

Corporate Presentation | August 2022

*ARCUS Genome Editing for Transformative
Cell & Gene Therapeutics*

Forward-Looking Statements

This presentation contains forward-looking statements, as may any related presentations, within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this herein and in any related presentation that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements regarding the goal of providing a one time, potentially curative treatment for certain hemoglobinopathies, the success of the collaboration with Novartis, including the receipt of any milestone, royalty, or other payments pursuant to and the satisfaction of obligations under the Agreement, clinical and regulatory development and expected efficacy and benefit of our platform and product candidates, benefits of ARCUS and potential expansion and development using ARCUS, the expected timing of updates regarding our allogeneic CAR T and in vivo programs, the expected timing of communications with regulators, the expected advancement toward and timing of IND and CTA filings, the ability of our product candidates, if approved, to become best-in-class or first-in-class, the planned development activities with our collaboration partners, expectations about our operational initiatives and business strategy, achieving key milestones and additional collaborations, and expectations regarding our liquidity and ability to fund operating expenses and capital expenditures requirements. In some cases, you can identify forward-looking statements by terms such as “aim,” “anticipate,” “approach,” “believe,” “contemplate,” “could,” “estimate,” “expect,” “goal,” “intend,” “look,” “may,” “mission,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “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. Such 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 important factors, including, but 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 limited ability or inability to assess the safety and efficacy of our product candidates; our dependence on 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; 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” 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 COVID-19 pandemic and variants thereof, or any pandemic, epidemic or outbreak of an infectious disease; insurance expenses and exposure to uninsured liabilities; effects of tax rules; risks related to ownership of our common stock and other important factors discussed under the caption “Risk Factors” in our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2022, 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.

Precision BioSciences: A clinical stage gene editing company built on wholly owned ARCUS genome editing platform

ARCUS[®] platform for therapeutic drug development

Diversified Pipeline



Ex Vivo:

Allogeneic CAR T immunotherapies

- Single-gene edit with donor-derived, single-dose CAR T cells



In Vivo:

Gene editing for complex genetic diseases

- Potentially curative, one-time treatments



Scalable in-house manufacturing capabilities



ARCUS platform and nucleases are unencumbered by third-party IP; control of over 100 issued patents related to ARCUS and its applications



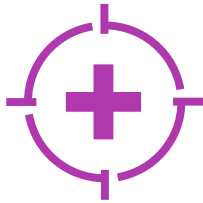
Pioneers in genome editing technology development



Strong balance sheet provides 2+ years of runway¹

ARCUS: Well-differentiated genome editing platform to address high unmet needs in oncology and genetic diseases

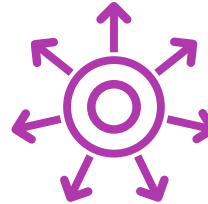
THREE DISTINCT ADVANTAGES OF ARCUS EDITING



Precision

(Safety & Specificity)

- ARCUS is inactive until it binds to its target DNA site
- Off-target editing is easier to detect and eliminate
- Nuclease optimization process



Versatility

- Gene insertion, deletion or repair
- DNA cuts are preferentially repaired by homology directed repair (HDR)



Delivery

- ARCUS nucleases are small
- Delivery to broad array of tissues and cells using adeno-associated virus (AAV) and lipid nanoparticle (LNP) delivery technologies

Precision: Safety and Specificity

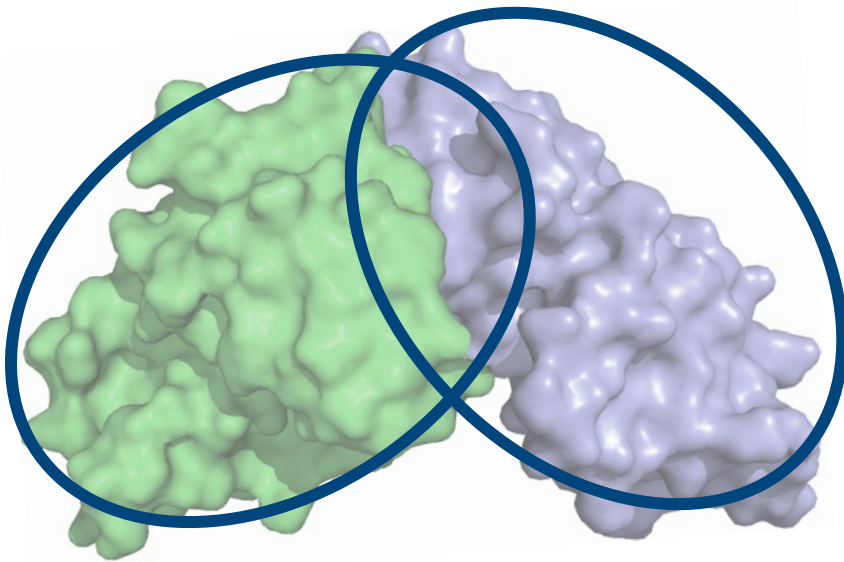
ARCUS is inactive until it binds to its target DNA site

ARCUS can be expressed for extended periods of time without accumulating off-target gene edits

> 80 years of event-free in life safety testing in non-human primates

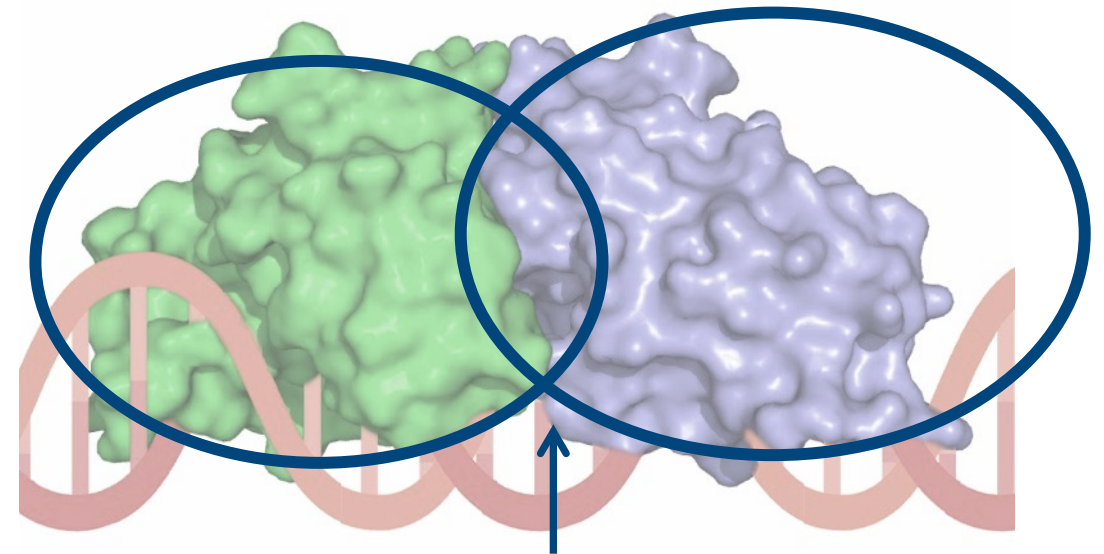
Inactive form of ARCUS

Closed configuration buries the active site inside the protein



Active form of ARCUS

Open configuration allows the active site to access DNA

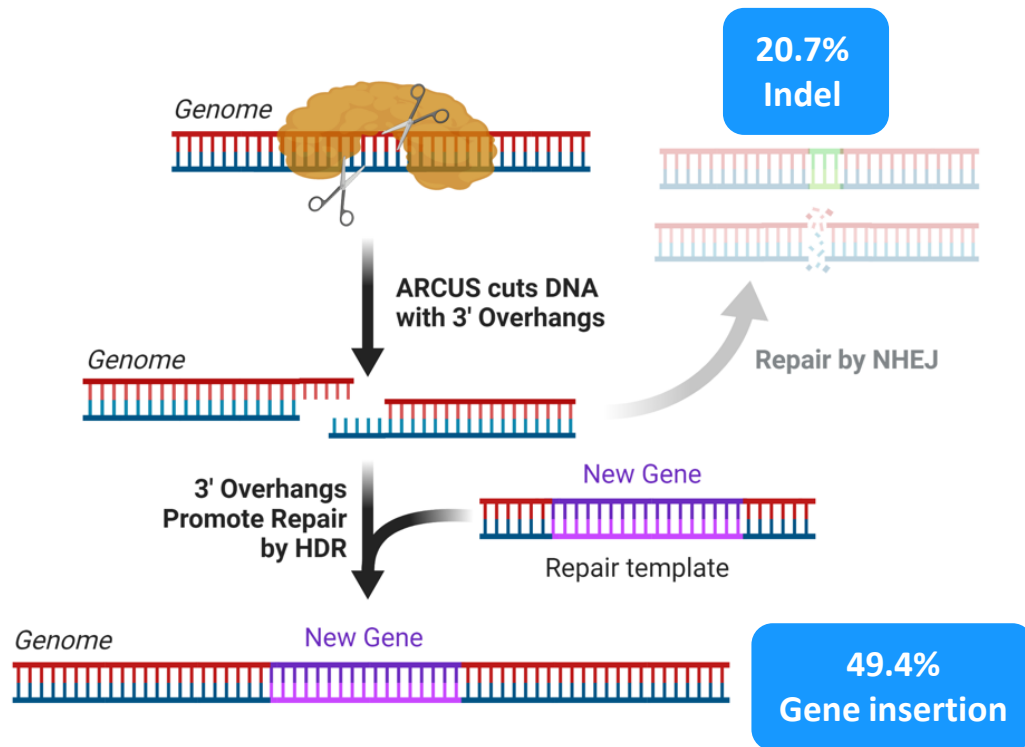


ACTIVE SITE

Versatility

ARCUS performs complex edits (including gene insertion)

The 3' overhangs produced by ARCUS potentially stimulate DNA repair by either homology directed repair (HDR) or non-homologous end joining (NHEJ).



ARCUS promotes HDR

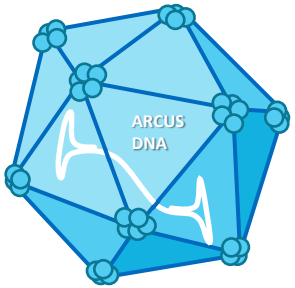
Cuts made by ARCUS have 3' overhangs and are repaired primarily via HDR

Enables complex edits like gene insertion

Delivery

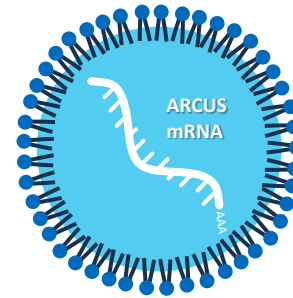
ARCUS is
small and
easy to deliver

ARCUS is 364 amino acids. This enables delivery to tissues and cells using a variety of viral and non-viral delivery technologies, including AAV and LNP.



AAV Adeno-Associated Virus:

- ✓ Delivery to many tissues
- ✓ Deliver HDR donor for knock-in
- ✓ Established manufacturing
- ✓ Established regulatory pathway
- ✓ Promoters localize expression



LNP Lipid Nanoparticle:

- ✓ Efficient delivery to liver
- ✓ Short half-life
- ✓ No neutralizing antibodies
- ✓ Potential to repeat-dose
- ✓ Good translation from NHP

Ex vivo allogeneic CAR T clinical pipeline focused on potential first-in-class and best-in-class approaches

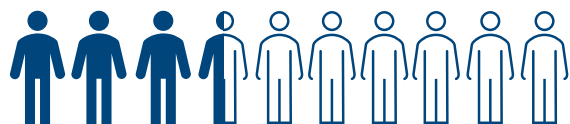
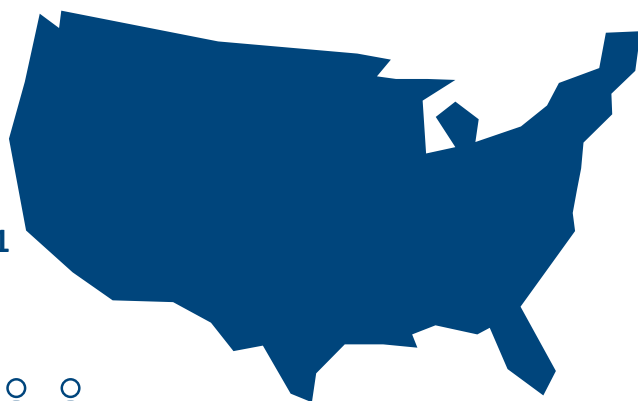


Blood cancers, or hematologic cancers remain a major unmet need

Diffuse large B-cell lymphoma (DLBCL)

DLBCL is the most common form of non-Hodgkin's lymphoma (NHL), comprising more than 25% of all lymphomas reported in the US. Derives from white blood cells that grow in an uncontrolled, rapid manner, often migrating to the spleen, liver, bone marrow and other organs.

