Corporate Presentation

November 2022

Sana Biotechnology

Cautionary Note Regarding Forward-Looking Statements

This presentation contains forward-looking statements about Sana Biotechnology, Inc. (the "Company," "we," "us," or "our") within the meaning of the federal securities laws. All statements other than statements of historical facts contained in this presentation, including, among others, statements regarding the Company's strategy, expectations, cash runway and future financial condition, future operations, and prospects, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "design," "due," "estimate," "expect," "goal," "intend," "may," "objective," "plan," "positioned," "potential," "predict," "seek," "should," "target," "will," "would" and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. The Company has based these forward-looking statements largely on its current expectations, estimates, forecasts and projections about future events and financial trends that it believes may affect its financial condition, results of operations, business strategy and financial needs. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. These statements are subject to risks and uncertainties that could cause the actual results to vary materially, including, among others, the risks inherent in drug development such as those associated with the initiation, cost, timing, progress and results of the Company's current and future research and development programs, preclinical and clinical trials.

For a detailed discussion of the risk factors that could affect the Company's actual results, please refer to the risk factors identified in the Company's SEC reports, including its Quarterly Report on Form 10-Q dated November 2, 2022. Except as required by law, the Company undertakes no obligation to update publicly any forward-looking statements for any reason.

Sana Biotechnology
Engineered Cells as Medicines

Ability to modify the genome and use engineered cells as medicines has the potential to be one of the most important advances in healthcare over the next several decades:

- Nearly every disease is caused by damage to or dysfunction of a cell
- Sana's ambition is to repair or replace any cell in the body

Platform progress, broad capabilities, and strong balance sheet enable us to execute on a broad vision:

- Goal: hypoimmune CD19 allo T (SC291) IND as early as 2022 with ~2 INDs per year going forward
  - Expect *in vivo* CAR T (SG295) and CD22 allo T (SC263) INDs in 2023; hypoimmune islet cells (SC451) IND for type 1 diabetes and BCMA allo T (SC255) IND for multiple myeloma expected in 2024
- Building expertise in key areas: delivery of genetic material, gene modification, immunology, biology, and manufacturing
- $511.6M cash and investments as of September 30, 2022; expect cash runway into 2025 enabling multiple data readouts across our platforms based on current timelines for lead programs
  - Slowed pace of investment for some programs with INDs expected in 2024+

Sana goal: Repair cells in the body when possible or replace them when needed

in vivo Cell Engineering

Repair and control the genes of any cell in the body

Deliver any payload…
(DNA, RNA, protein, organelle, integrating vs non-integrating)

To any cell…
(unlimited volume of distribution)

In a specific…
(e.g., just T cell)

And repeatable way
(limit immunogenicity)

ex vivo Cell Engineering

Replace any cell in the body

Manufacture any cell at scale…

That engrafts…
(the right cell in the right environment)

Functions…
(understand exact phenotype desired)

And persists
(overcome immune rejection and cellular signaling, such as apoptotic signaling)

Sana's platforms, technology, and programs

PLATFORM	TECHNOLOGY	PROGRAMS (CELL TYPES)	THERAPEUTIC AREA	PRE-CLINICAL PRODUCT CANDIDATE	POTENTIAL INDICATIONS
***ex vivo* cell engineering**	**Hypoimmune donor-derived**	T cells	Oncology	**SC291 [CD19]**	NHL/ALL/CLL
				SC263 [CD22]	NHL/ALL/CLL
				SC255 [BCMA]	Multiple myeloma
	Hypoimmune stem cell-derived	Islet cells	Diabetes	**SC451**	Type 1 diabetes
	Stem cell-derived (to migrate to hypoimmune)	Glial progenitor cells	Central nervous system (CNS)	**SC379**	Huntington's disease
					Pelizaeus-Merzbacher disease
					Secondary progressive multiple sclerosis
***in vivo* cell engineering**	**Fusogen**	T cells	Oncology	**SG295 [CD8/CD19]**	NHL/ALL/CLL
				SG239 [CD8/BCMA]	Multiple myeloma
				SG242 [CD4/CD19]	NHL/ALL/CLL
				SG221 [CD4/BCMA]	Multiple myeloma
				SG233 [CD8/CD22 (+CD19)]	NHL/ALL/CLL
		Hematopoietic stem cells	Hemoglobinopathies	**SG418**	Sickle cell disease
					Beta-thalassemia

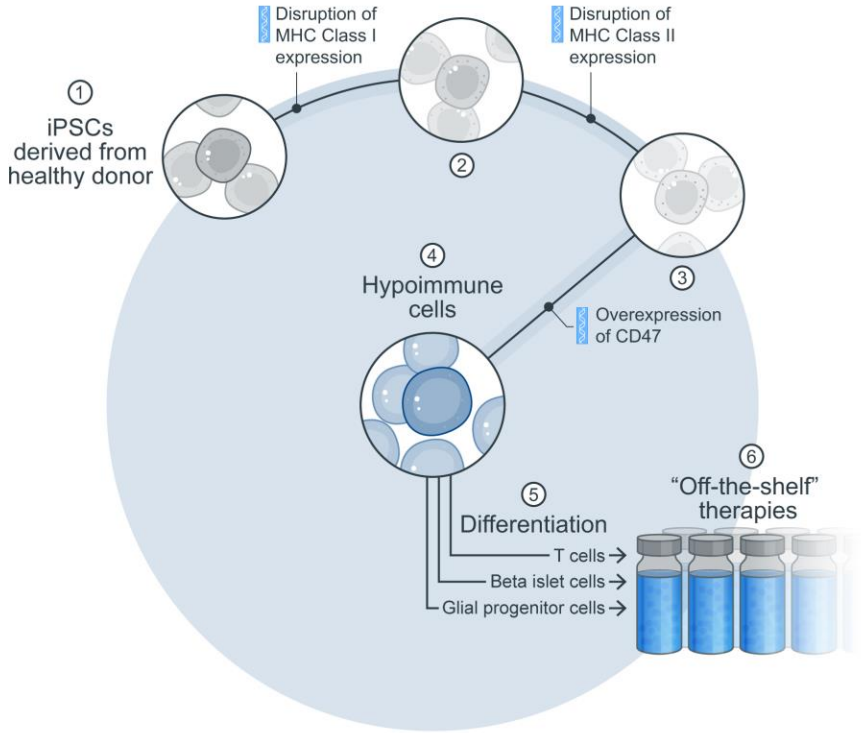
Hypoimmune technology: Protecting cells from immune rejection

Sana approach: Leverage insights from nature to create hypoimmune cells (HIP)

"Allogeneic" fetus:

- Half of fetal proteins are from the father, not the mother.
- However, the fetus is not rejected by the mother.

How can we protect our engineered cells from getting attacked from the recipient's immune system?



Hypoimmune cells evade rejection from the adaptive **and** innate immune system in mice

Evade the adaptive immune system

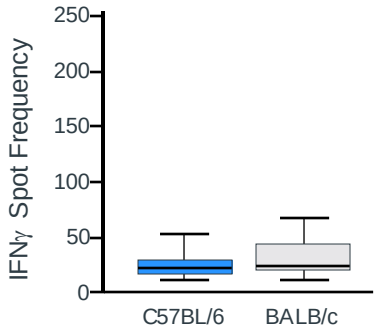
T cell Activation (ELISPOT)

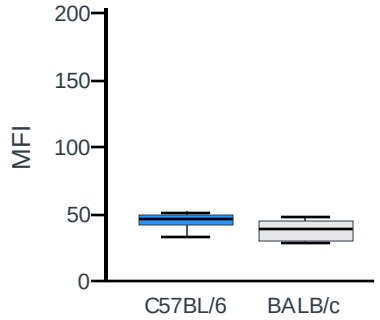
No systemic T cell activation with HIP cell transplantation

IgM Binding (FACS)

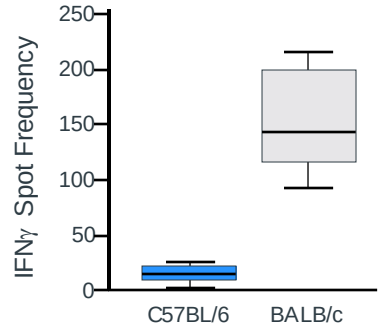
No binding of donor-specific antibodies against HIP cells

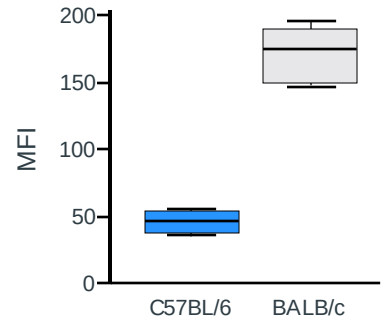
Hypoimmune iPSC





Unmodified iPSC





Representative of results across 5 mice for the unmodified arm and across 6 mice for the hypoimmune arm.

