PRECISION BIOSCIENCES

Precision Reacquires All Global Rights to CAR T Programs

April 15, 2021

Forward Looking Statements

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Agenda

- **Welcome**
  - Alex Kelly, Interim Chief Financial Officer and Chief Corporate Affairs Officer
- **Introduction of Chief Medical Officer**
  - Alan List, M.D., Chief Medical Officer
- **Strategic Rationale for Reacquiring Global Rights to CAR T Programs**
  - Matt Kane, MBA, Chief Executive Officer and Co-Founder
- **Allogeneic CAR T Strategy**
  - Derek Jantz, Ph.D., Chief Scientific Officer and Co-Founder
- **Q&A**

Precision Reacquires All Partnered CAR T Programs from Servier

Rationale for Reacquiring Global Rights to Allogeneic CAR T Programs:

- **Improves Precision ROI by gaining commercial rights and full control over program development and spending**
- **Freedom to direct focus on most promising assets across the portfolio**

2 + 4

Two lead allogeneic CAR T programs targeting CD19

Recently nominated targets: 2 hematologic malignancy and 2 solid tumor

- Precision will pay **$1.25 million in cash** and waive earned milestones totaling $18.75 million
- Servier eligible to receive milestones and low- to mid-single-digit royalties subject to product development milestones

Collaboration History

1 Baxalta

$105 million upfront payment to Precision from Baxalta

Precision & Baxalta announce collaboration
Feb 2016

2 Shire

Baxalta & Shire merge
Jun 2016

3 SERVIER

Servier completes **Shire Oncology** acquisition
Aug 2018

PBCAR0191 IND accepted
Nov 2018

PBCAR0191 first patient dosed
Apr 2019

Collaboration expanded adding 4 new targets
Sep 2020

PBCAR19B stealth cell IND submitted
Dec 2020

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$10 million payment to Precision for milestones related to new targets

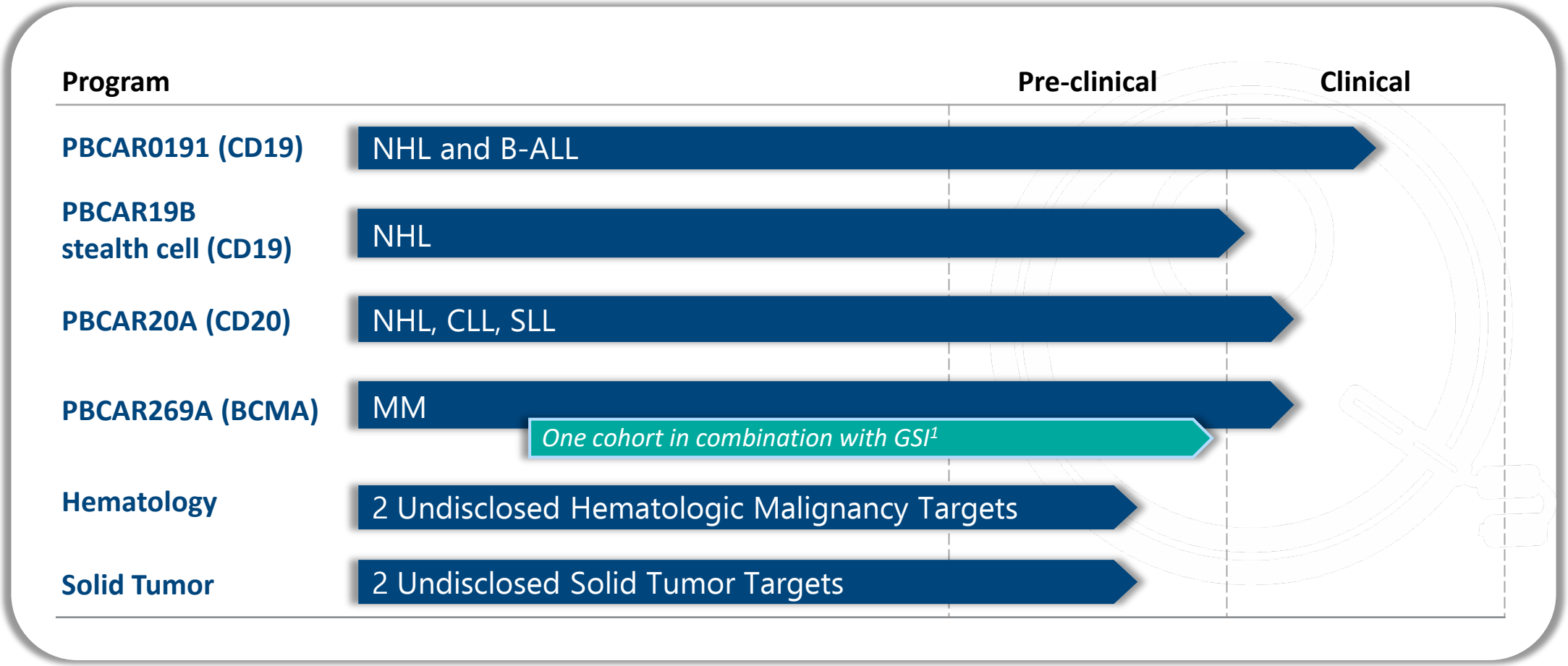
Precision reacquires rights to all CAR T programs
Apr 2021