Approximately
30,000
people annually¹



Auto-CAR T potentially curing 3.5 out of 10 patients

Up to 20% of intended auto-CAR T patients never receive treatment
(~4 weeks required to manufacture auto-CAR T cells)

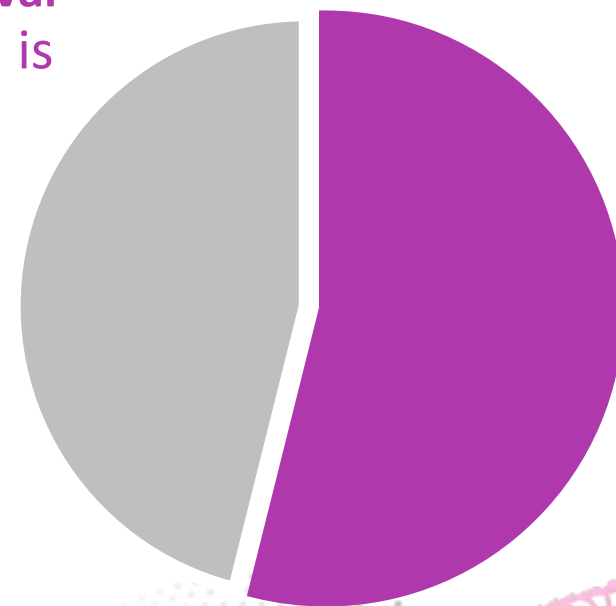
Multiple myeloma

A type of cancer that affects plasma cells in the blood, causing them to grow and divide. The “multiple” in multiple myeloma indicates that there are multiple tumors in different areas of the bone(s). More than 90% of individuals diagnosed with multiple myeloma have multiple tumors at the time of diagnosis.

Five-year relative survival
for multiple myeloma is

57.9%

following diagnosis²

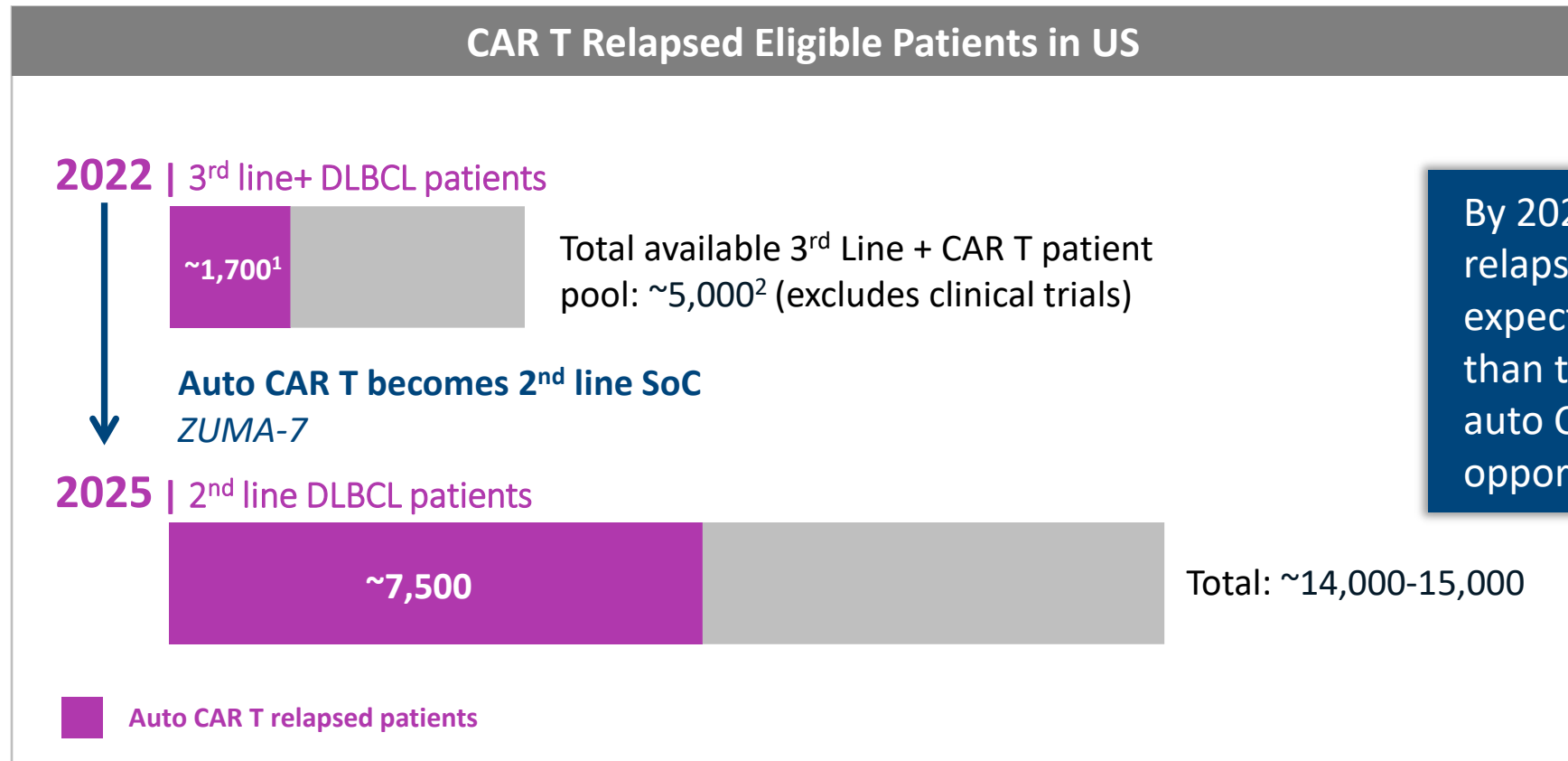


¹ Gena Kanas, Wenzhen Ge, Ruben G. W. Quek, Katie Keeven, Knar Nersesyan & Jon E. Arnason (2022) Epidemiology of diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma (FL) in the United States and Western Europe: population-level projections for 2020–2025, *Leukemia & Lymphoma*, 63:1, 54-63, DOI: 10.1080/10428194.2021.1975188

² <https://seer.cancer.gov/statfacts/html/mulmy.html>

CAR T relapsed market for DLBCL expected to grow ~4-5x by 2025

Driven by auto CAR T becoming 2nd line standard-of-care (SoC)



By 2025, the auto CAR T relapsed population is expected to be 1.5x larger than the entire 3rd line+ auto CAR T market opportunity today

¹ LEK Research (HCP interviews, Evaluate Pharma, DRG), Internal assumptions

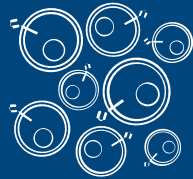
² <https://doi.org/10.6004/jnccn.2020.77422> CancerMPact, ZUMA-1 and ZUMA-7 Clinical Studies

Note: ZUMA-1 and ZUMA-7 relapse rate estimated off 2-year EFS. Assumes higher drug treatment rate of 90% in 2025 from the advancement of ZUMA-7 into 2nd line setting offering potential curative outcomes/new standard-of-care

Pursuing a deliberate, multi-faceted approach to allogeneic CAR T treatments for patients

Our approach for allo CAR T is to overcome host immune rejection while accomplishing an acceptable safety profile

5 levers to overcome host immune rejection

1**Construct****2****Single cell dose****3****Product attributes****4****Lymphodepletion****5****Patient selection**

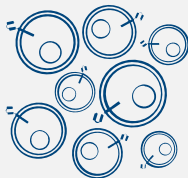
Refining optimal therapeutic index for patients

1
Construct



Single gene edit with novel N6 co-stimulatory domain

2
Single cell dose



- DL1 = 3×10^5 cells/kg
- DL2 = 1×10^6 cells/kg
- DL3 = 3×10^6 cells/kg
- DL4b = 500×10^6 cells (flat dose)

3
Product attributes



Improved manufacturing to drive efficacy, safety and reproducibility of cell dose

4
Lymphodepletion



- eLD = 30 mg/m^2 Flu $\times$ 4 days + 1000 mg/m^2 Cy $\times$ 3 days
- mLD = 30 mg/m^2 Flu $\times$ 4 days + 750 mg/m^2 Cy $\times$ 3 days
- sLD = 30 mg/m^2 Flu $\times$ 3 days + 500 mg/m^2 Cy $\times$ 3 days

5
Patient selection



- R/R NHL
- R/R ALL
- CD19 CAR T relapsed

Potential path forward for Azer-cel

*Best outcomes for Azer-cel have been achieved in CAR T relapsed patients

Minimal acceptable target product profile for CAR T relapsed patient population

	CAR T relapse median 5+ lines	3 rd line NHL
Progression Free Survival (mPFS)	> 3 months	> 6-7 months
Duration of Response (DoR)	> 50% @ 3 months	~35% CR at 6 months; ~32% CR at 1 year plus
Overall Response Rate (ORR)	> 50%	> 70% at 28 days
Overall Survival (mOS)	> 6 months	26 months ³
Safety	Highest risk salvage population	Same or better than auto CAR T
Potential Regulatory Path	Single-arm study with historical control (to be discussed with FDA)	Head-to-head vs. auto CAR T/ auto transplant

¹ <https://ashpublications.org/blood/article/137/13/1832/474111/Outcomes-of-patients-with-large-B-cell-lymphoma>

² <https://onlinelibrary.wiley.com/doi/10.1002/ajh.25505> University of Washington N=61 patients

³ Long term overall survival in ZUMA-1 <https://ash.confex.com/ash/2021/webprogram/Paper148078.html>

CAR T relapsed subjects had aggressive disease and poor prognosis

	YE 2021 DL3 ^{1,3,4} (n=6 ³)	Mid-2022 DL4b ² (n=6)
Age (y), median (range)	50.5 (38-67)	72.5 (45-77)
Primary refractory	2 (33%)	2 (33%)
Aggressive histology, n (%)	5 (100%)	5 (83%)
DLBCL	5 (100%)	4 (67%)
FL transformed to DLBCL	0	1 (17%)
Number of prior treatments, median (range)	7.5 (4-11)	4 (3-7)
Number of prior treatments across all CAR T relapsed subjects, median	5 lines	
Prior CD19 directed CAR T, n (%)	6 (100%)	6 (100%)
Prior HSCT n (%)	4 (67%)	1 (17%)

¹ Enhanced LD (eLD) = Fludarabine 30 mg/m²/day × 4 days + Cyclophosphamide 1000 mg/m²/day × 3 days

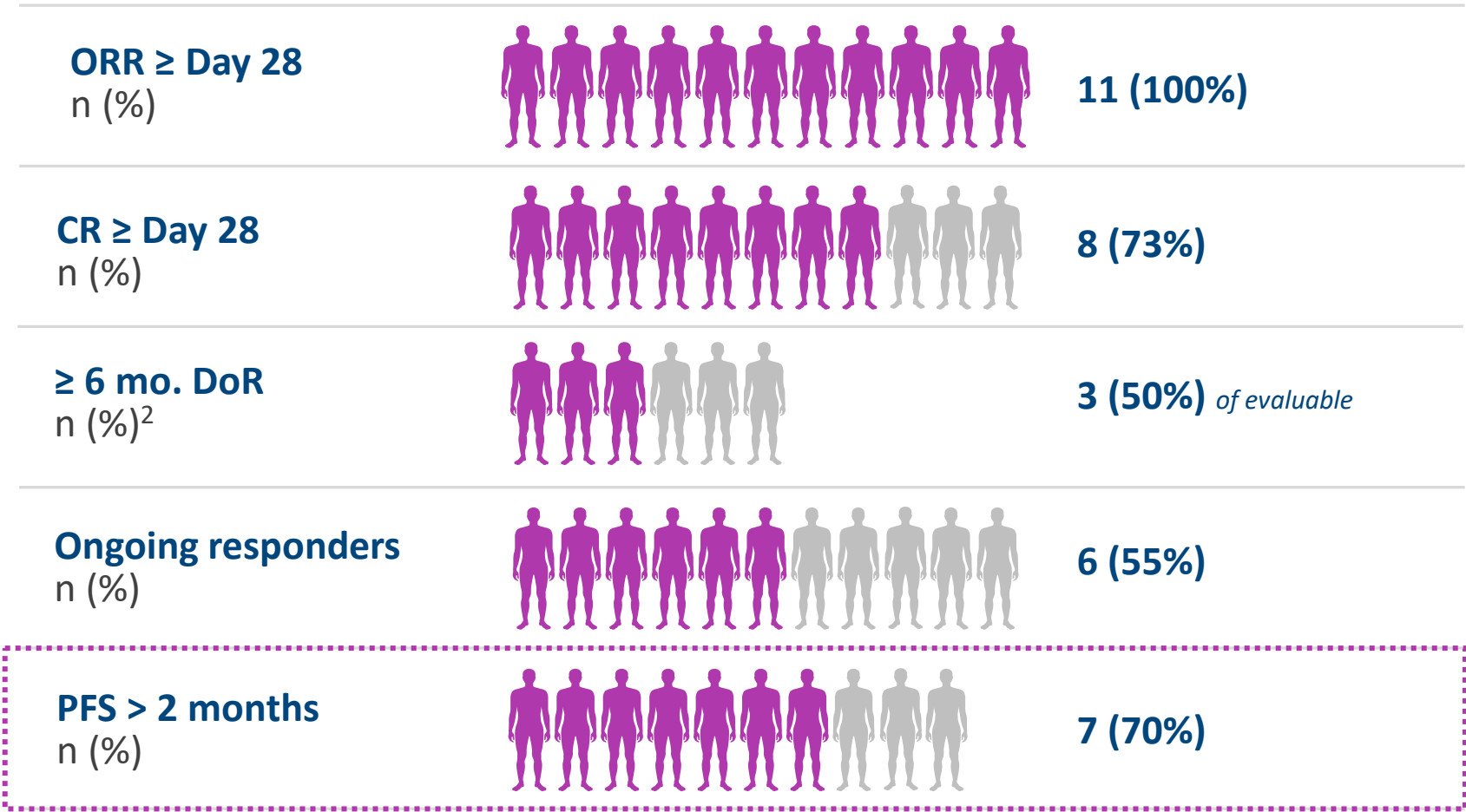
² Modified LD (mLD) = Fludarabine 30 mg/m²/day × 4 days + Cyclophosphamide 750 mg/m²/day × 3 days