Evade the innate immune system

NK Cell Killing

No NK cell killing of HIP cells

Wildtype Unmodified Cells

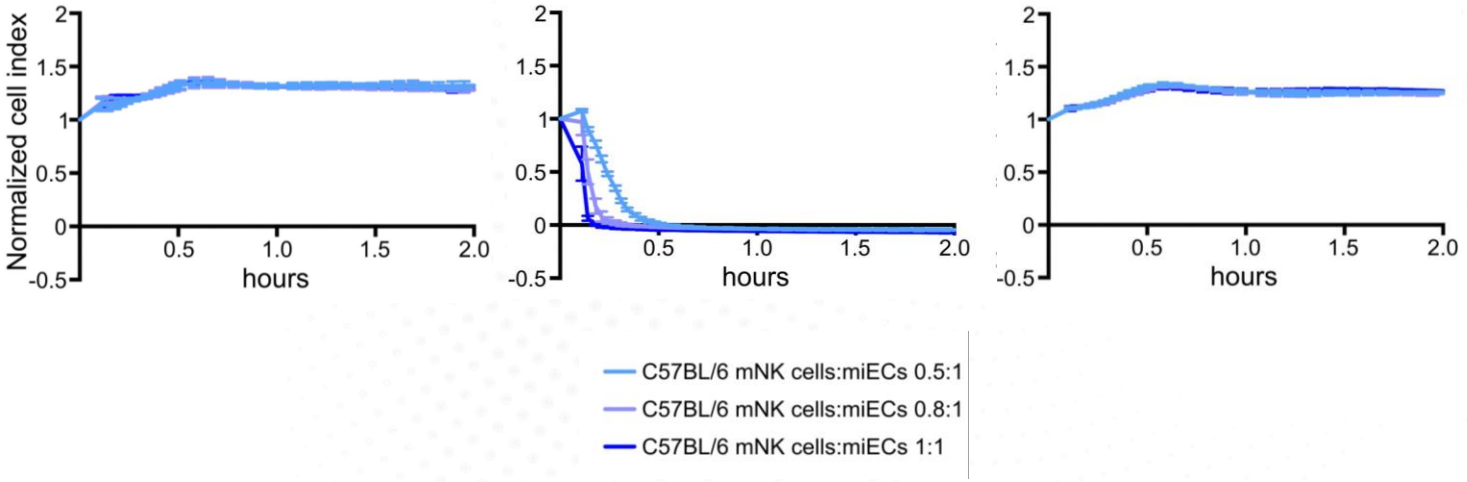
No killing of unmodified cells by NK cells

MHC Class I/II Disruption

Killing of partially edited iPSC; HLA I/II knockout by NK cells

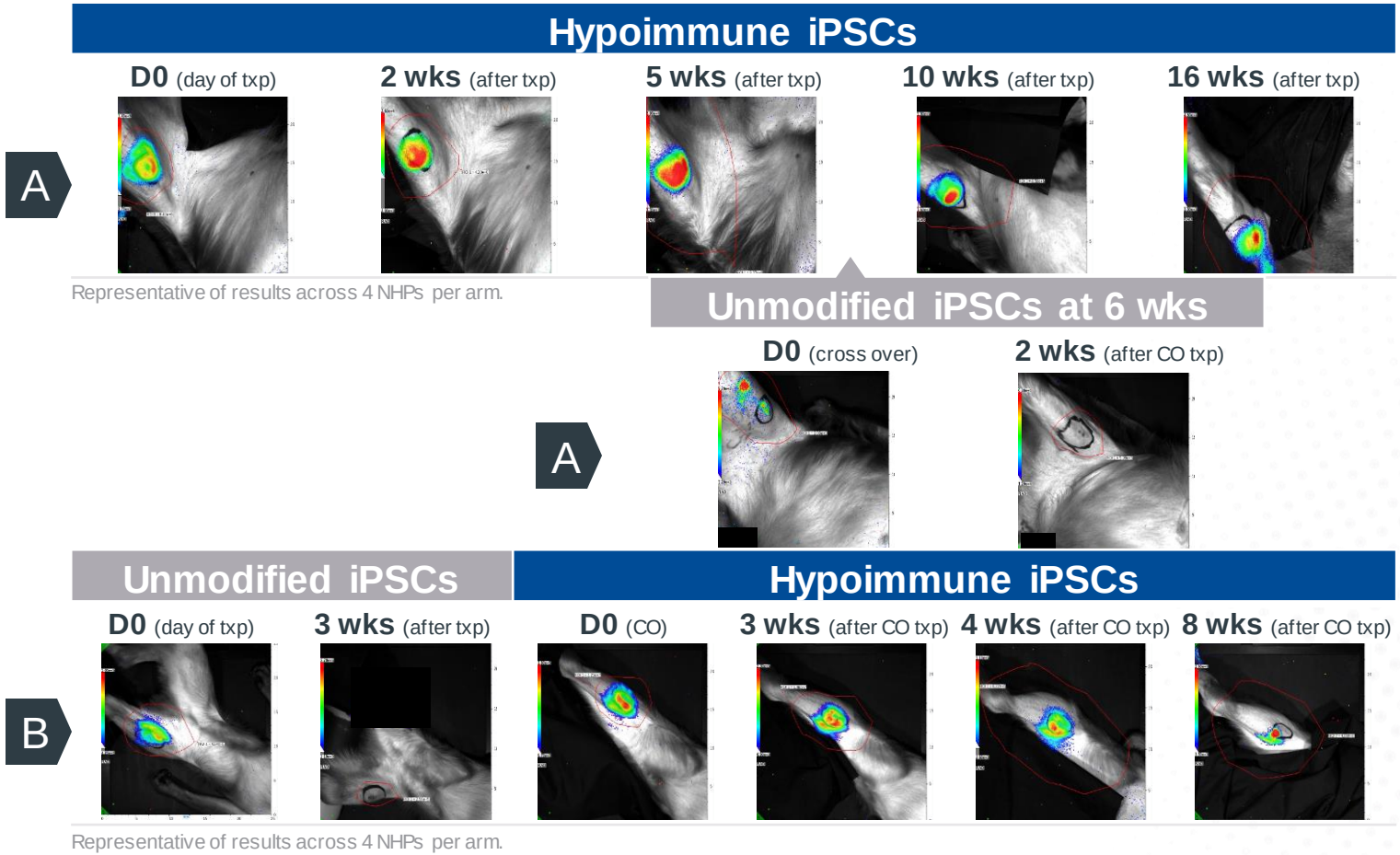
MHC Class I/II Disruption & CD47 Overexpression

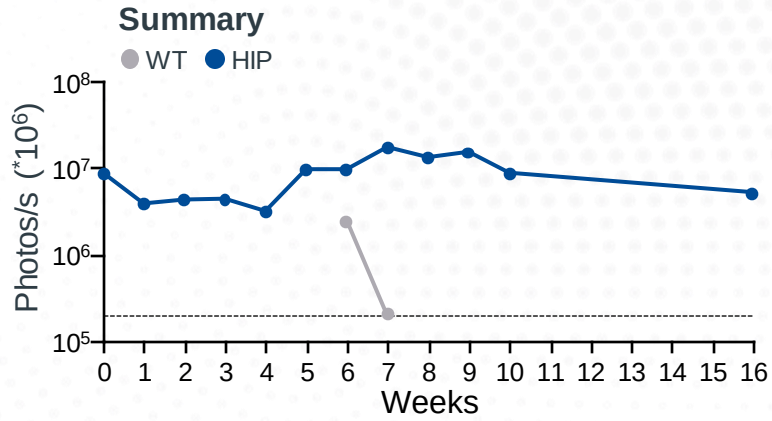
No killing of HIP cells by NK cells

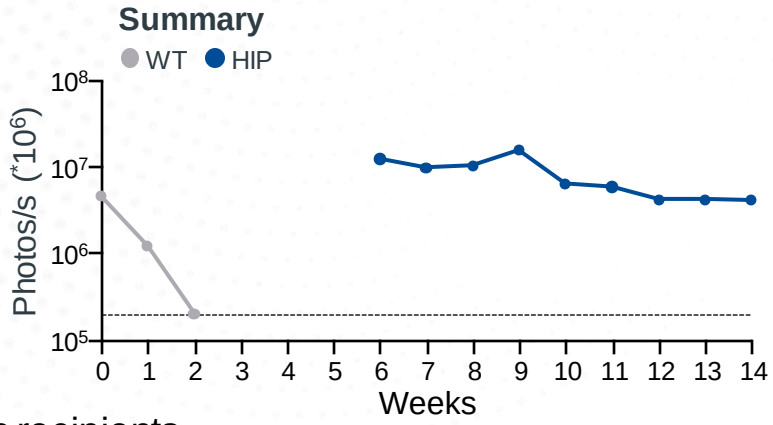


Deuse T, …, Schrepfer S. *Nat Biotechnology.* 2019;37:252-258

Hypoimmune cells survive *in vivo* in NHP while unmodified iPSCs get rejected







- NHP unmodified iPSCs (wt) & NHP hypoimmune iPSCs (HIP) were transplanted into 8 allogeneic recipients