PBCAR19B stealth cell **IND accepted**
Jan 2021

PBCAR19B to **dose first patient**
May 2021

2016 | 2017 | 2018 | 2019 | 2020 | 2021

Precision Wholly Owned Allogeneic CAR T Pipeline

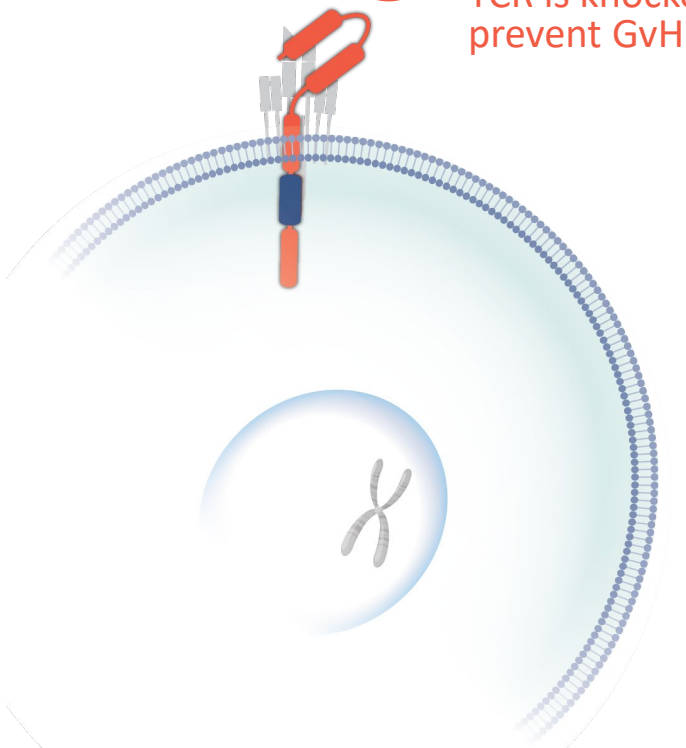


[1] In combination with gamma secretase inhibitor from SpringWorks Therapeutics.

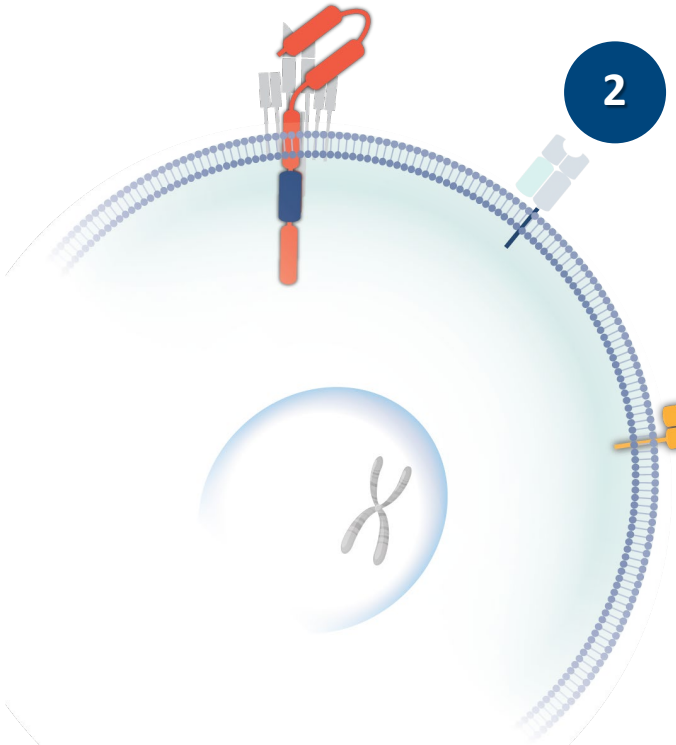
Multiple Shots on CD19 Target: 1st Generation and 2nd Generation