³ Included one B-ALL subject in MRD negative CR at > 9 months after relapse from two prior allogeneic HCTs and CD19 auto CAR T

⁴ Reported at the American Society of Hematology meeting 2021

Efficacy results¹: 100% ORR, 73% CR with 50% durable responses at > 6 mos

CAR T relapsed
median 5+ prior lines
(n = 11 evaluable)^{2,3}



Clinicaltrials.gov identifier: NCT03666000

Potential Regulatory Hurdle

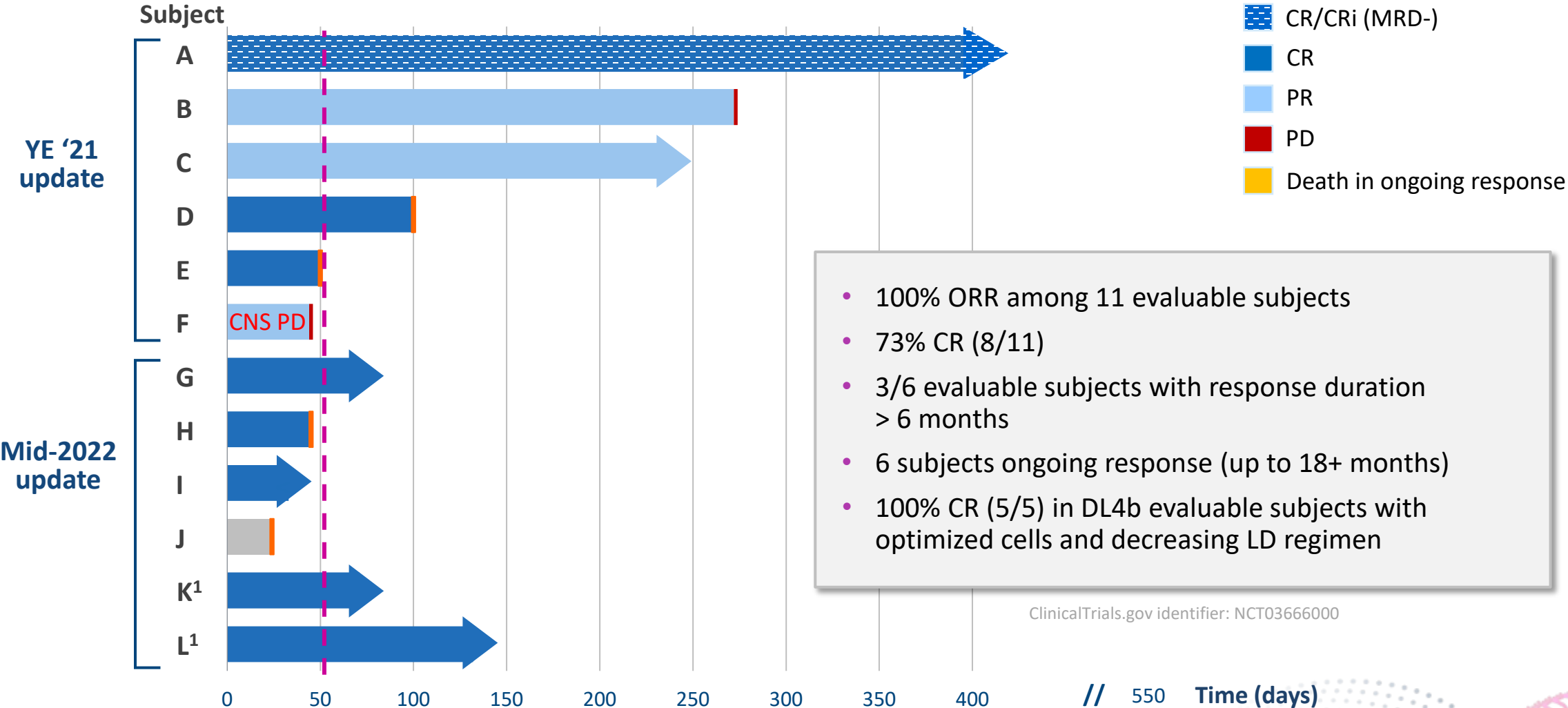
¹ Interim efficacy results as of May 31, 2022

² One subject non-evaluable for efficacy at Day 28 assessment due to death from suspected fludarabine associated neurotoxicity at Day 23; patient had complete resolution on PET/CT scan at Day 21

³ 4 of 6 (67%) evaluable patients have achieved remission inversions when comparing against prior therapy received

Azer-cel (PBCAR0191)

Response rate and duration exceeds current standard-of-care for CAR T relapsed patients

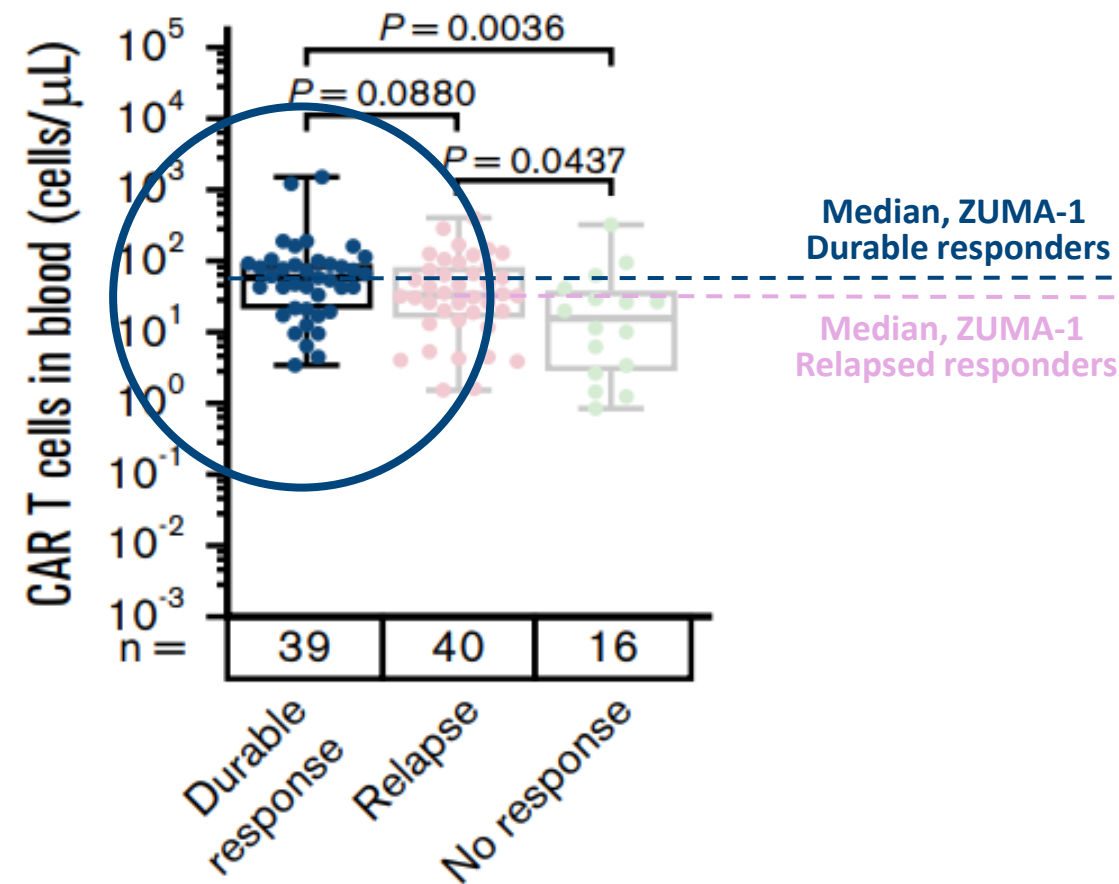


¹ Subject "K" and subject "L" relapsed after allo CAR T initially dosed at DL3; original response for subject "K" was CR for 178 days before PD and subject "L" was PR for 28 days before PD
² US CAR T Consortium Study <https://pubmed.ncbi.nlm.nih.gov/33156925/>

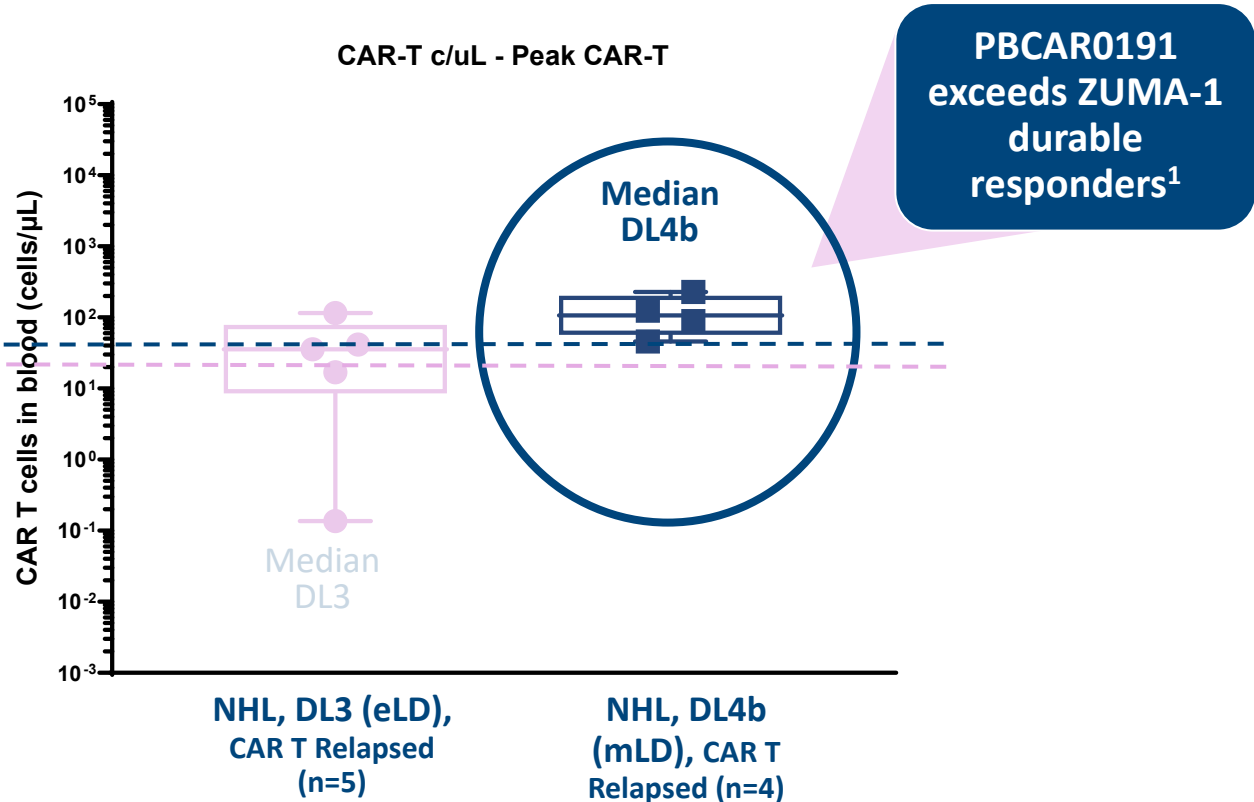
Azer-cel (PBCAR0191)

Peak expansion equivalent to auto CAR T levels in long term durable responders from ZUMA-1¹

Auto CAR T Durable Responders (Locke et al, 2020)



PBCAR0191 NHL DL3 vs. DL4b subjects



¹ FOR ILLUSTRATIVE PURPOSES ONLY. Not a head-to-head comparison. Differences exist between trial designs and subject characteristics, and caution should be exercised when comparing data across studies.

² Both ZUMA-1 and PBCAR01091 clinical study analyzed utilizing flow cytometry.