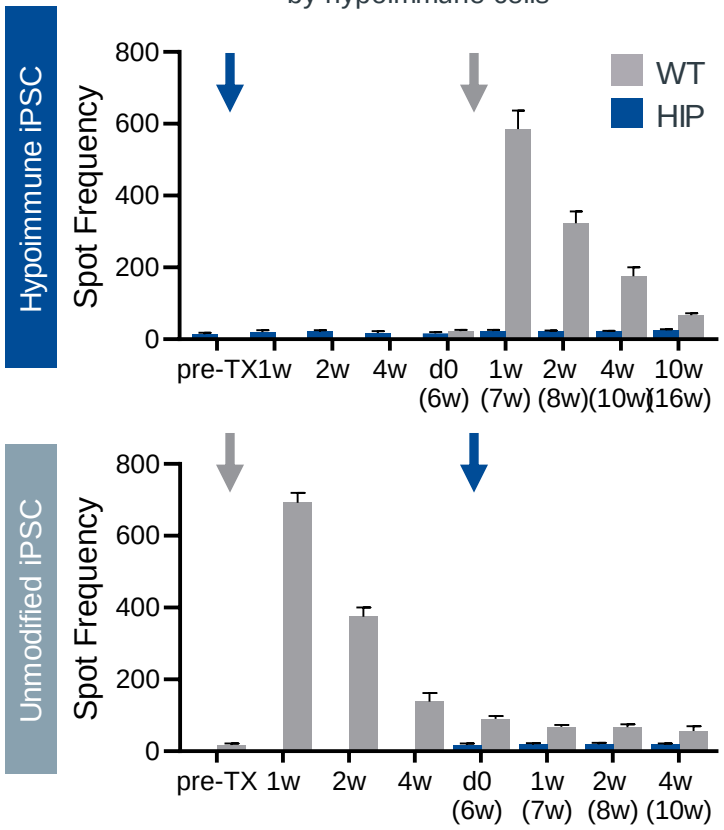
CO, cross over; Txp, transplant

Hypoimmune cells evade rejection from the adaptive **and** innate immune system in NHPs

Transplantation of NHP iPSCs into allogeneic NHPs: immune evasion is achieved even after prior sensitization

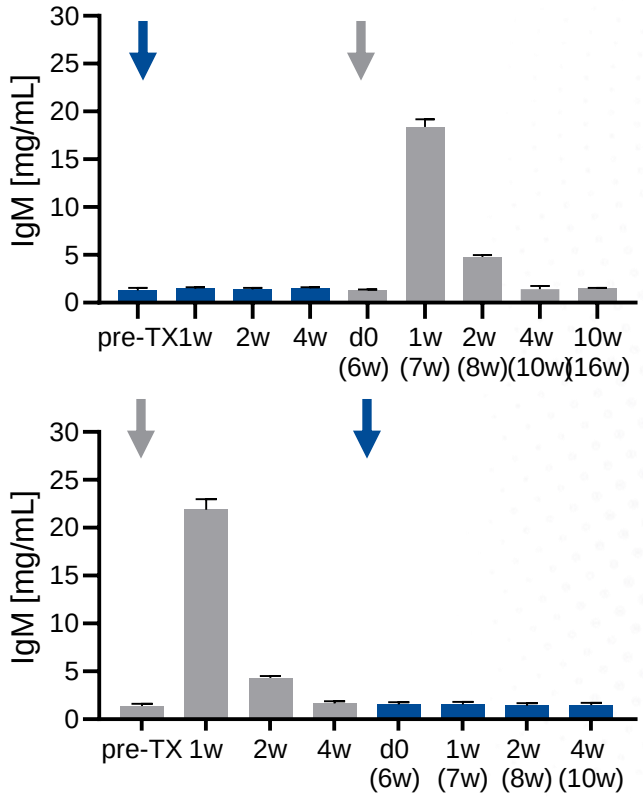
T cell Activation (ELISPOT)

No systemic T cell activation by hypoimmune cells



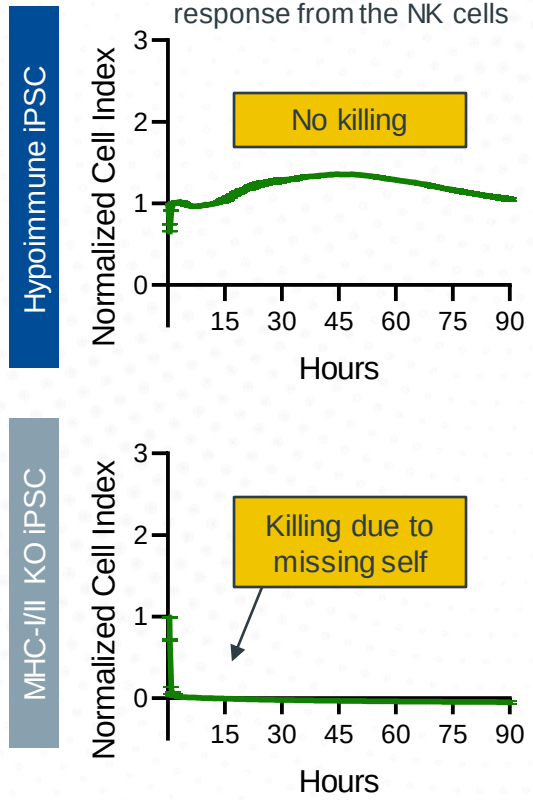
IgM Production (ELISA)

Implantation of hypoimmune cells does not cause activation of antibody production

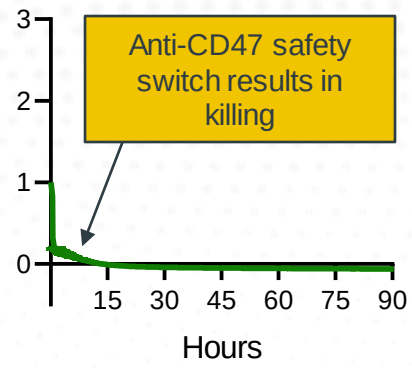


Killing by NK Cells

Hypoimmune cells do not activate the "missing self" response from the NK cells



Anti-CD47 safety switch



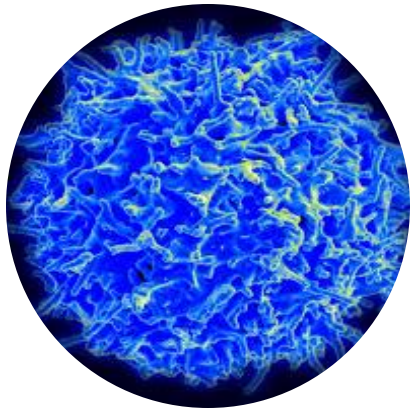
Representative of results across 4 NHPs per arm.

Sana is pursuing a broad *ex vivo* cell engineering strategy

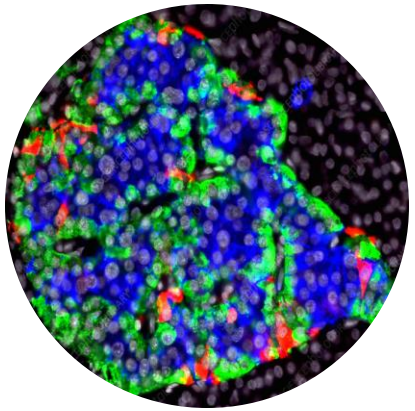
Transforming *ex vivo* cell engineering through development of hypoimmune cell platform

Differentiate pluripotent stem cells with hypoimmune edits

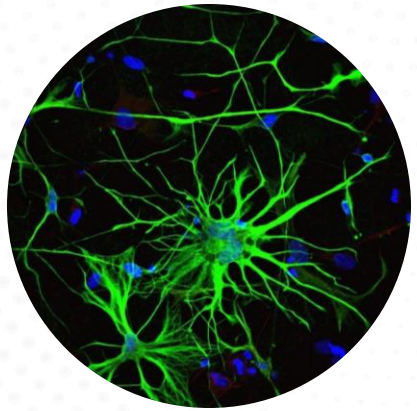
Programs that benefit from, but do not require hypoimmune edits