PBCAR0191
1st generation

PBCAR19B
2nd generation
"Stealth Cell"



1 **Anti-CD19 CAR**
TCR is knocked-out to prevent GvHD

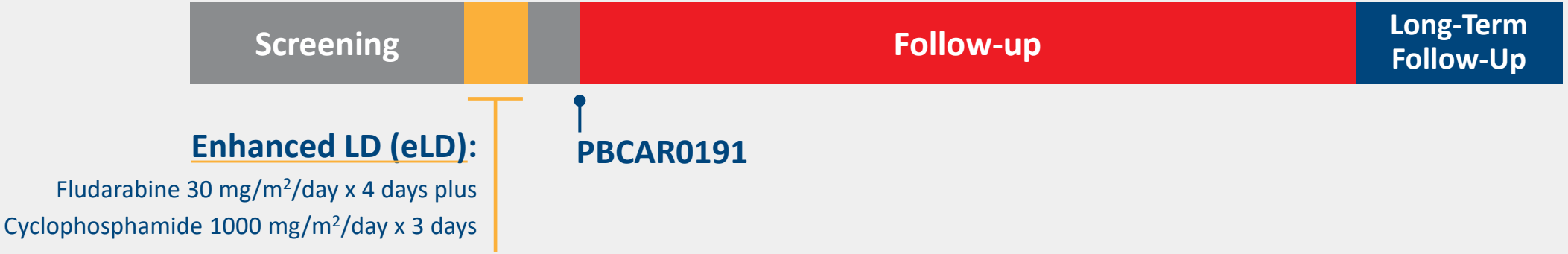


1 **Anti-CD19 CAR**
TCR is knocked-out to prevent GvHD

2 **Anti-Beta-2 Microglobulin (B2m) shRNA**
Reduces MHC-I expression to prevent rejection by T cells

3 **HLA-E Transgene**
Prevents rejection by NK cells

PBCAR0191: Enhanced Lymphodepletion in R/R NHL



- PBCAR0191 with eLD associated with **high initial response rates** and **increased cell expansion and persistence** in first four NHL patients dosed prior to December 2020 interim update on PBCAR0191
- **Inclusion/exclusion criteria modified** to exclude patients with prolonged cytopenia or serious infections 30 days prior to enrollment
- **Additional patients enrolled in eLD arm** since December 2020 interim update:

  High initial response rates

  Acceptable safety profile

  Assessment for durability is ongoing

Expectation for Next PBCAR0191 Update

- **Next update planned at ASCO 2021**
- **Focus will be on NHL patients with the eLD dosing strategy**
  - More than 30 NHL patients will have been treated with PBCAR0191
  - >10 patients treated with eLD regimen
  - Most eLD patients will have at least 3-month follow-up
- **Durability of response will help frame potential of 1st generation allogeneic CAR T program**

PBCAR19B Stealth Cell Timeline and Approach

- **PBCAR19B IND accepted by FDA in January 2021**
  - Phase 1 study designed for patients with R/R NHL
- **Study will evaluate the safety and clinical activity of PBCAR19B at increasing flat dose levels**
  - IND permits a starting dose of PBCAR19B at 2.7 x 10^8 cells/patient. The maximum dose permitted under the IND is 8.1 x 10^8 cells/patient.
  - Starting dose is approximately equivalent to PBCAR0191 DL3
  - Patients will receive standard lymphodepletion
- **Clinical trial material has been produced at MCAT and sites are being enrolled**
- **First patient expected to be dosed by end of May 2021**

Phase 1 Interim Data for PBCAR20A Expected in 2021

	Population	Approved Dose Escalation Range	Status
PBCAR20A Targeting CD20	Adult patients with: • R/R NHL (including MCL), or • R/R CLL or SLL	DL1 = 1.0 × 10^6 cells/kg DL2 = 3.0 × 10^6 cells/kg DL3 = 4.8 × 10^8 (fixed dose) *(max dose - 6.0 × 10^6 cells/kg)*	• **DL3 began Q1/2021** • **Plan to pause after DL3 is completed until PBCAR0191 and PBCAR19B durability is established** • **Interim update expected in 2021**