Adverse events of special interest observed in CAR T relapsed subjects¹

Number (%) of subjects who experienced events with max grade			YE 2021 update (n=6)	Mid-2022 update (n=6)
AE of special interest	CRS	Grade 1 or Grade 2	5 (83%)	4 (67%)
		Grade 3 or higher	0	0
		Time to onset (Days)	4 (4-14)	8 (7-9)
	ICANS	Grade 1 or Grade 2	2 (33%)	1 (17%)
		Grade 3 or higher ²	1 (17%)	1 (17%)
		Time to resolution Grade 1 (Days)	1.5 (1-2)	1.5 (1-2)
		Time to onset (Days)	10 (2-14)	10 (8-12)
	GvHD	0	0	
Other notable AEs	Infection	Grade 1 or Grade 2	0	2 (33%)
		Grade 3 or higher	4 (67%)	1 (17%)
Grade 5 events			2 (33%) ³	2 (33%) ⁴

ClinicalTrials.gov identifier: NCT03666000

¹Interim safety results as of May 31, 2022

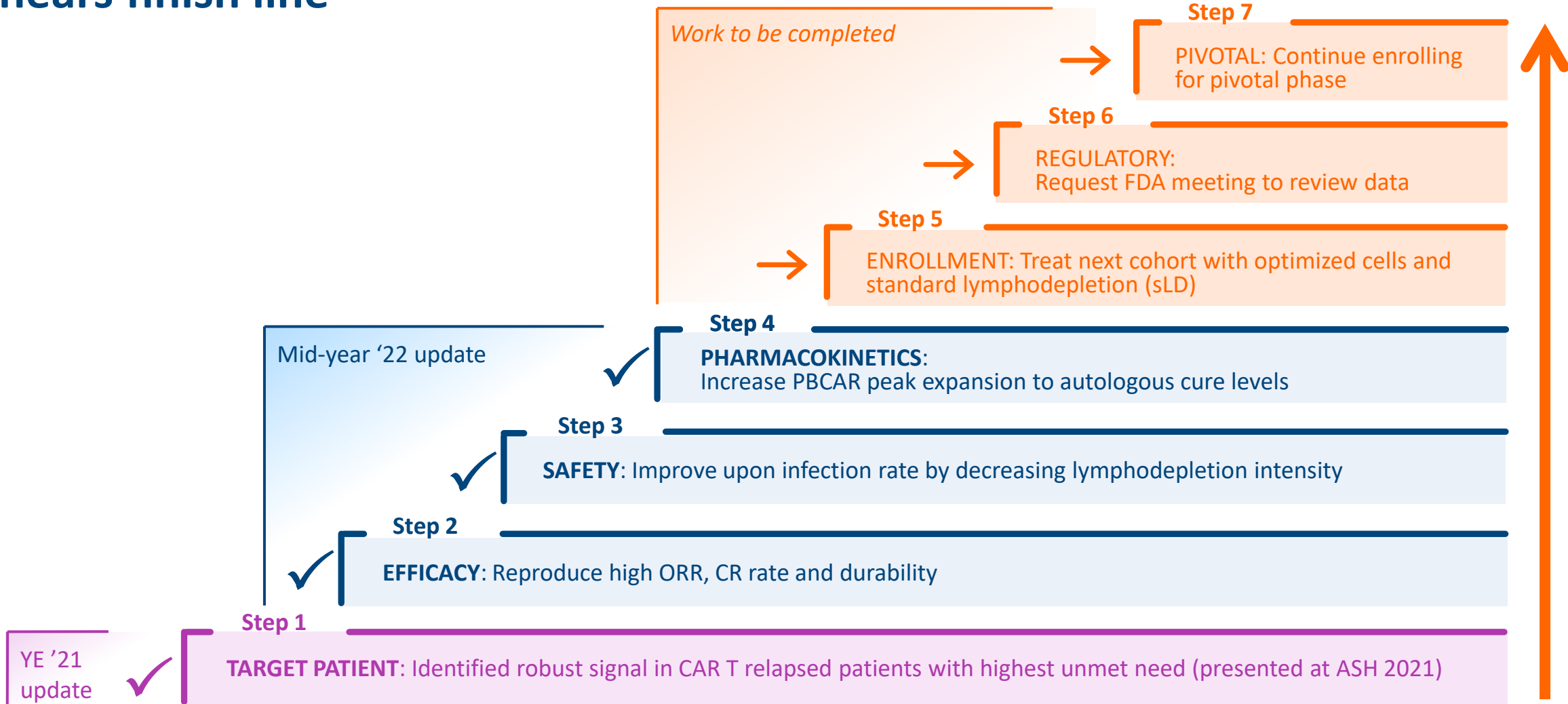
²Time to resolution Grade 1 ICANS 1-2 days

³Two deaths reported in year-end 2021 update related to infections and suspected fludarabine-associated neurotoxicity

⁴Two deaths reported in mid-year 2022 update related to suspected fludarabine-associated neurotoxicity

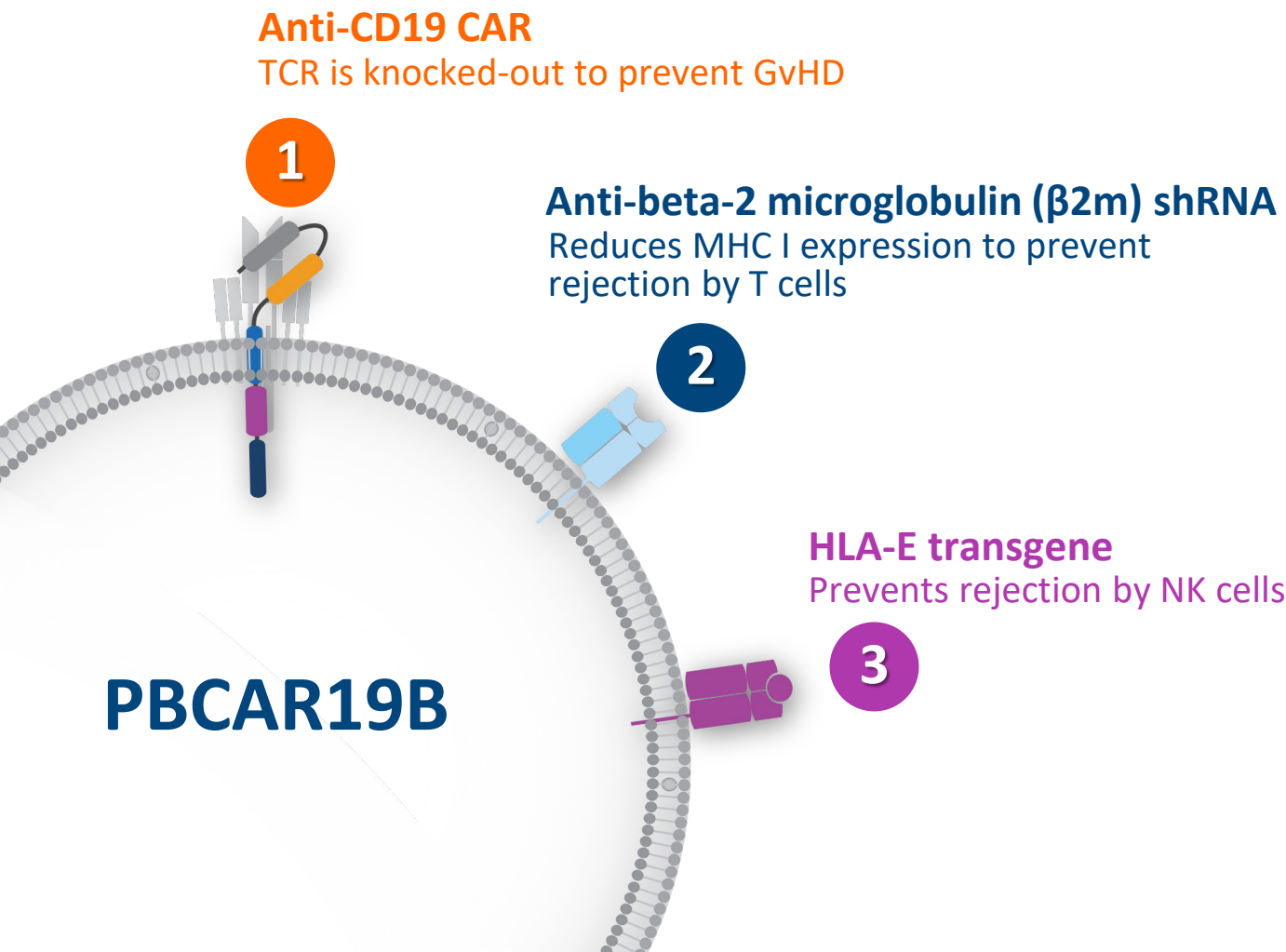
Azer-cel (PBCAR0191)

Path to desired target product profile for CAR T relapsed patient population nears finish line



PBCAR19B “Stealth Cell”

Next-generation anti-CD19 allogeneic CAR T designed to evade immune rejection and displace 2nd and 3rd line auto CAR T



3 rd line+ NHL TPP to Replace Auto CAR T	
Median Overall Survival (mOS)	> ~26 months ³
Overall Response Rate (ORR)	> > 70% at 28 days
Duration of Response (DoR)	> ~35% at 6 months to 1 year+
Safety	> Same or better than Auto CAR T
Expected Regulatory Hurdle	> Head-to-head vs. Auto CAR T

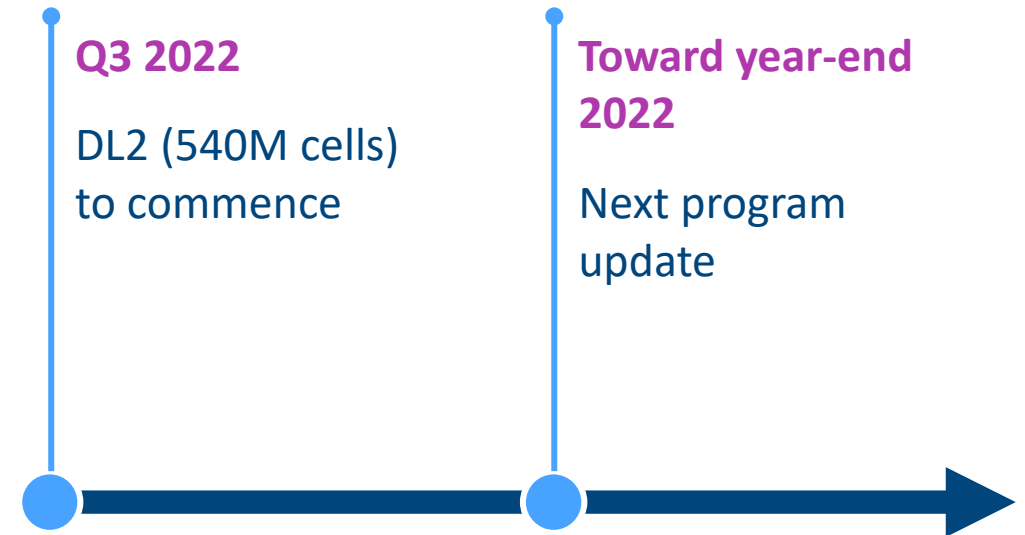
PBCAR19B “Stealth Cell”

Next-generation anti-CD19 allogeneic CAR T designed to evade immune rejection and displace 2nd and 3rd line auto CAR T

PBCAR19B “Stealth Cell”

- Three patients dosed at DL1 (270M cells) + sLD
- Due to prioritization of PBCAR0191, as potential first-in-class, PBCAR19B strategically paused in Q1 2022 to implement manufacturing process optimization for allogeneic platform
- Manufactured lots with new optimized process completed in Q2 2022
- Expect to begin dosing in next cohort in Q3 2022

Next Steps



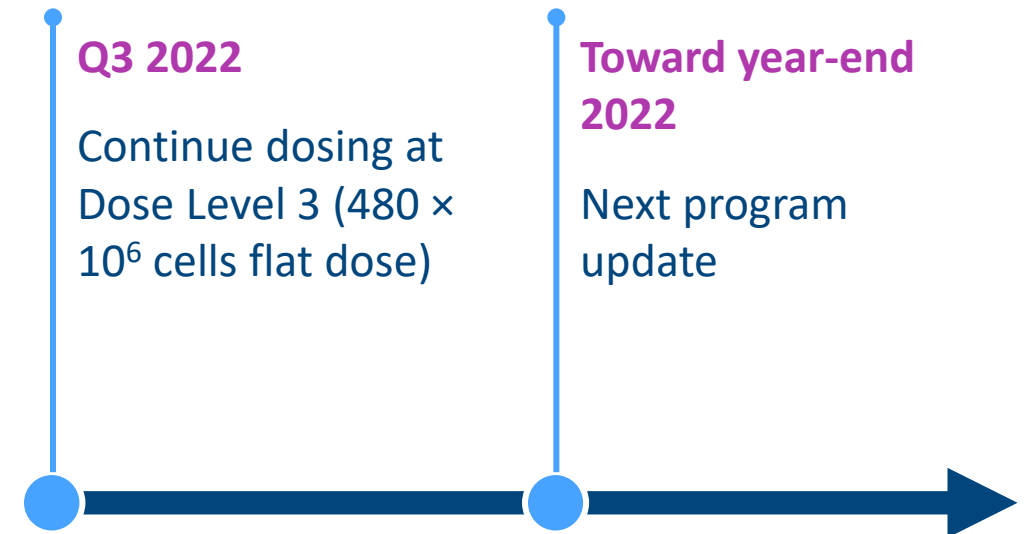
Pursuit of an allogenic alternative to autologous CAR T targeting BCMA for relapsed/refractory multiple myeloma

