Hepatitis B at the Global Hepatitis Summit 2025

March 20, 2025 at 7:01 AM EDT

- PBGENE-HBV, the first and only clinical stage gene editing therapy for chronic hepatitis B –

- Repeat dosing of PBGENE-HBV supported by definitive preclinical safety and toxicology studies -

- ELIMINATE-B global Phase 1 study for chronic hepatitis B actively enrolling patients and will evaluate up to three dose administrations of PBGENE-HBV at each dose level –

- Precision remains on track to continue reporting clinical data throughout 2025 –

DURHAM, N.C.--(BUSINESS WIRE)--Mar. 20, 2025-- Precision BioSciences, Inc. (Nasdaq: DTIL), a clinical stage gene editing company utilizing its novel proprietary ARCUS® platform to develop *in vivo* gene editing therapies for high unmet diseases, presents preclinical data supporting repeat dosing of PBGENE-HBV in the ELIMINATE-B trial to treat patients with chronic HBV. Even with today's standard of care, an estimated 15% to 40% of patients with HBV infections may develop complications, such as cirrhosis, liver failure, or liver cancer (hepatocellular carcinoma), which account for the majority of the 1.1 million global HBV-related deaths each year. These data will be presented during an oral presentation at the Global Hepatitis Summit (GHS) 2025, being held March 18-21, 2025, in Los Angeles, California.

"We are excited to share new supportive preclinical data for our lead clinical program PBGENE-HBV, which is currently enrolling patients in the ELIMINATE-B Phase 1 study. These new data highlight the potential to safely administer repeated doses of PBGENE-HBV, a LNP delivered gene editor, to achieve durable functional cures in chronic hepatitis B patients," said Dr. Murray Abramson, MD, MPH, Senior Vice President and Head of Clinical Development at Precision BioSciences. "As we look to translate these results into the clinic, our Phase 1 trial is evaluating up to three dose administrations per patient at each dose level to assess the cumulative effect of editing and eliminating viral DNA with the goal of cure. After demonstrating that the first administration at the lowest dose level was safe and well tolerated, we have commenced subsequent administrations at the lowest dose level."

Presentation Details:
Title: PBGENE-HBV definitive preclinical toxicokinetic and toxicology data enables advancement to clinical trials for a potentially curative gene editing treatment for chronic hepatitis B
Oral Presentation Number: 30267
Date and Time: March 21, 2025, 9:20-9:30 am PDT

Preclinical safety data to be presented at GHS 2025 support the activity of multiple doses of PBGENE-HBV in order to increase cumulative editing and drive potential cures. In non-human primates (NHPs), repeated administration of PBGENE-HBV was safe and well tolerated, with no systemic accumulation of PBGENE-HBV drug product. Furthermore, PBGENE-HBV was not distributed to germ cells at any of the analyzed timepoints, supporting the conclusion that there is no risk of heritable genome edits. Additionally, the Company conducted extensive nuclease specificity assessments in HBV-infected primary human hepatocytes and showed no increased off-target risk with additional dose administrations. The Company has previously shared nonhuman primate data showing that the administration of two doses of PBGENE-HBV achieved up to 99% viral eradication. As a result of this compelling data, the ELIMINATE-B Phase 1 clinical trial is designed to safely investigate up to three doses at each dose level.

In February, Precision announced initial results from the first administration of PBGENE-HBV in cohort 1, the lowest dose level of the ELIMINATE-B trial. PBGENE-HBV, which comprises an ARCUS-encoding mRNA encapsulated in a lipid nanoparticle (LNP), was safe and well tolerated in all three participants in cohort 1 after the first administration of a 0.2 mg/kg dose. In addition to safety, PBGENE-HBV demonstrated a substantial reduction in Hepatitis B surface antigen (HBsAg) in two of the three participants following the first of three administrations at the lowest dose level. The Company has commenced dosing planned subsequent administrations at the lowest dose level (0.2mg/kg).

The ELIMINATE-B study is currently enrolling HBeAg-negative chronic Hepatitis B patients at leading global infectious disease sites in Moldova, Hong Kong, and New Zealand. Following the clearance of an Investigational New Drug application by the U.S. Food and Drug Administration in March, Precision plans to initiate Phase 1 clinical activities in the U.S. to continue accelerating recruitment and evaluation of a genetically diverse patient population in the global Phase 1 study. The company is providing additional administrations of PBGENE-HBV at this dose level and in parallel plans to escalate to higher dose levels to define the optimal dose and number of dose administrations for safely eliminating cccDNA and integrated HBV DNA. Precision plans to share detailed clinical data throughout 2025.

About Hepatitis B:

Hepatitis B is a leading cause of morbidity in the US and death globally, with no curative options currently available for patients. Despite the availability of approved antiviral therapies, an estimated 300 million people globally and 1-2 million people in the US are estimated to have chronic hepatitis B infection. An estimated 15% to 40% of patients with HBV infections may develop complications, such as cirrhosis, liver failure, or liver cancer (hepatocellular carcinoma), which account for the majority of HBV-related deaths.