T cells



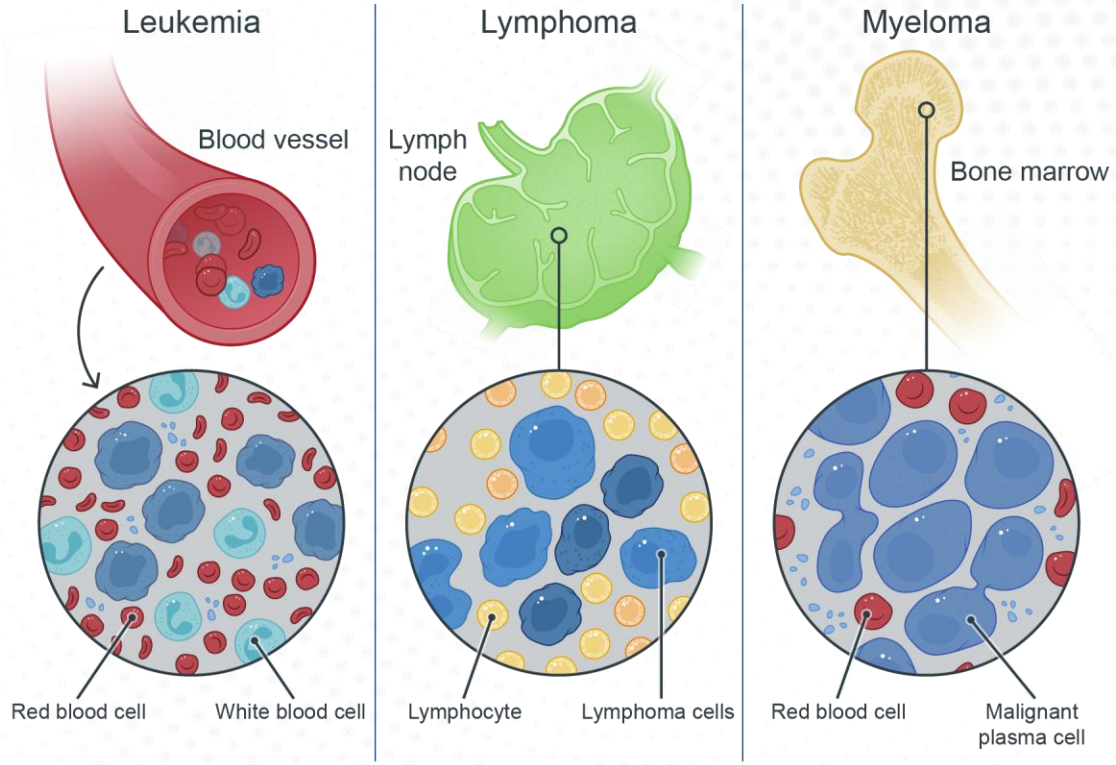
Pancreatic islets



Glial progenitor cells

High unmet need remains for blood cancers

- Significant unmet need in B cell malignancies and multiple myeloma in the US and EU alone:
  - ~250,000 new cases annually[1]
  - Est. 100,000 deaths annually[1]
- <10,000 patients have been treated with CAR T therapy to date[2]
- Of those treated, many do not respond and many relapse
- Manufacturing and access challenges remain for many patients



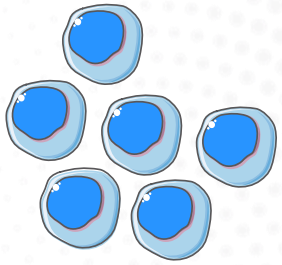
[1]World Health Organization, GLOBOCAN 2020
[2]Financial Reports, through Q3 2021; Evaluate Pharma, through Q3 2021

Sana's hypoimmune allo T is potentially best-in-class

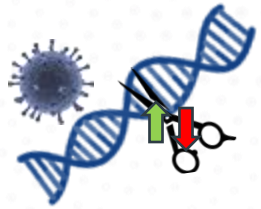
Immune Challenges	Current Allo T	**Sana Hypo Allo T**
GvHD	✓	✓
HvGD: Adaptive immune system	?	✓
HvGD: Innate immune system	✗	✓

GvHD, graft versus host disease; HvGD, host versus graft disease.

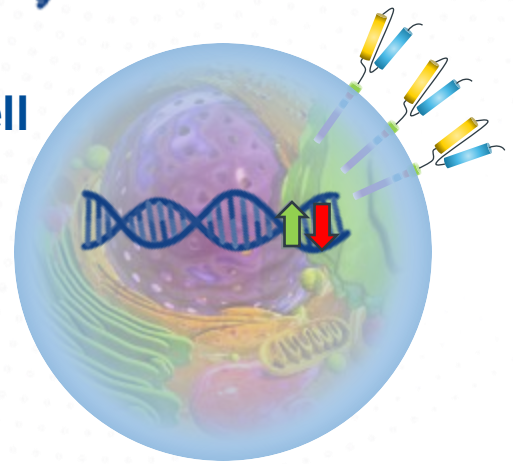
1. **Donor or iPSC T cells**



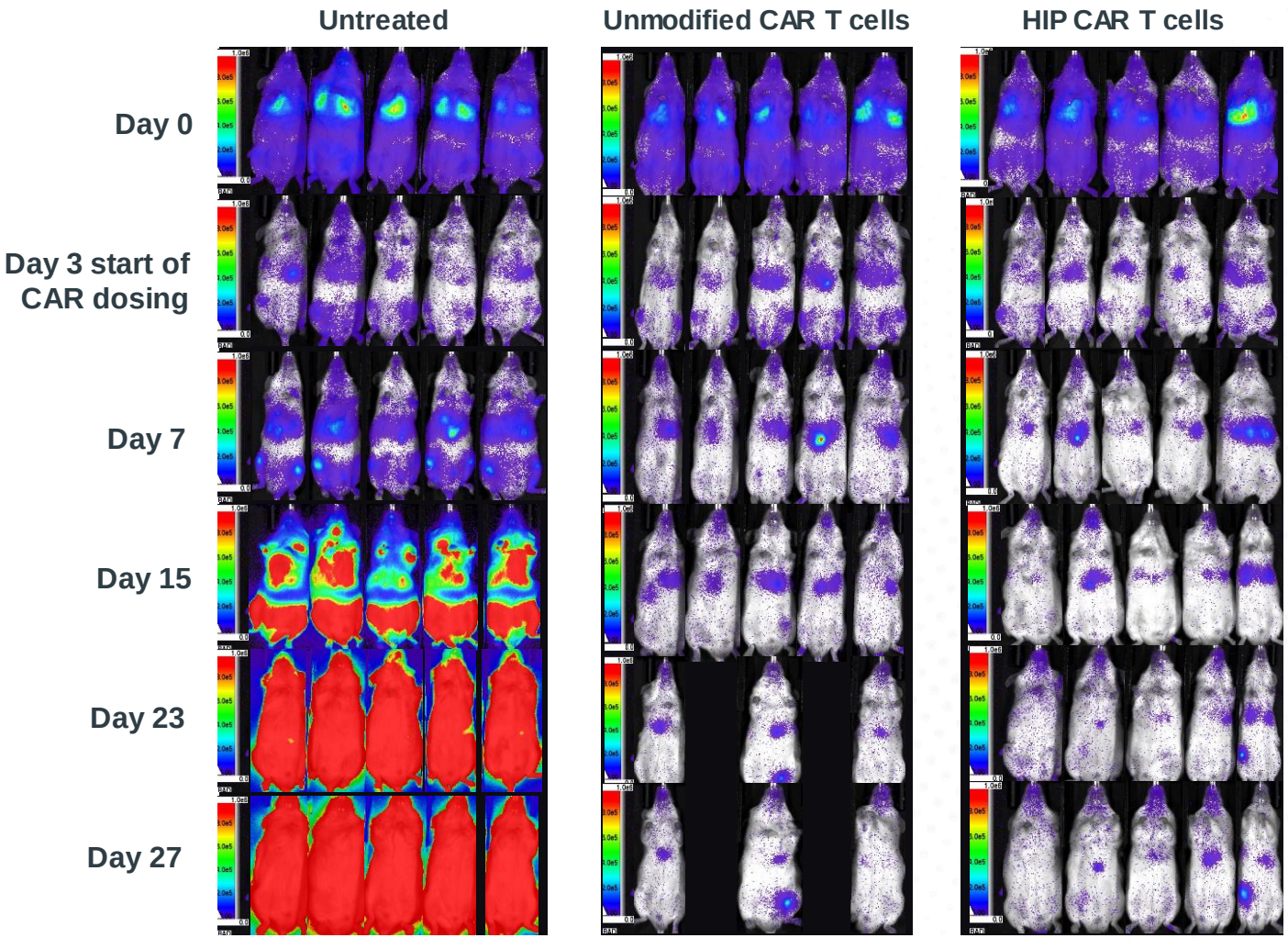
2. **Cell engineering**



3. **CD19 targeted HIP allogeneic T cell**



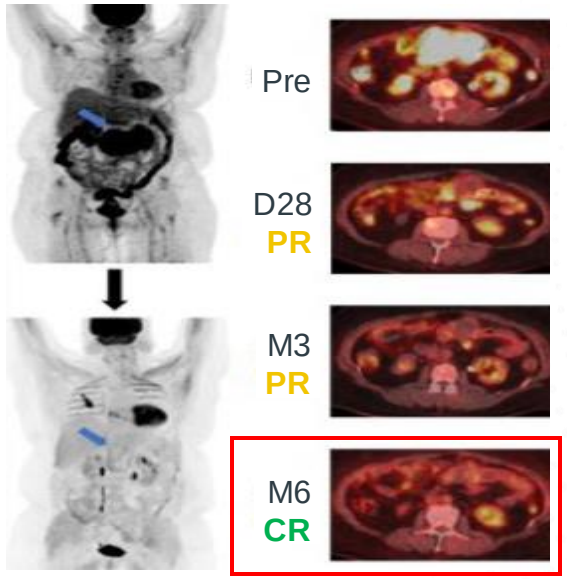
CD19 HIP CAR T cells clear tumor *in vivo*



Clinical study shows CD22 CAR T efficacy in treating relapsed lymphoma after prior CD19 CAR T therapy

	Patient 1
Prior lines of therapy	5
Prior CAR T therapy	Yes
Product previously received	Yescarta
Antigen targeted	CD19

Blood 2021 Apr 29;137(17):2321-2325. doi: 10.1182/blood.2020009432.