PBCAR269A

Combination with gamma secretase inhibitor¹ (GSI) for multiple myeloma

- Completed Dose Level 2 (2.0×10^6 cells/kg) + GSI (nirogacestat) in six patients
 - Peak expansion equivalent to PBCAR269A Dose Level 4 (960×10^6 cells flat dose) monotherapy
 - No dose limiting toxicities observed
 - Overall and depth of response at Dose Level 2 with GSI below desired target product profile
 - Continue Phase 1 dose finding and escalate PBCAR269A dose with nirogacestat arm only
- Dosed first subject in next cohort, Dose Level 3 (480×10^6 cells flat dose)

Expected Next Steps





Broad and deep *in vivo* gene editing pipeline demonstrates unique attributes of ARCUS

PROGRAM	INDICATION	TISSUE	TARGET	EDIT TYPE / DELIVERY	RESEARCH	CANDIDATE SELECTION	IND-ENABLING	EXPECTED IND/CTA	PARTNER
WHOLLY OWNED									
PBGENE-PCSK9 ¹	Familial hypercholesterolemia	Liver	PCSK9	Deletion/AAV				—	
PBGENE-PH1	Primary hyperoxaluria type 1	Liver	HAO1	Deletion/LNP				2023	
PBGENE-HBV	Chronic hepatitis B	Liver	HBV	Deletion/LNP				2024	
PARTNERED									
PBGENE-HbE	Sickle cell disease/ beta thalassemia	HSCs	—	Insertion/—				—	 NOVARTIS
PBGENE-DMD	Duchenne muscular dystrophy	Muscle	DMD	Excision/AAV				—	
PBGENE-LLY2	Undisclosed	Liver	—	—				—	
PBGENE-LLY3	Undisclosed	CNS	—	—				—	
iECURE-OTC	Ornithine transcarbamylase deficiency	Liver	OTC	Insertion/AAV				—	
iECURE-PKU	Phenylketonuria	Liver	PAH	Insertion/AAV				—	

ARCUS for familial hypercholesterolemia (FH)

targeting the PCSK9 gene



One of the most common genetic diseases that affects 1 in 250 people with pattern of severe hypercholesterolemia, cholesterol deposition and high risk of early onset coronary artery disease.

**Disorders all share
decreased LDL clearance**

Heterozygous FH (HeFH)



LDL-C
**> 190 mg/dl
in adults**



Prevalence
1.3 –1.5M

Family history of
coronary artery
disease, stroke

Homozygous FH (HoFH)



LDL-C
**> 400 mg/dl
in adults**



Prevalence
1.3 –1.4K

Mortality common
by age 30

ARCUS for primary hyperoxaluria type 1 (PH1)

targeting the HAO1 gene

Rare genetic disease characterized by accumulation of calcium oxalate in kidneys, which leads to painful kidney stones and ultimately end-stage renal disease

HAO1 encodes glycolate oxidase acts upstream of the formation of oxalate

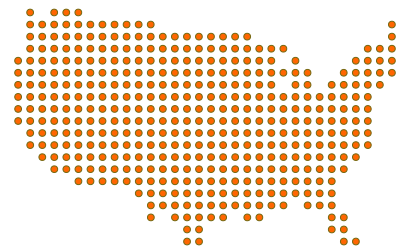
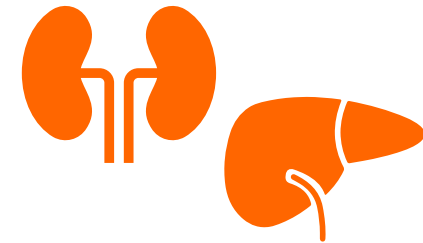


Affects adults and young children



40%
of patients have
end-stage renal disease
at the time of diagnosis

Combined liver-kidney
transplant often required



Prevalence of
1-3/1,000,000

ARCUS for chronic hepatitis B virus (cHBV) targeting cccDNA

ARCUS-mediated **inactivation of cccDNA and integrated HBV** could result in a functional cure

Chronic HBV is one of greatest racial health disparities in the U.S.

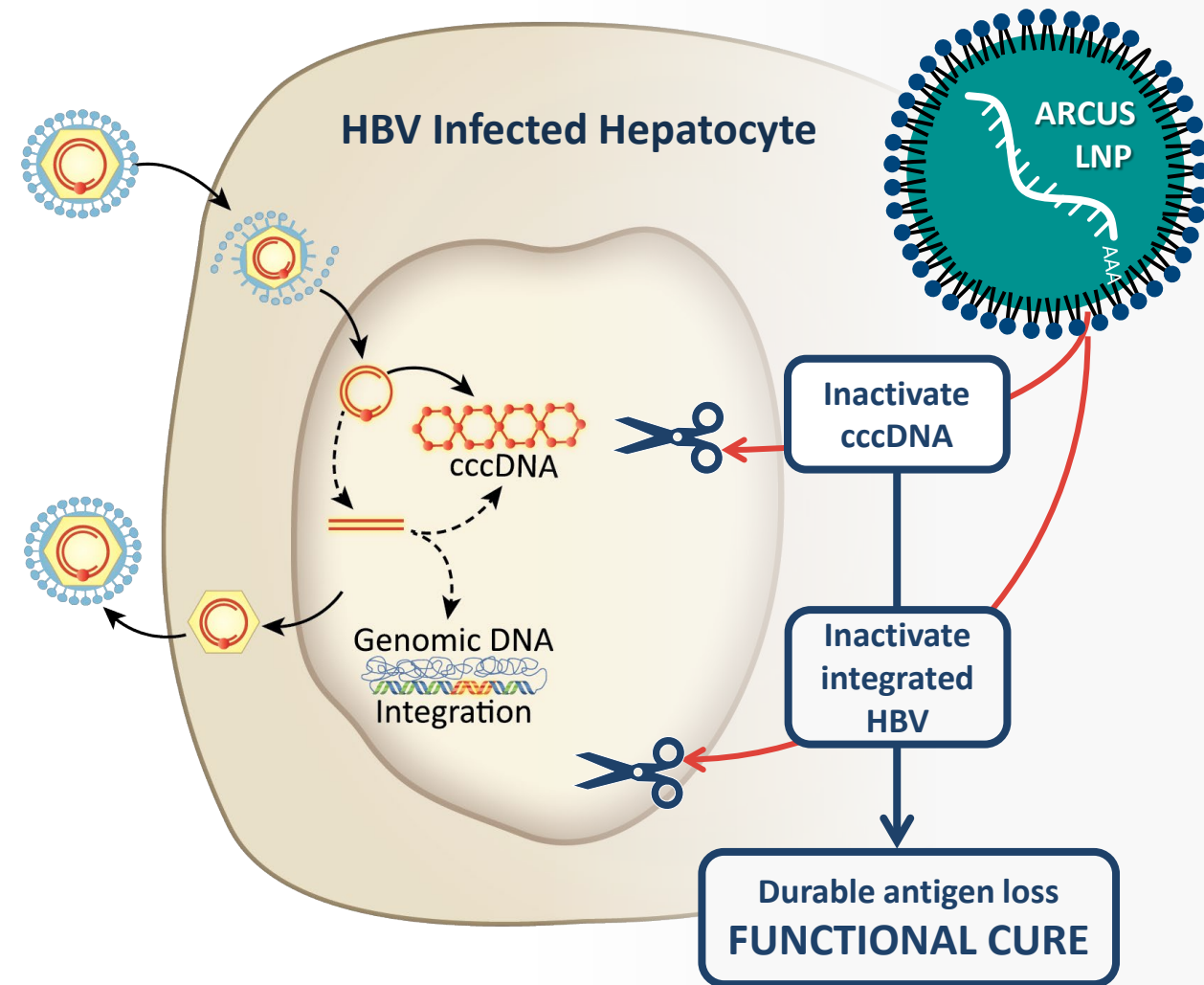


> 860,000
cHBV infections in the US



> 290 million
cHBV infections globally

- > 90% of infected infants develop cHBV
- ≤ 50% of infected children 1-5 years develop cHBV
- 5-10% of infected healthy adults develop cHBV



In vivo gene insertion collaboration with Novartis for hemoglobinopathies

Builds on the unique gene insertion capabilities of ARCUS® and further validates ARCUS as a premium genome editing platform



+



Develop single
ARCUS nuclease

Preclinical to
commercial

Collaboration with Novartis,
a global gene therapy leader

**Precision to develop a single
ARCUS nuclease** for certain
hemoglobinopathies such as
sickle cell disease and beta
thalassemia

**Goal to design ARCUS
nuclease for safe and efficient
in vivo gene insertion**

- ✓ Precision receives \$75M upfront for a single target/single nuclease
- ✓ Eligible to receive up to an additional \$1.4B in milestones and tiered royalties on sales of licensed products
- ✓ Collaboration adds hematopoietic stem cells (HSCs) to existing *in vivo* gene editing programs targeting the liver, muscle and central nervous system
- ✓ One-time, treatment for hard-to-treat genetic blood disorders such as sickle cell disease (SCD) and beta thalassemia

Hemoglobinopathies are a major world health problem

Sickle Cell Disease (SCD)

Affects the structure/function of hemoglobin, reducing the ability of red blood cells to transport oxygen

- Acute sickle cell pain crises and life-threatening complications

Beta Thalassemia

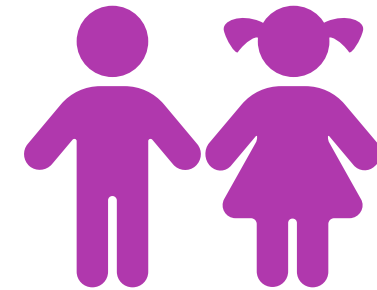
One of the most common genetic diseases caused by a disruption of normal hemoglobin production

- Complications: Overproduction of red blood cells inside and outside of the bone marrow, heart disease, chronic liver hepatitis, defects of the reproductive system, diabetes, and rare skin disorders

Sickle Cell Disease Affects
>300,000
newborns
annually



~1,000 children
in Africa are born with SCD
every day and > 50% will not
reach their 5th birthday

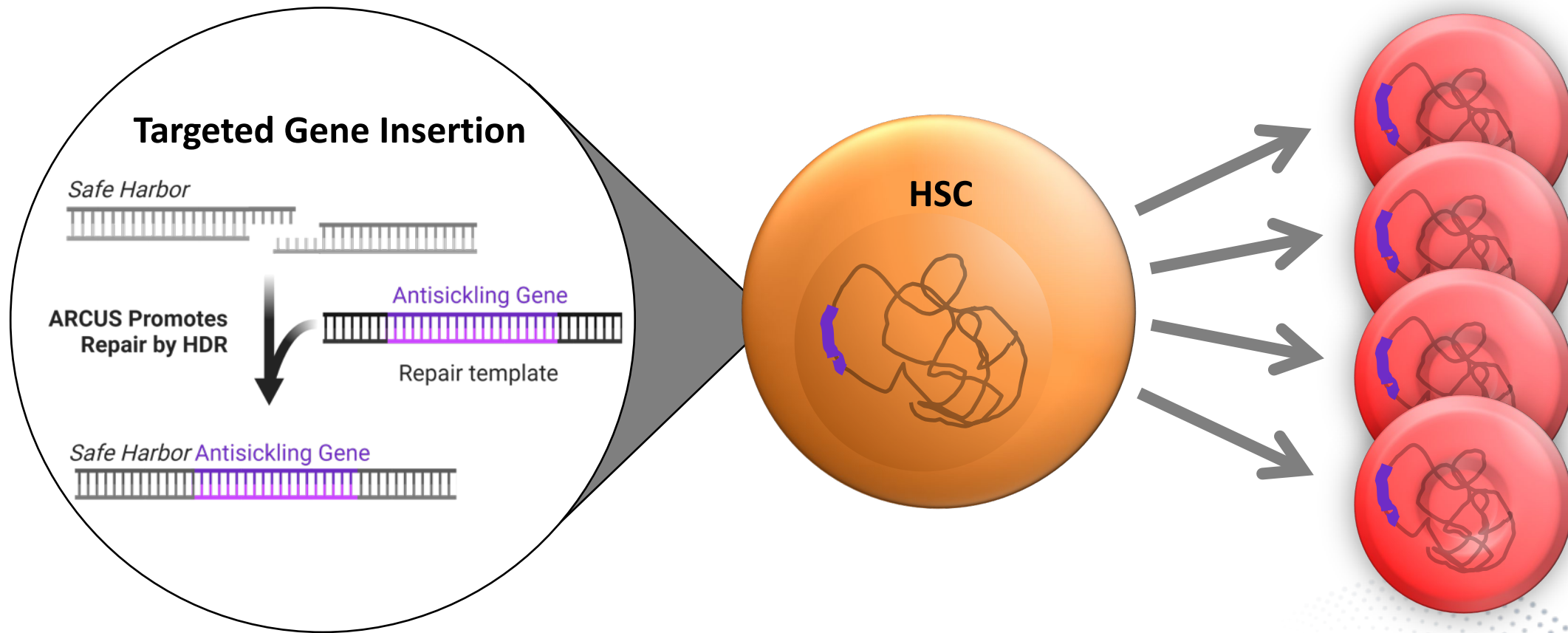


~68,000
children born with
thalassemia each year

Gene insertion to a “safe harbor” locus in hematopoietic stem cells

ARCUS will be used to add an antisickling gene to hematopoietic stem cells (HSCs)

Permanent integration of an antisickling gene into a “safe harbor” locus in HSCs is expected to prevent the sickle cell phenotype in mature erythrocytes.