Three Potential Shots on BCMA Target for R/R Multiple Myeloma

PBCAR269A

Targeting BCMA

- **DL3 began Q1/2021**
- **Interim update planned for 2021**
- **Approved dose escalation range**

  DL1 *= 6.0 × 10^5 cells/kg;* ***DL2*** *= 2.0 × 10^6 cells/kg;* ***DL3*** *= 6.0 × 10^6 cells/kg*

PBCAR269A in combination with gamma secretase inhibitor

Targeting BCMA

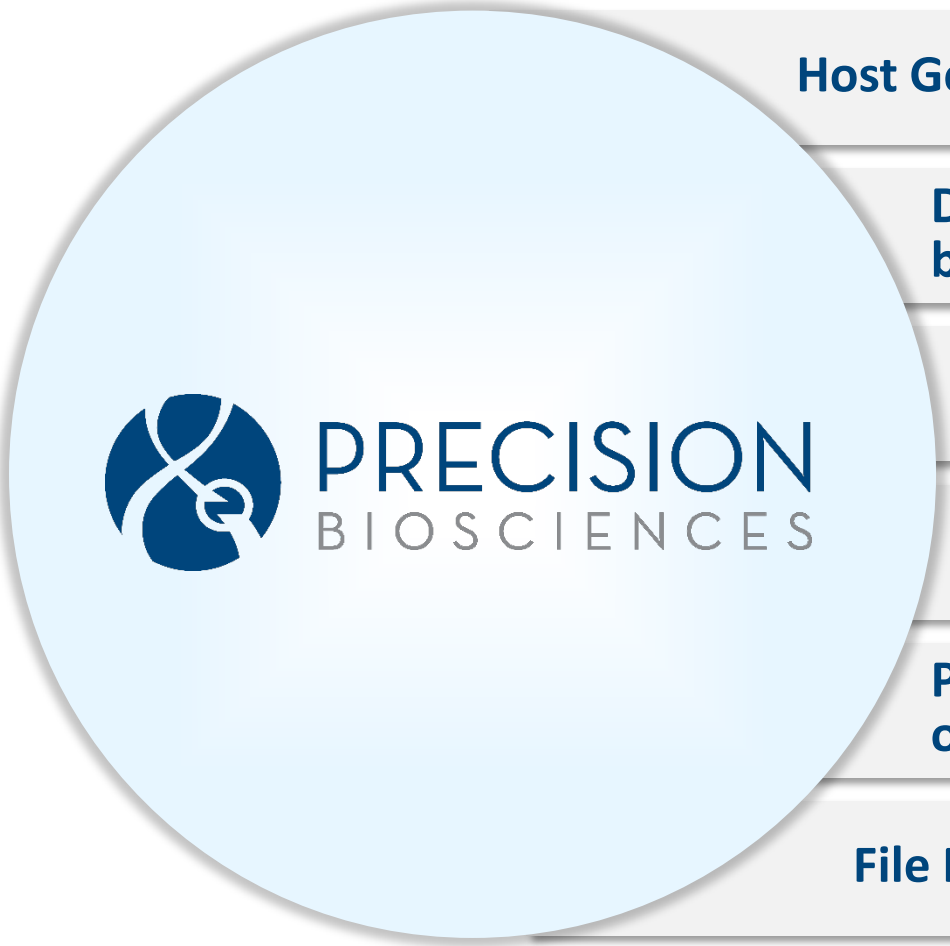
- **Cohort with SpringWorks gamma secretase inhibitor, nirogacestat**
- **First patient expected to be dosed in 1H/2021**

PBCAR269B immune evading **stealth cell**

Targeting BCMA

- **Stealth cell formulation in IND enabling studies**
- **File IND in early 2022**
- **Expect to be ready to initiate clinical trials in 2022**

Important Expected Milestones on Track



- **Host Gene Editing R&D event in mid-2021, update on PH1**
- **Dose first patient with next generation PBCAR19B stealth cell by end of May-2021**
- **Initiate clinical cohort with PBCAR269A combined with GSI in 1H/2021**
- **Updated interim PBCAR0191 data at ASCO 2021**
- **Provide interim update on PBCAR20A and PBCAR269A by end of 2021**
- **File PBCAR269B immune evading stealth cell IND in early 2022**

Patient recruitment and availability of follow-up patient data may be impacted by COVID-19 or other factors

Overcome cancer.

Cure genetic disease.

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