LBCL	Total (N=24)
Median follow up, months [range]	8.6 [1.6-21.3]
Overall Response Rate*, n (%)	19 (79%)
CR Rate	14 (58%)

Miklos et al, ASH 2021
Total is a combination of DL1 and DL2

Minimal ICANS / CRS observed across dose levels

Parameter	DLBCL DL1 (N=15)	DLBCL DL2 (N=9)	Total (N=24)
Cytokine release syndrome*, n (%)			
None	1 (7%)	0 (0%)	1 (4%)
Grade 1	6 (40%)	1 (11%)	7 (29%)
Grade 2	8 (53%)	7 (78%)	13 (54%)
Grade 3	0 (0%)	1 (11%)	1 (4%)
Neurologic events / ICANS*, n (%)			
Grade 1	1 (7%)	1 (11%)	2 (8%)
Grade 2	1 (7%)	1 (11%)	2 (8%)

Miklos et al, ASH 2021

Sana Biotechnology

Best-in-class, broadly accessible allogeneic CAR T cells

- Expect to file our first allo T IND targeting CD19 as early as this year
- Fully-human, clinically validated CD22 CAR with potential to address CD19 CAR T failures
- Fully-human, clinically validated BCMA CAR to potentially treat multiple myeloma
- Targets beyond CD19, CD22, and BCMA

Type 1 diabetes represents a large unmet need with a loss of ~15 years of life[1]

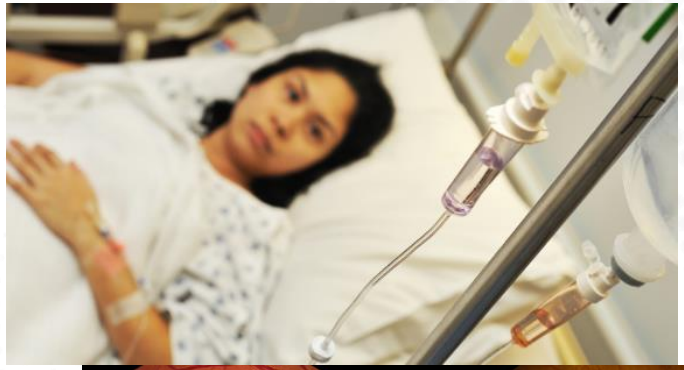
Large unmet need remains

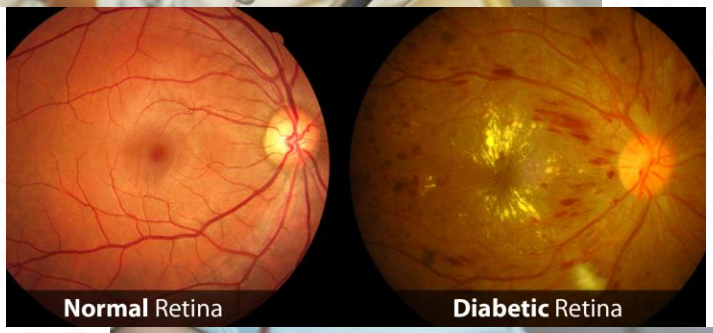
- Disease where destruction of insulin-producing beta cells in the pancreas results in inability to control blood glucose

- 1.6M patients with type 1 diabetes in the US and 2.4M in Europe[2]; 51k new patients/year combined[3]

- Long-term complications: end-organ damage, including heart attack, stroke, retinopathy, and nephropathy

→ Our goal is to produce hypoimmune beta cells that evade the immune system and normalize glucose

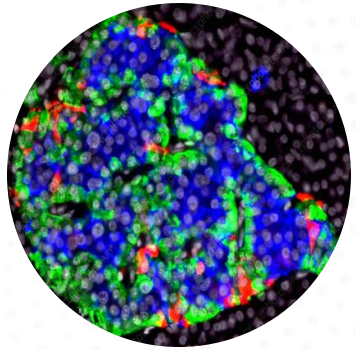




[1]Rawshani *et al*, Lancet 2018
[2]Centers for Disease Control and Prevention, Diabetes Report, 2017-2018
[3]National Institutes of Health, Health Promot Perspect 2020

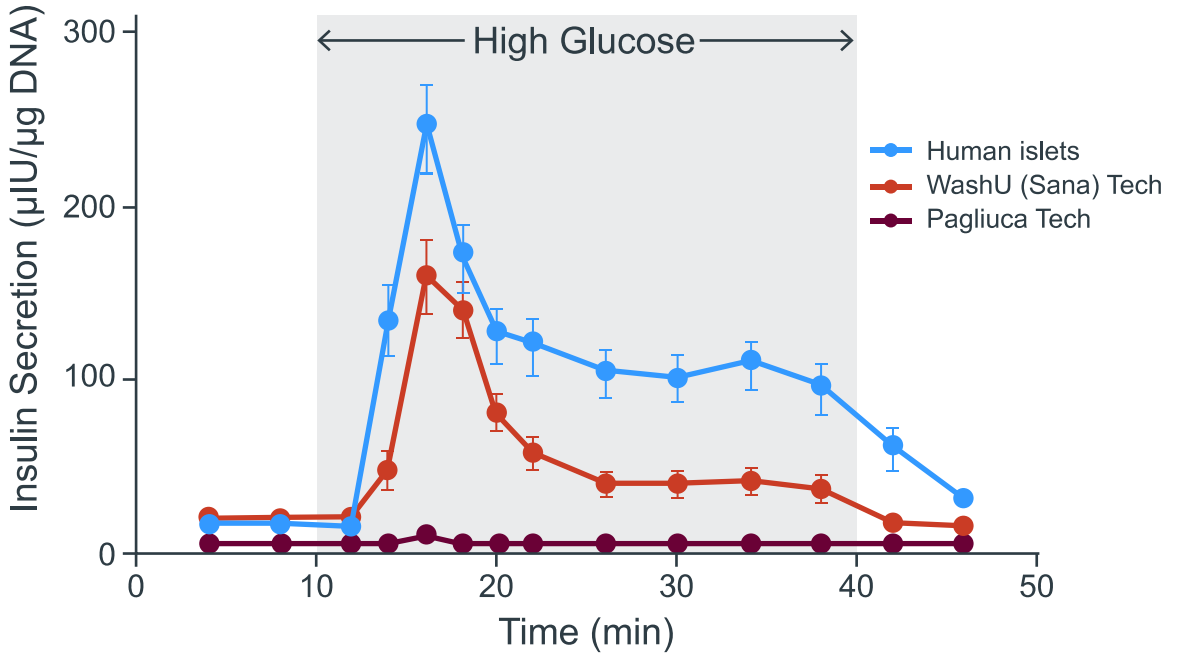
Progress toward turning beta cells into medicines

1. **Make** functional beta cells from iPSCs cells ✓
2. **Hide** beta cells from allogeneic rejection ✓
3. **Hide** beta cells from autoimmune reaction ✓
4. **Create** GMP supply chain