Novartis collaboration complementary to Precision's existing *in vivo* gene editing partnership with Lilly

Research collaboration and license agreement aimed at treating challenging genetic diseases



+

Lilly

Pre-IND R&D

IND to Commercial

3 Initial collaboration for **three targets**, including Duchenne muscular dystrophy and **two other undisclosed programs targeting the liver and CNS**

+

3 Lilly retains right to select up to **three additional gene targets**

- ✓ Upfront payment of \$135M including \$35M equity
- ✓ Up to \$420M per target in development and commercialization milestones
- ✓ Mid-single digit to low-teens tiered royalties

Duchenne muscular dystrophy currently lacks a curative treatment

On average,
children **lose
their ability
to walk** by
age 12



Mutation on the X chromosome interferes with dystrophin protein production, which is needed to form and maintain healthy muscle

Affects approximately
1 in 3,500
live male births



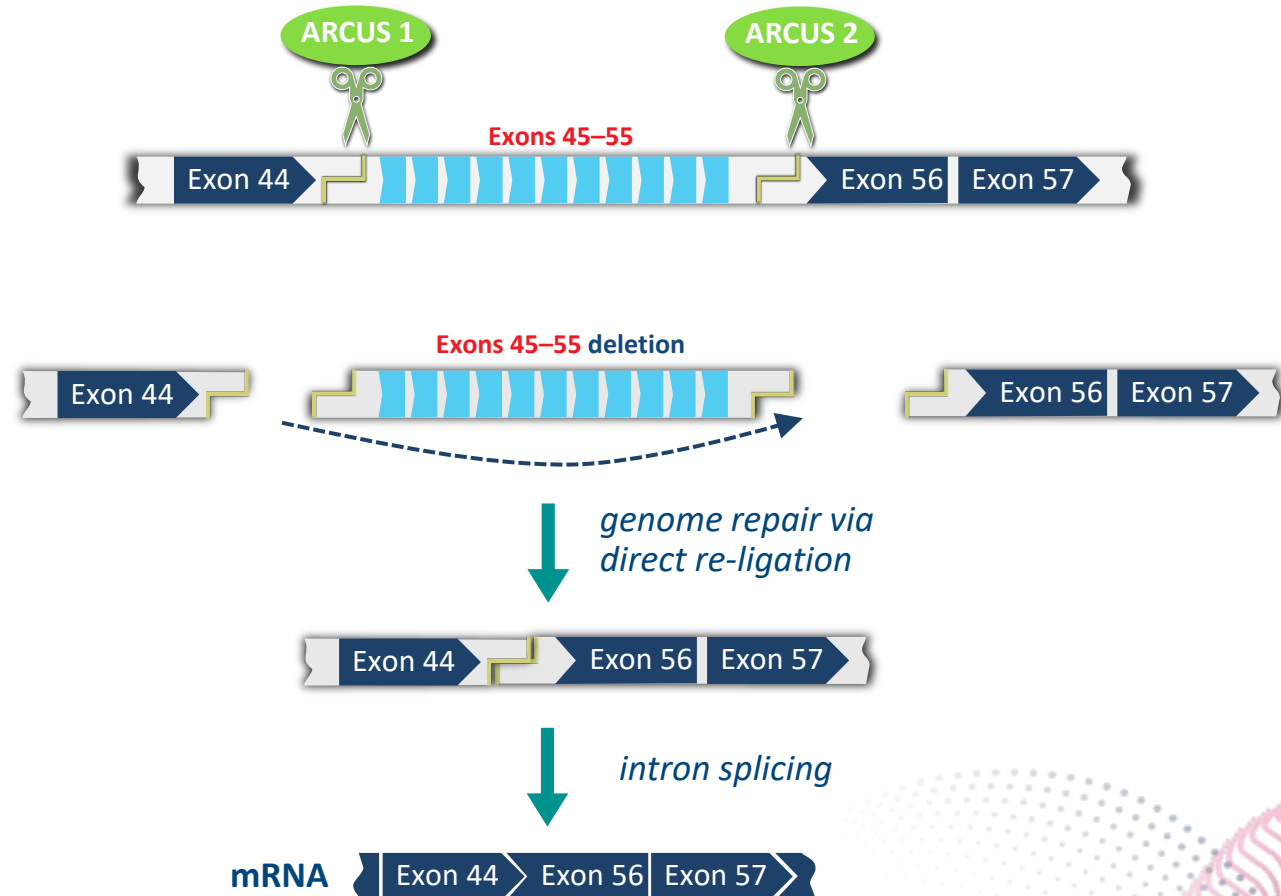
ARCUS for Duchenne muscular dystrophy

Restore dystrophin expression

Deleting exons 45-55 using a pair of ARCUS nucleases intended to remove a mutation hotspot responsible for >50% of DMD

GOAL

Restore dystrophin expression by **deleting exons 45-55** using a **pair of ARCUS nucleases** to remove a mutation hotspot responsible for > 50% of DMD



**Building the leading
therapeutic gene editing
company** focused on high
unmet needs in oncology and
genetic diseases

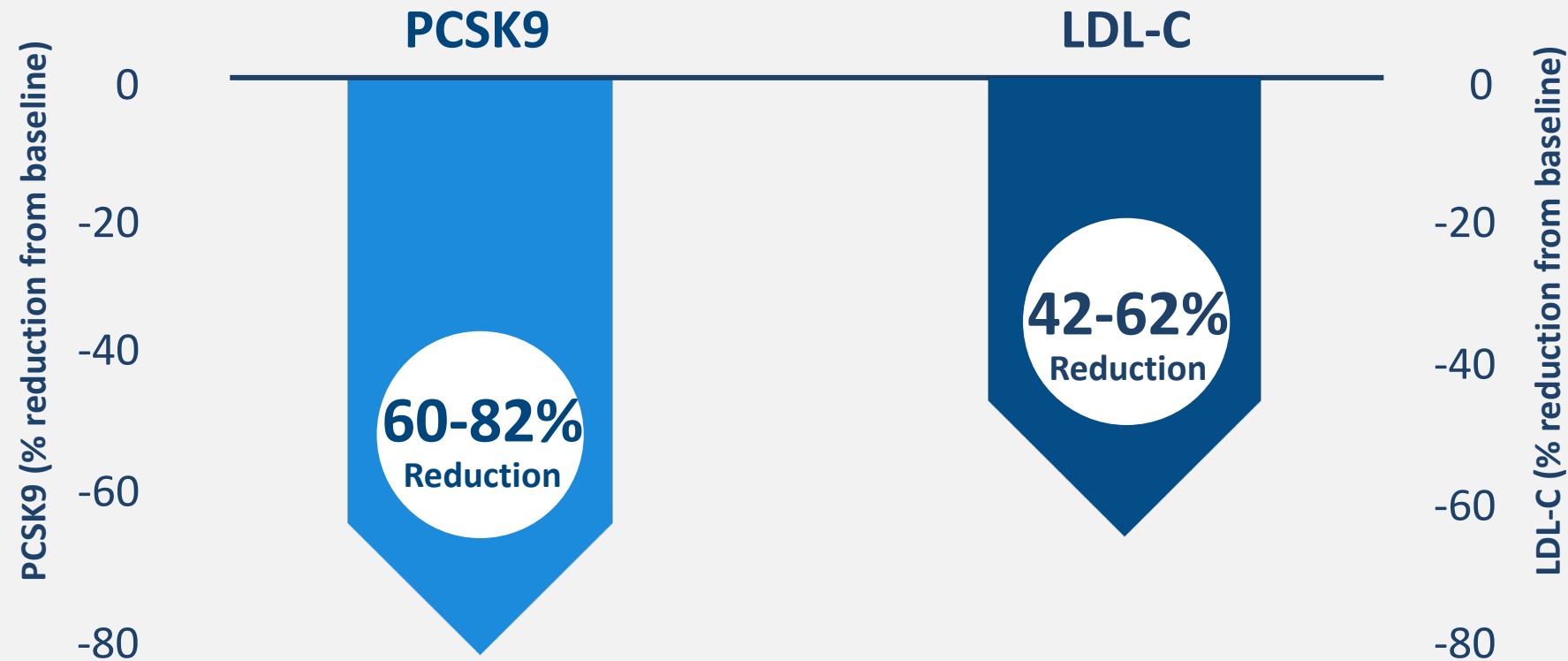
Technology: ARCUS, a premier genome editing platform

People: Fortified Senior Leadership Team with 15+ years perfecting ARCUS protein engineering

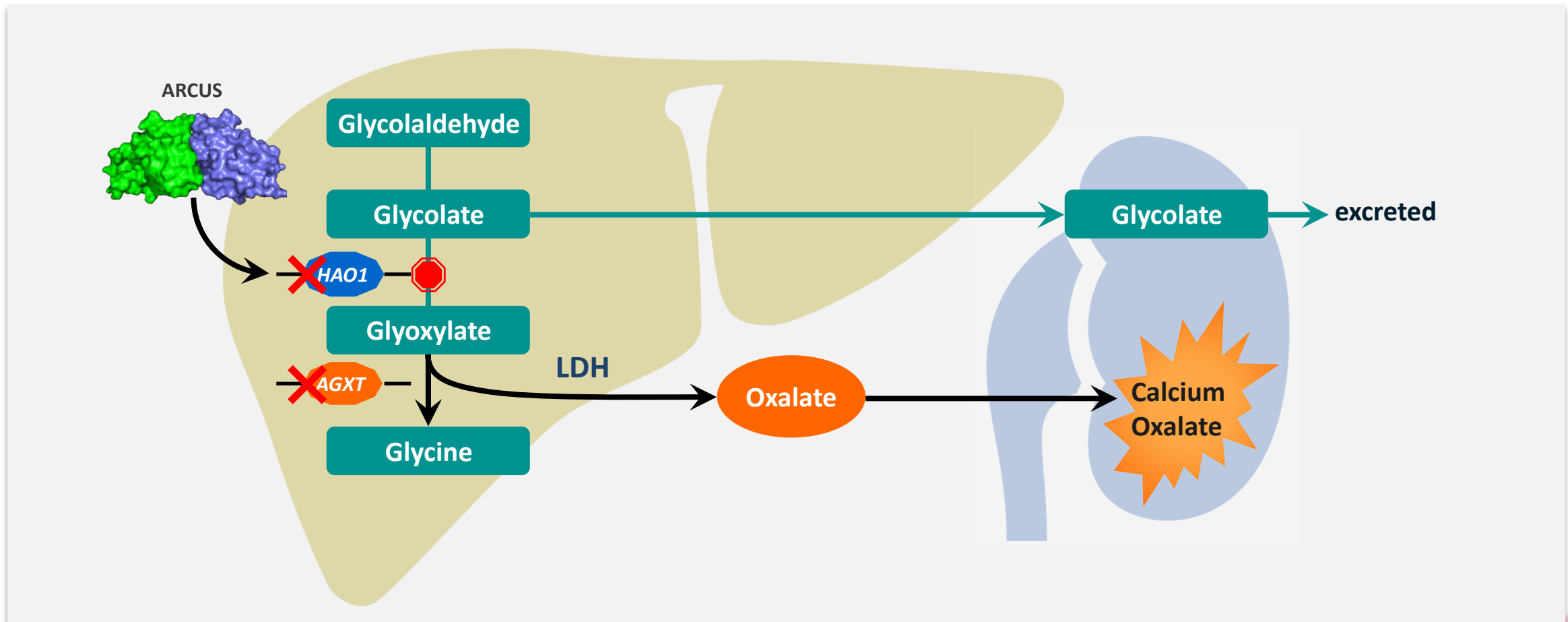
Focus & Discipline: Fiscal resources support 2+ year cash runway¹

Corporate Presentation | Appendix

Single-dose of AAV8-ARCUS significantly reduced serum PCSK9 levels & LDL-C levels in NHPs for 3yr