Chronic hepatitis B infection is primarily driven by persistence of HBV cccDNA and integration of HBV DNA into the human genome in liver cells, the primary source of hepatitis B surface antigen (HBsAg) in late-stage disease. Current treatments for patients with HBV infection include agents that result in long-term viral suppression as indicated by reduction of circulating HBV DNA, but these therapies do not eradicate HBV cccDNA, rarely lead to functional cure, and require lifelong administration.

About PBGENE-HBV (Viral Elimination Program):

PBGENE-HBV is Precision's wholly owned *in vivo* gene editing program under investigation in a global first-in-human clinical trial, which is designed to potentially cure chronic hepatitis B infection. Currently, it is estimated that 300 million people worldwide are afflicted with chronic hepatitis B. PBGENE-HBV is the first and only potentially curative gene editing program to enter clinical investigation that is specifically designed to eliminate cccDNA and inactivate integrated HBV DNA. Lipid nanoparticle technology for PBGENE-HBV has been provided by Acuitas Therapeutics Inc.

About Precision BioSciences, Inc.

Precision BioSciences, Inc. is a clinical stage gene editing company dedicated to improving life (DTIL) with its novel and proprietary ARCUS® genome editing platform that differs from other technologies in the way it cuts, its smaller size, and its simpler structure. Key capabilities and differentiating characteristics may enable ARCUS nucleases to drive more intended, defined therapeutic outcomes. Using ARCUS, the Company's pipeline is comprised of in vivo gene editing candidates designed to deliver lasting cures for the broadest range of genetic and infectious diseases where no adequate treatments exist. For more information about Precision BioSciences, please visit www.precisionbiosciences.com.

The ARCUS® platform is being used to develop *in vivo* gene editing therapies for sophisticated gene edits, including gene insertion (inserting DNA into gene to cause expression/add function), elimination (removing a genome e.g. viral DNA or mutant mitochondrial DNA), and excision (removing a large portion of a defective gene by delivering two ARCUS nucleases in a single AAV).

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements regarding the clinical development and expected safety, efficacy and benefit of our product candidates and gene editing approaches (including PBGENE-HBV); the design of PBGENE-HBV, including expected repeat dose administrations, to directly eliminate cccDNA and inactivate integrated HBV DNA with high specificity, with the goal of a cure for chronic hepatitis B; the expected timing of regulatory processes (including filings such as IND's and CTAs and studies for PBGENE-HBV); expectations about operational initiatives, strategies, and further development of our programs; expectations about achievement of key milestones and anticipated timing and reporting of clinical data; translation of preclinical studies to viral engagement in humans; and risks of heritable genome edits and off-target editing with additional dose administrations. In some cases, you can identify forward-looking statements by terms such as "aim," "anticipate," "approach," "believe," "contemplate," "could," "designed," "estimate," "expect," "goal," "intend," "look," "may," "mission," "plan," "possible," "potential," "predict," "project," "pursue," "should," "strive," "target," "will," "would," or the negative thereof and similar words and expressions.

Forward-looking statements are based on management's current expectations, beliefs and assumptions and on information currently available to us. These statements are neither promises nor guarantees, but involve 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 important factors, including, but not limited to: our ability to become profitable; our ability to procure sufficient funding to advance our programs; risks associated with raising additional capital and requirements under our current debt instruments and effects of restrictions thereunder; 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 limited ability or inability to assess the safety and efficacy of our product candidates; 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 studies and clinical trials; public perception about genome editing technology and its applications; competition in the genome editing, biopharmaceutical, and biotechnology fields; our or our collaborators' ability to identify, develop and commercialize product candidates; potential product 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' or other licensees' ability to advance product candidates into, and successfully design, implement and complete, clinical or field trials; our or our collaborators' other licensees' 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; delays or difficulties in our and our collaborators' ability to enroll patients; changes in interim "top-line" and initial 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 protection, 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 and reliance on 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 executives and 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 sustained inflation, supply chain disruptions and major central bank policy actions; insurance expenses and exposure to uninsured liabilities; effects of tax rules; risks related to ownership of our common stock; our ability to meet the requirements of and maintain listing of our common stock on NASDAQ or other public stock exchanges and other important factors discussed under the caption "Risk Factors" in our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2024, as any such factors may be updated from time to time in our other filings with the SEC, which are accessible on the SEC's website at www.sec.gov and the Investors page of our website under SEC Filings at investor.precisionbiosciences.com.

All forward-looking statements speak only as of the date of this presentation and, except as required by applicable law, we have no obligation to update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. Precision consults with various presentation speakers and compensates them for their time and expertise.

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