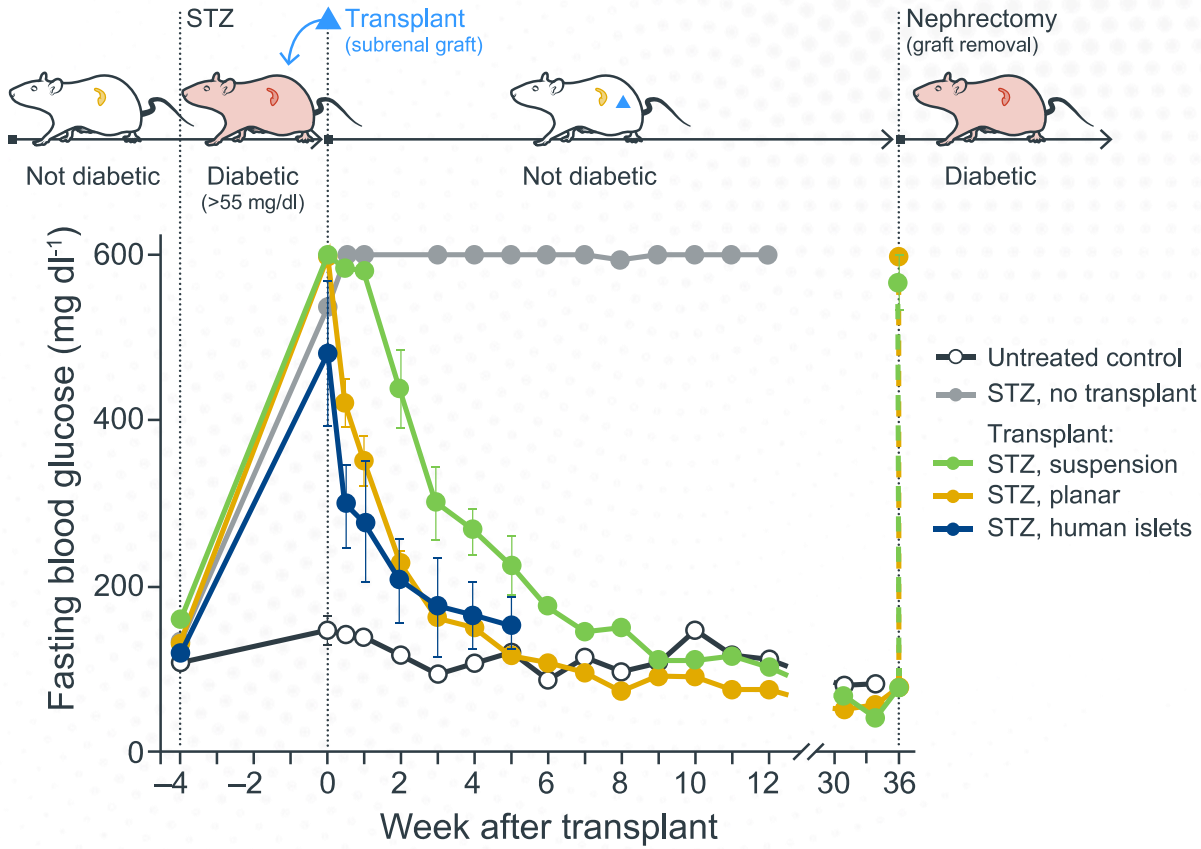


Stem cell-derived pancreatic islet cells lead to robust function

Superior insulin secretion and faster kinetics *in vitro*

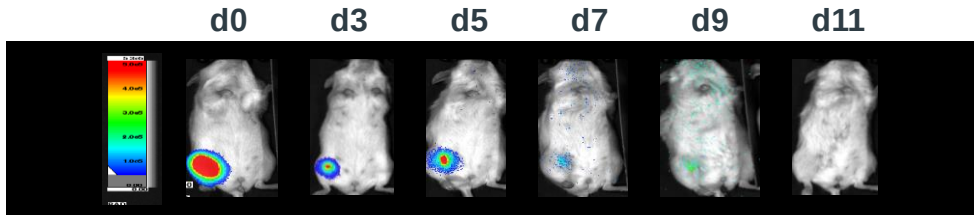


Robust rescue of type 1 diabetes mouse model

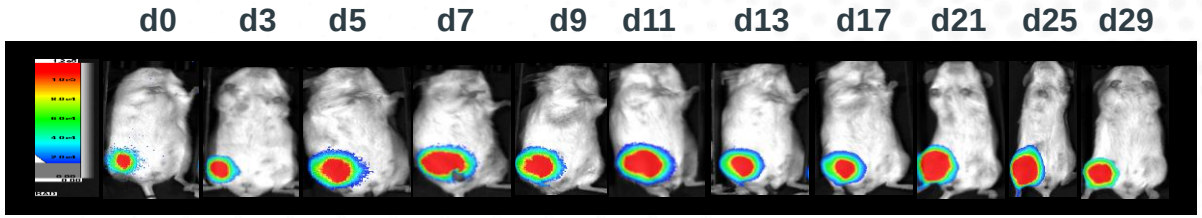


Hypoimmune pancreatic islet cells evade immune detection and regulate glucose levels