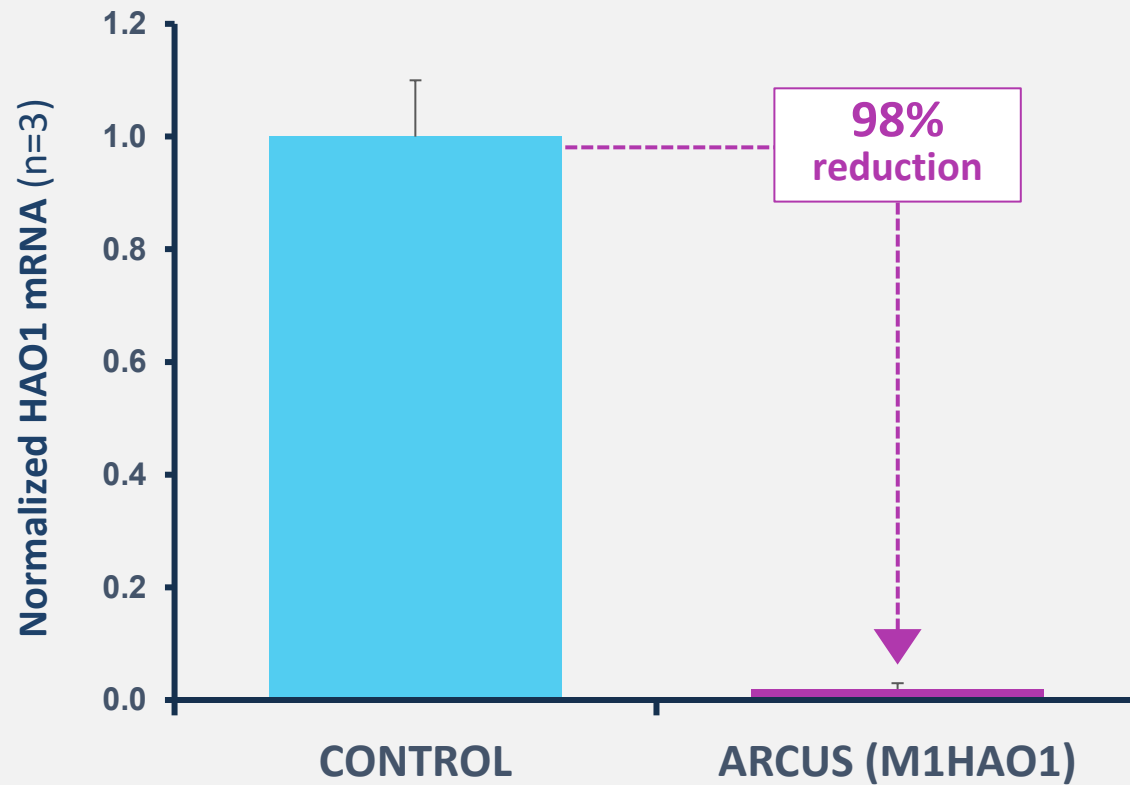


Suppressing expression of the HAO1 gene is a compelling approach to reduce calcium oxalate

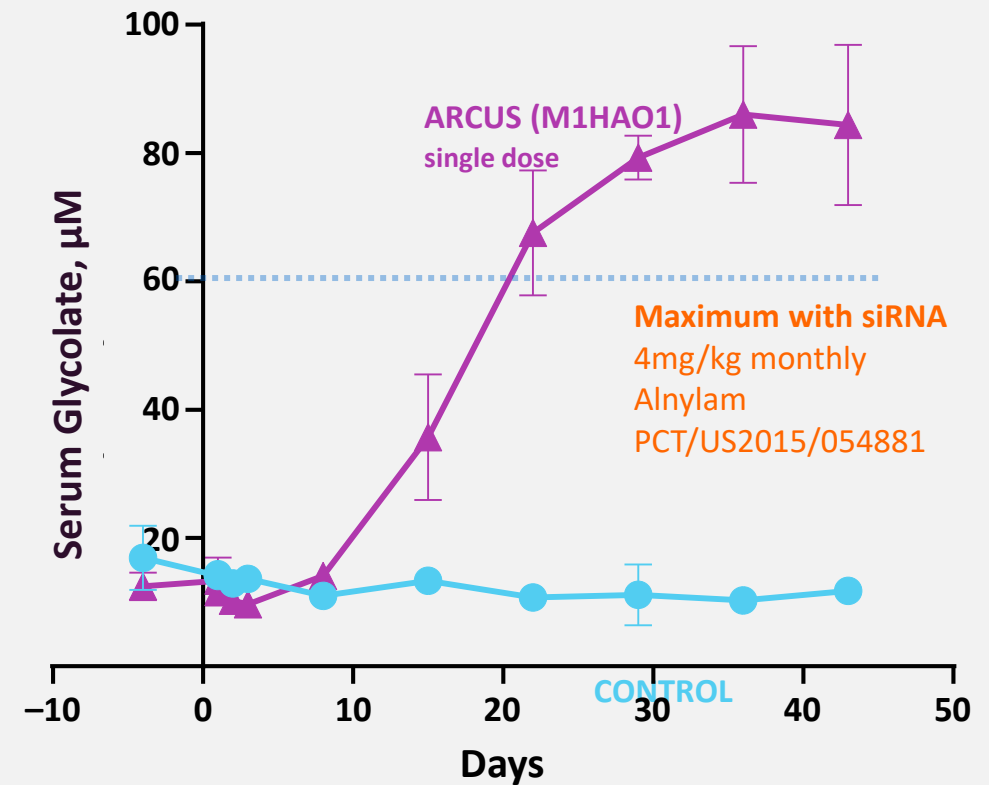


Decreased HAO1 mRNA by 98% and increased serum glycolate in NHPs

ARCUS Reduced *HAO1* mRNA Levels

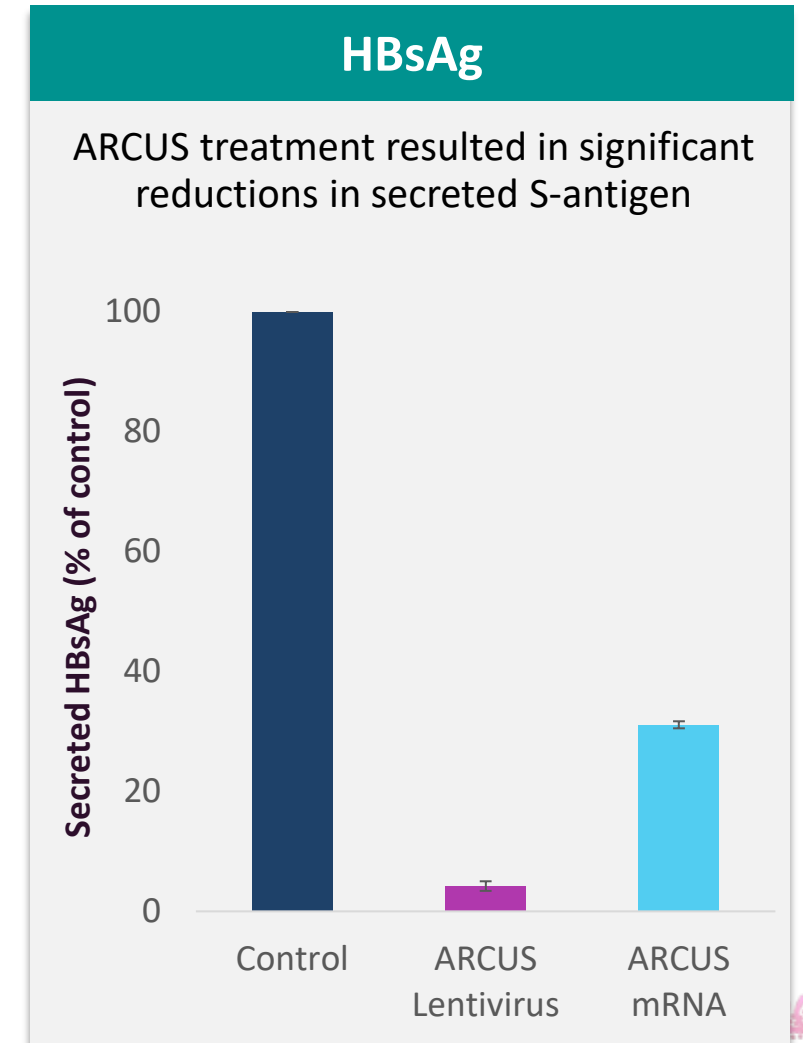
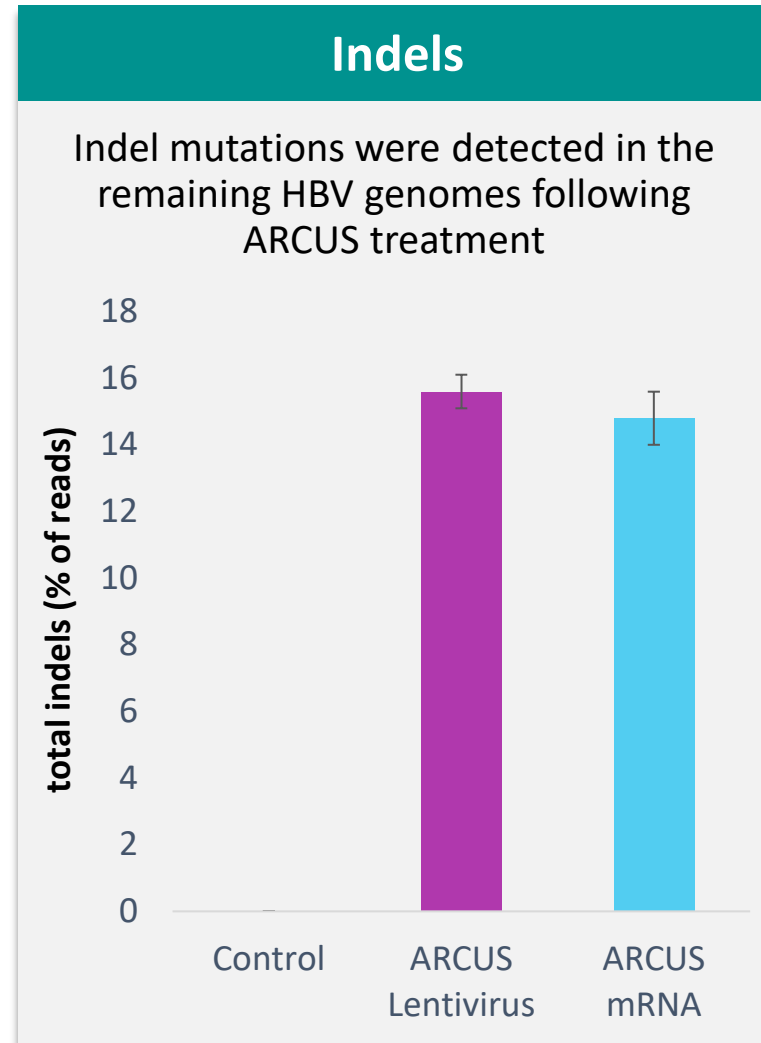
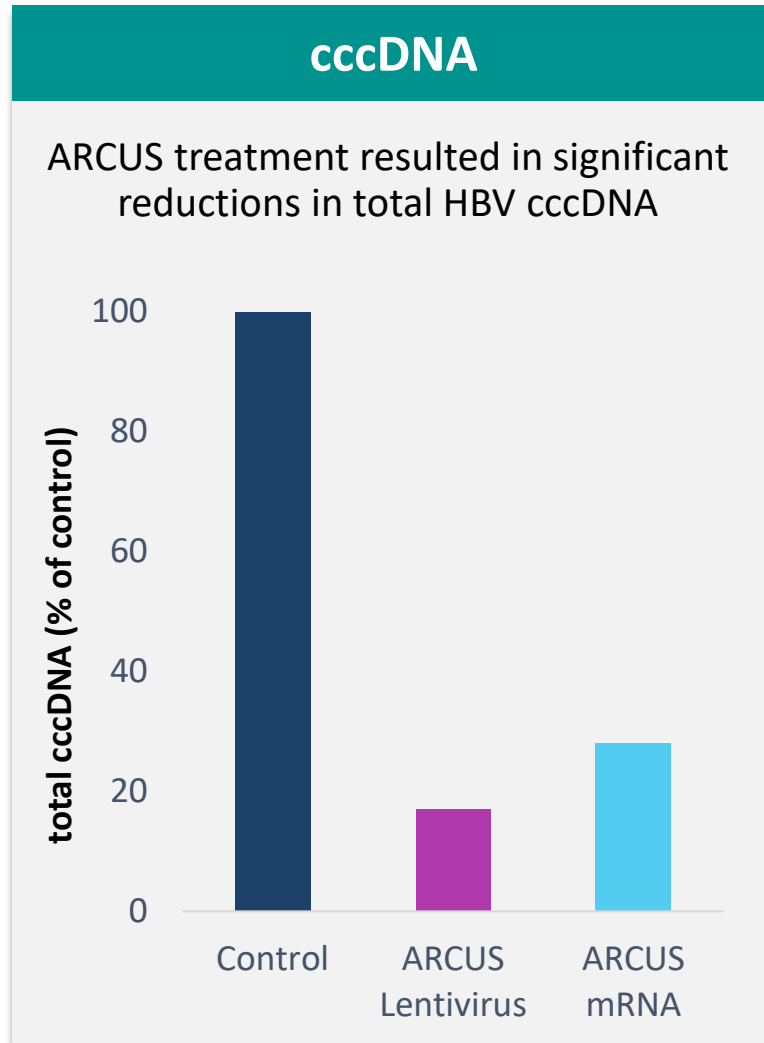


ARCUS Increased Serum Glycolate Levels



PBGENE-HBV: HBV-infected Human Hepatocyte Results

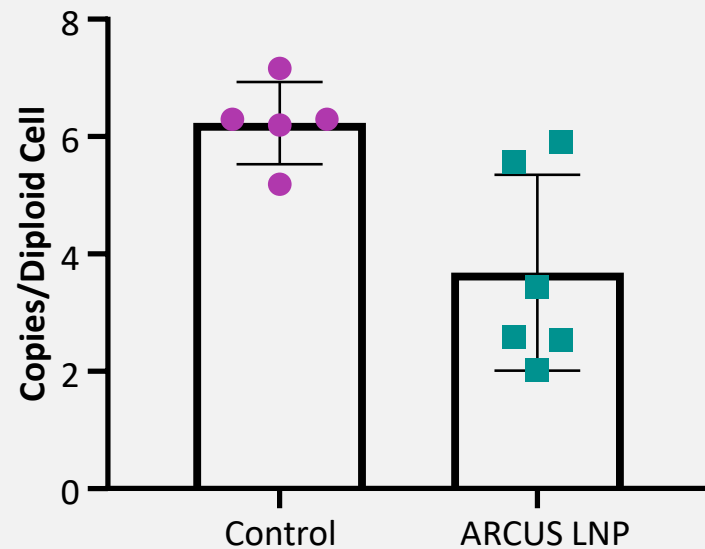
Antiviral activity in HBV-infected human hepatocytes



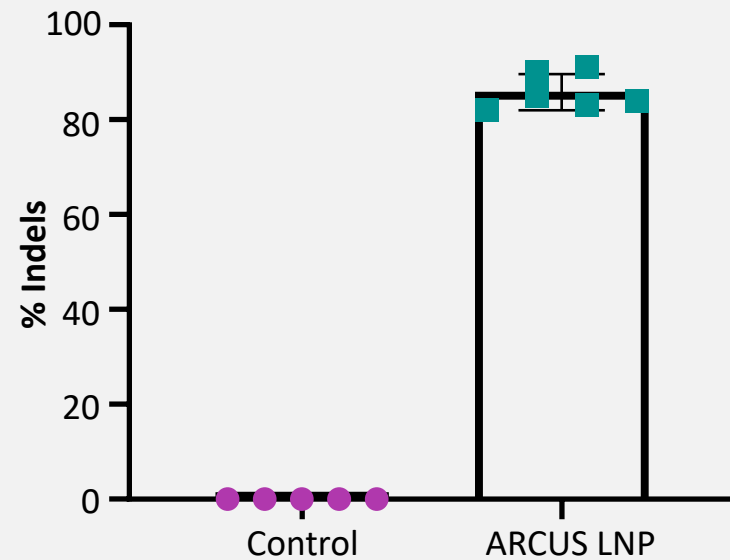
PBGENE-HBV: Mouse Episomal Model Results

LNP-ARCUS efficiently edited HBV sequences in an immunodeficient mouse model**AAV Copy Number**

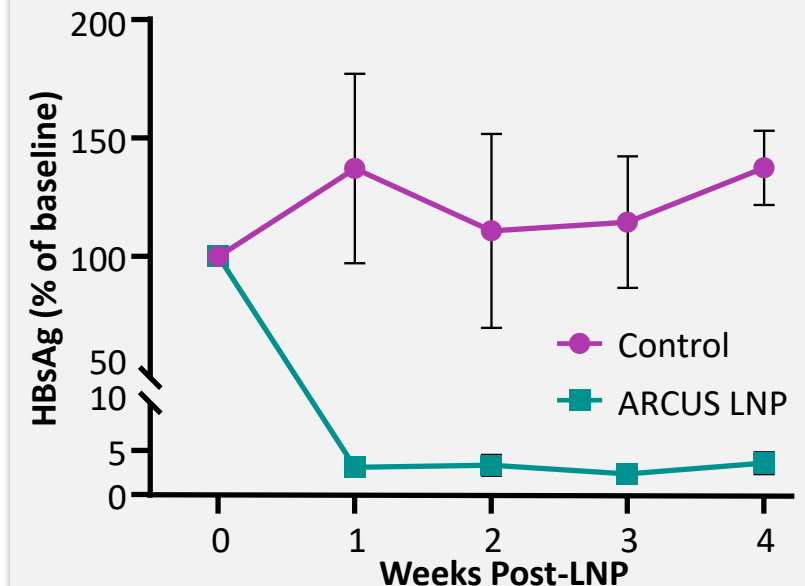
ARCUS treatment resulted in significant reductions in total AAV genome copies

**Indels**

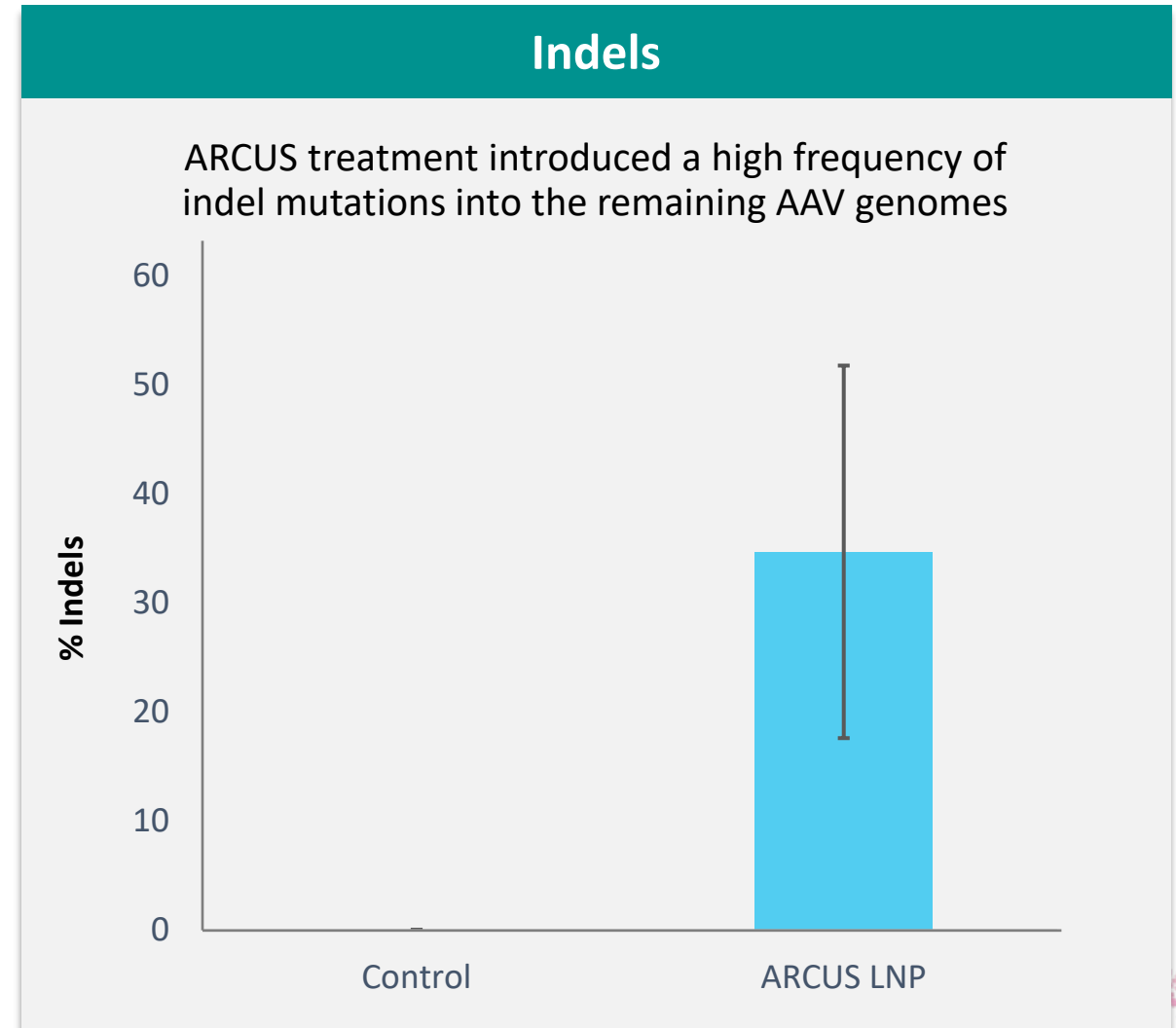
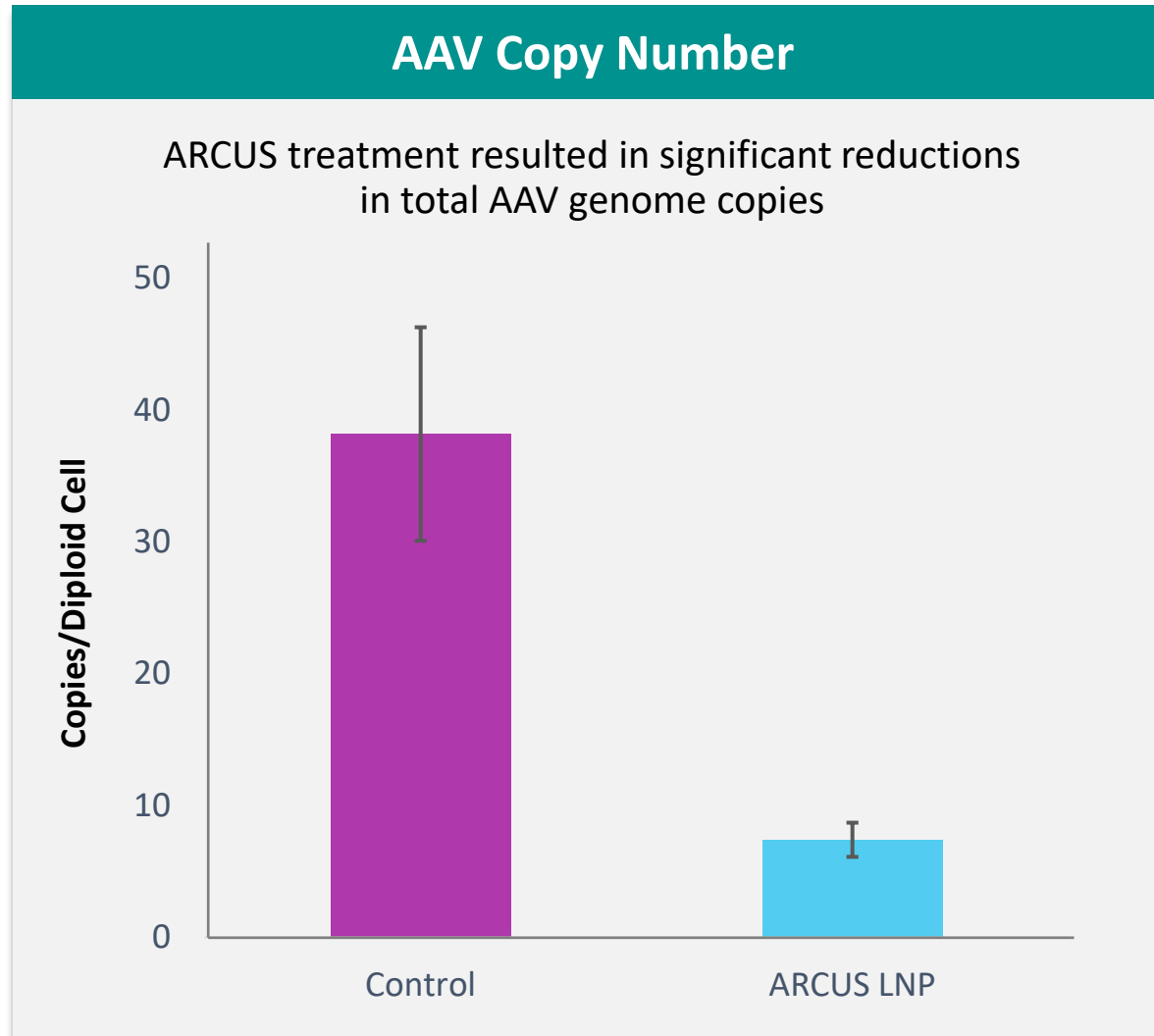
ARCUS treatment introduced a high frequency of indel mutations into the remaining AAV genomes

**HBsAg**

ARCUS treatment resulted in a significant reduction in serum S-antigen



LNP-ARCUS efficiently edited HBV sequences in a NHP model



Note: HBsAg is quickly neutralized in immunocompetent NHPs and is not useful as a biomarker in these animals