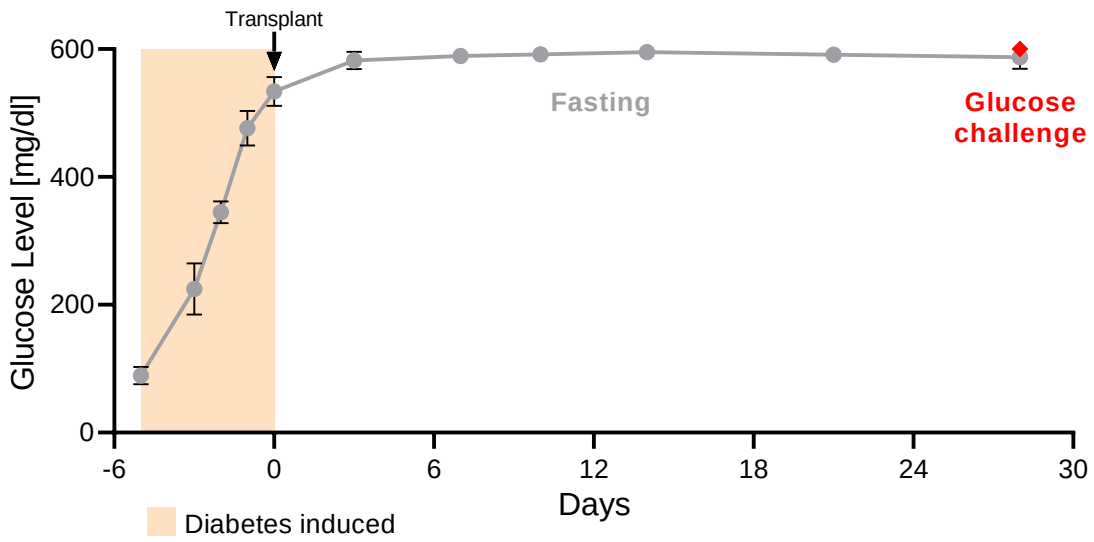
Allogeneic human unmodified islet cells



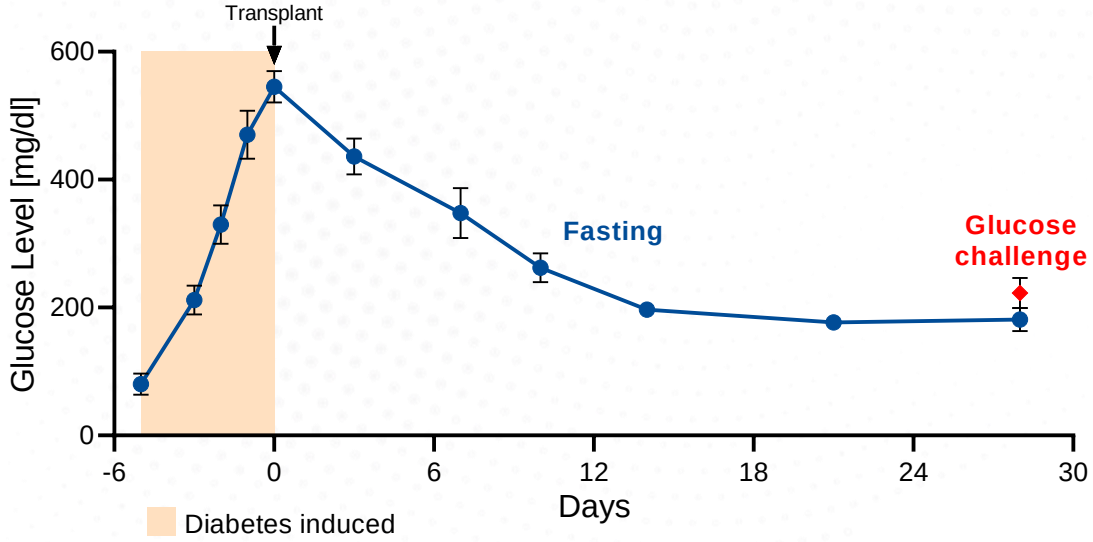
Allogeneic human hypoimmune islet cells



Glucose levels stay elevated

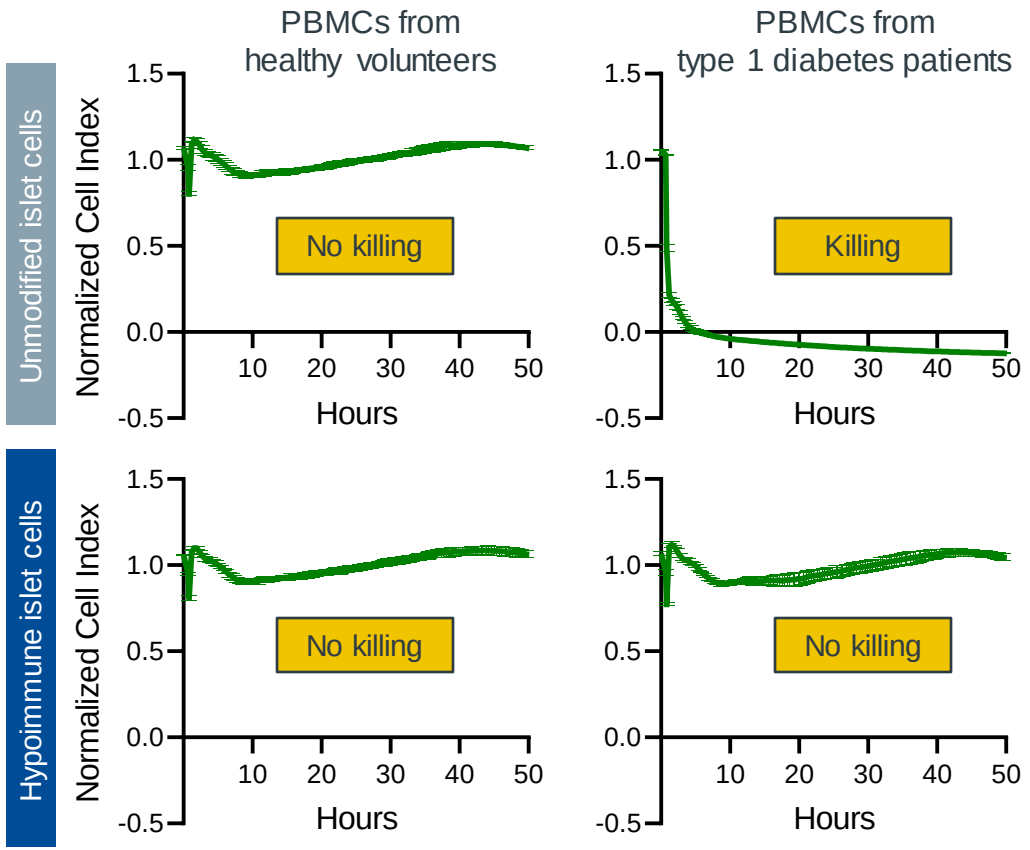


Glucose levels normalized



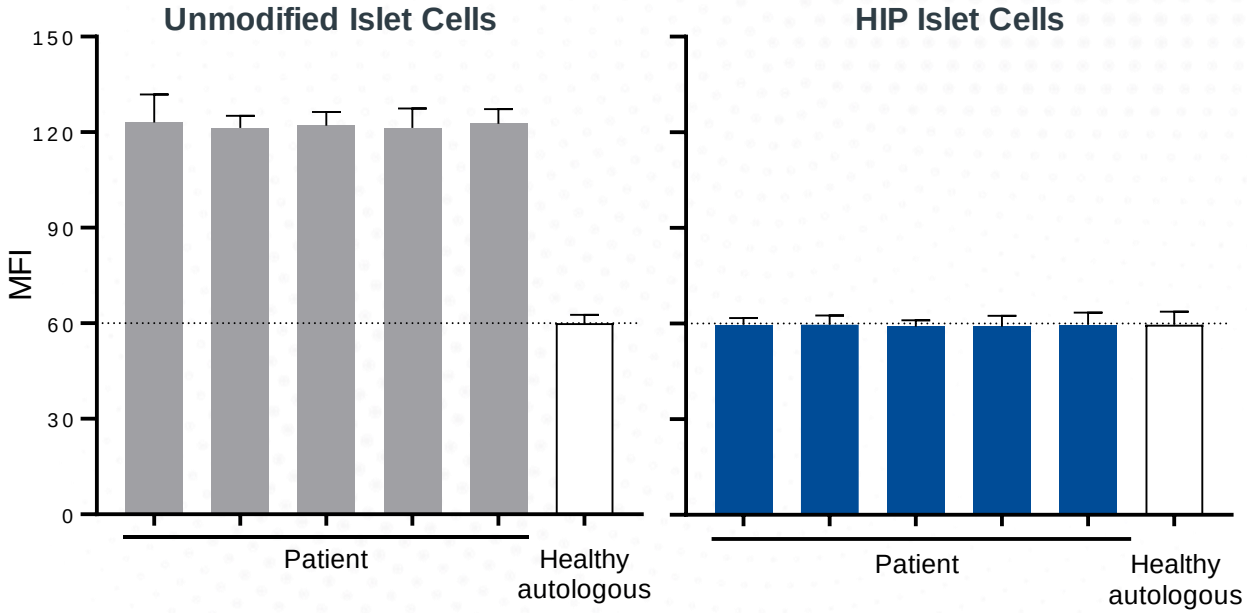
Hypoimmune pancreatic islet cells evade autoimmune killing in testing of blood from type 1 diabetes patients

T cells from PBMCs of type 1 diabetes patients kill unmodified islets, but not HIP islet cells



Antibodies from sera of type 1 diabetes patients bind to unmodified islets, but not HIP islet cells

Serum from healthy volunteers or type 1 diabetes patients

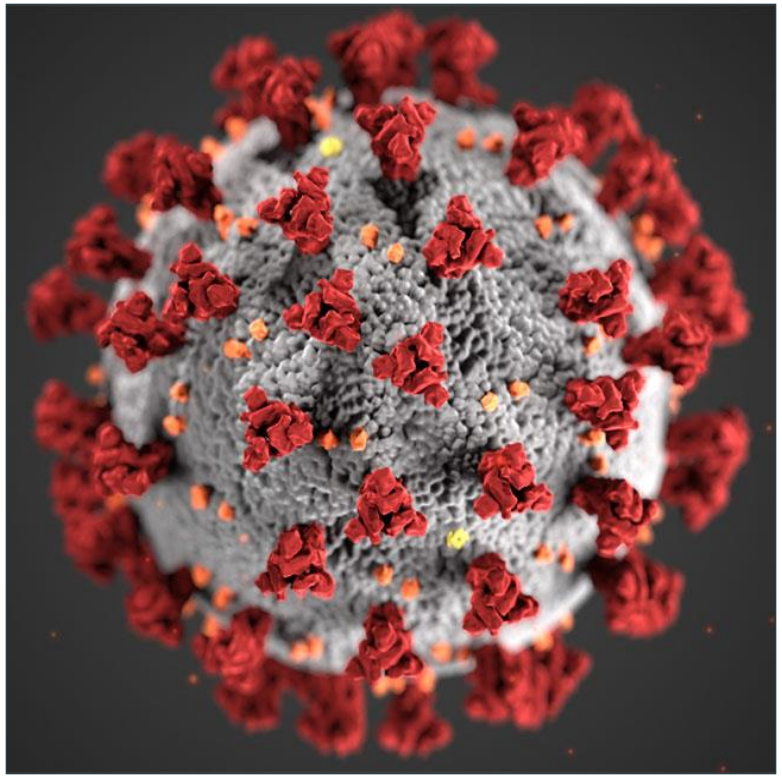


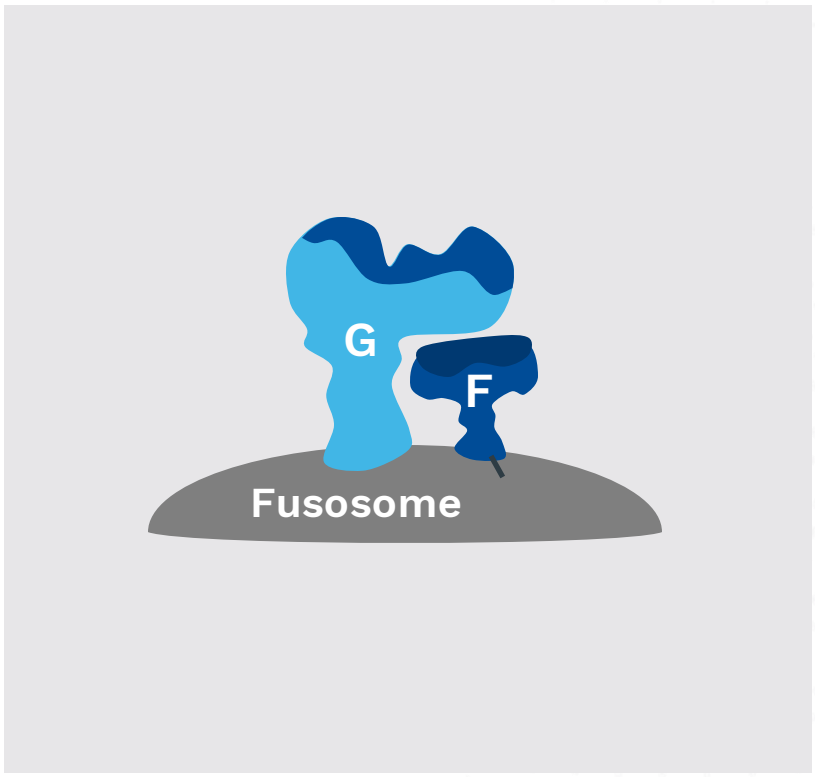
Robust GMP supply chain required to use iPSC-based therapies as medicines

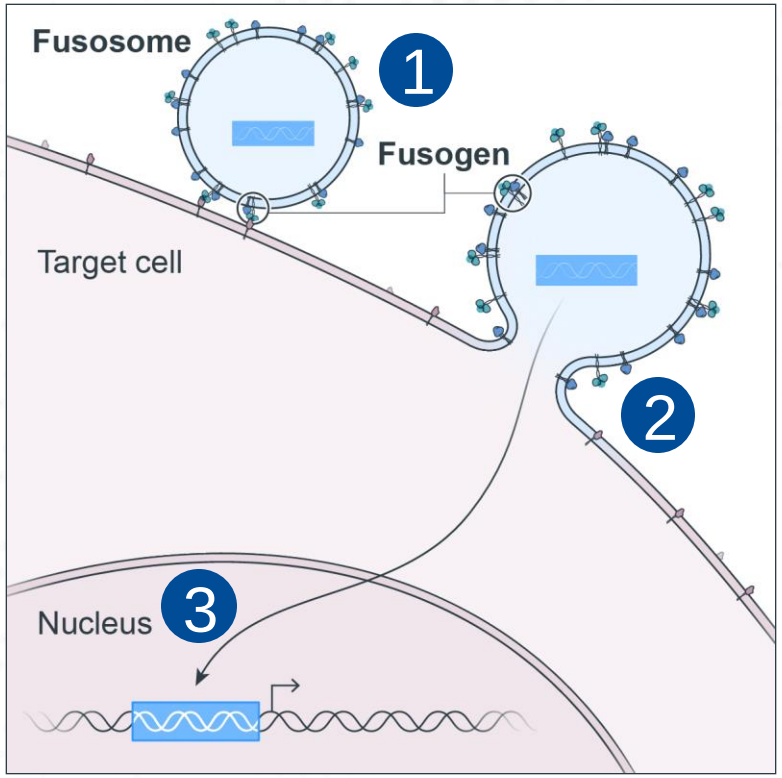
1	**GMP genomically stable cell lines**	FCDI licenses and bespoke lines
2	**GMP gene editing reagents**	Beam license enables editing requirements for current programs
3	**GMP gene-edited master cell bank**	Creating internal master cell banks for GMP HIP-edited iPSCs

Fusosome technology: Development of cell-specific *in vivo* delivery platform

Sana approach: Leverage insights from nature to deliver various payloads to specific cells



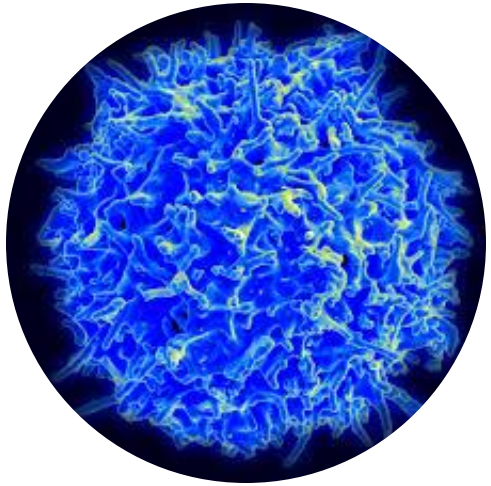




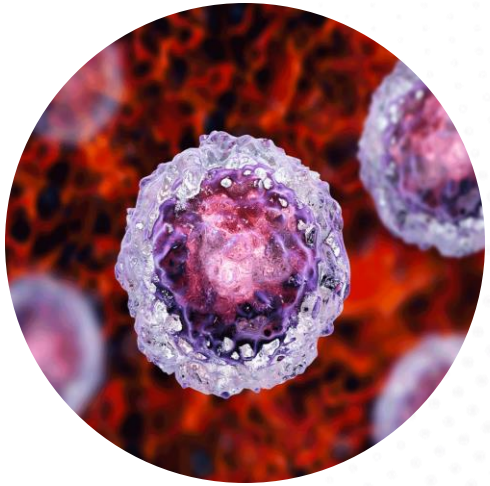
Source: CDC website

In vivo cell engineering: Creating targeted medicines across a diverse set of cell types

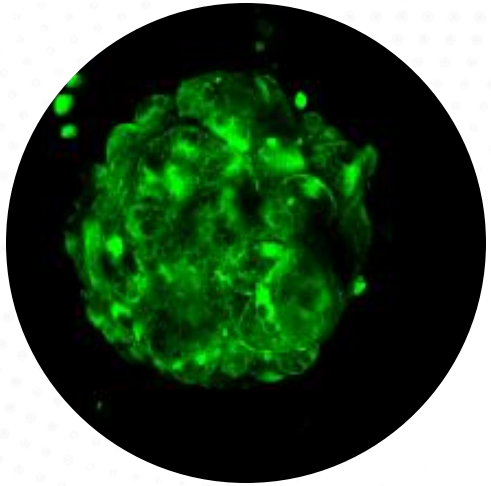
in vivo cell engineering strategy focused on developing therapies with transformative **fusogen platform delivery based on cell specificity and payload diversity**



T cells



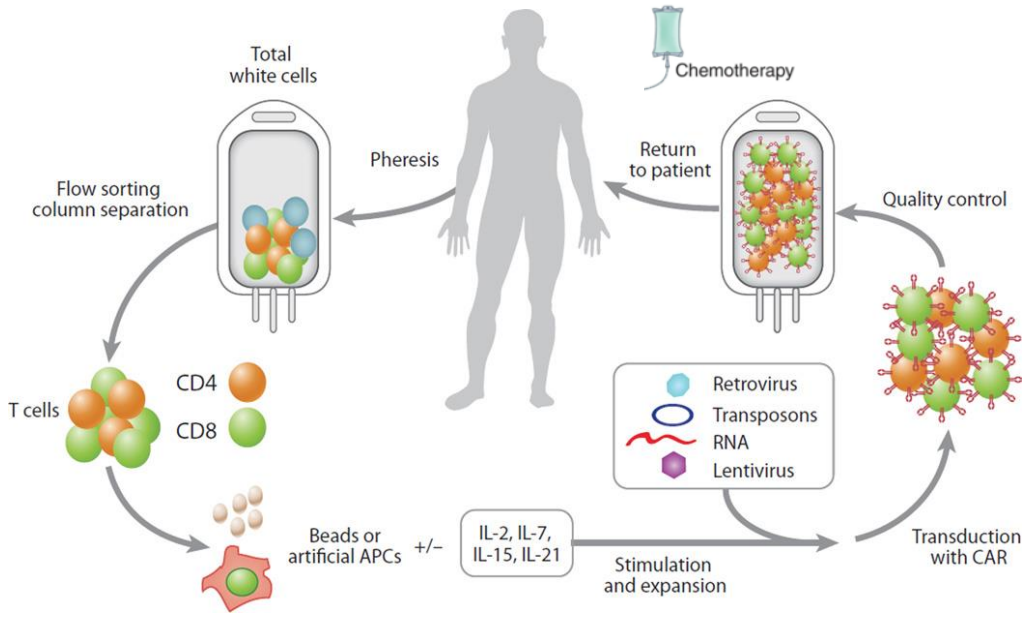
Hematopoietic stem cells



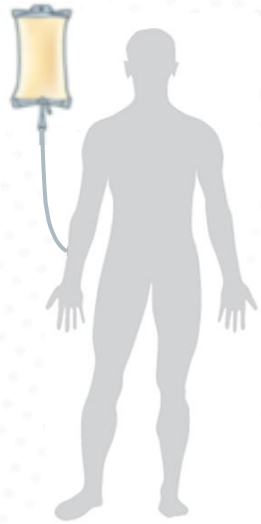
Hepatocytes

High unmet need remains for blood cancers

Current *ex vivo* approaches have limitations



Fusogen platform offers potential to overcome these limitations

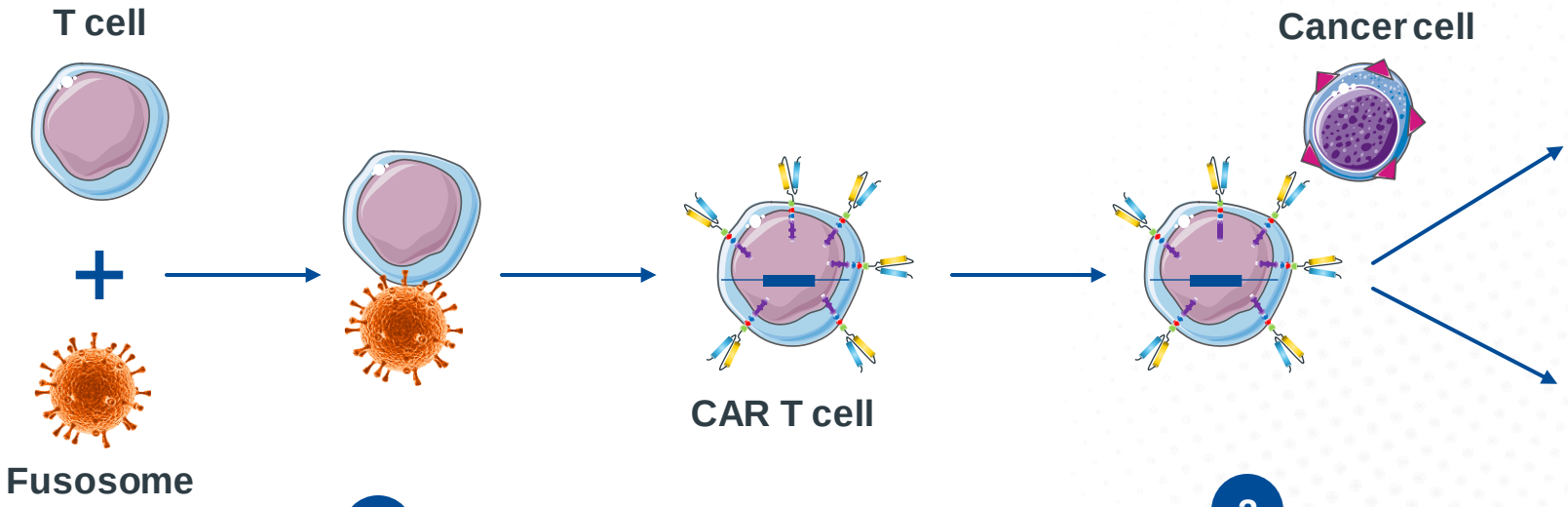


T cell fusosome carrying CAR construct infused into patient

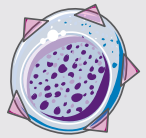
Specificity
CD4/CD8 T cell transduction

Expression
Transgene integration and CAR expression

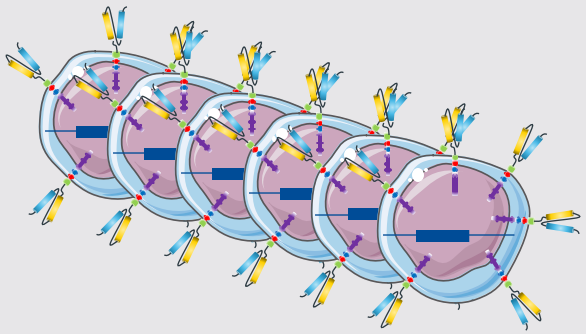
Function
Targeted cell killing



Target cell killing



T cell amplification



1

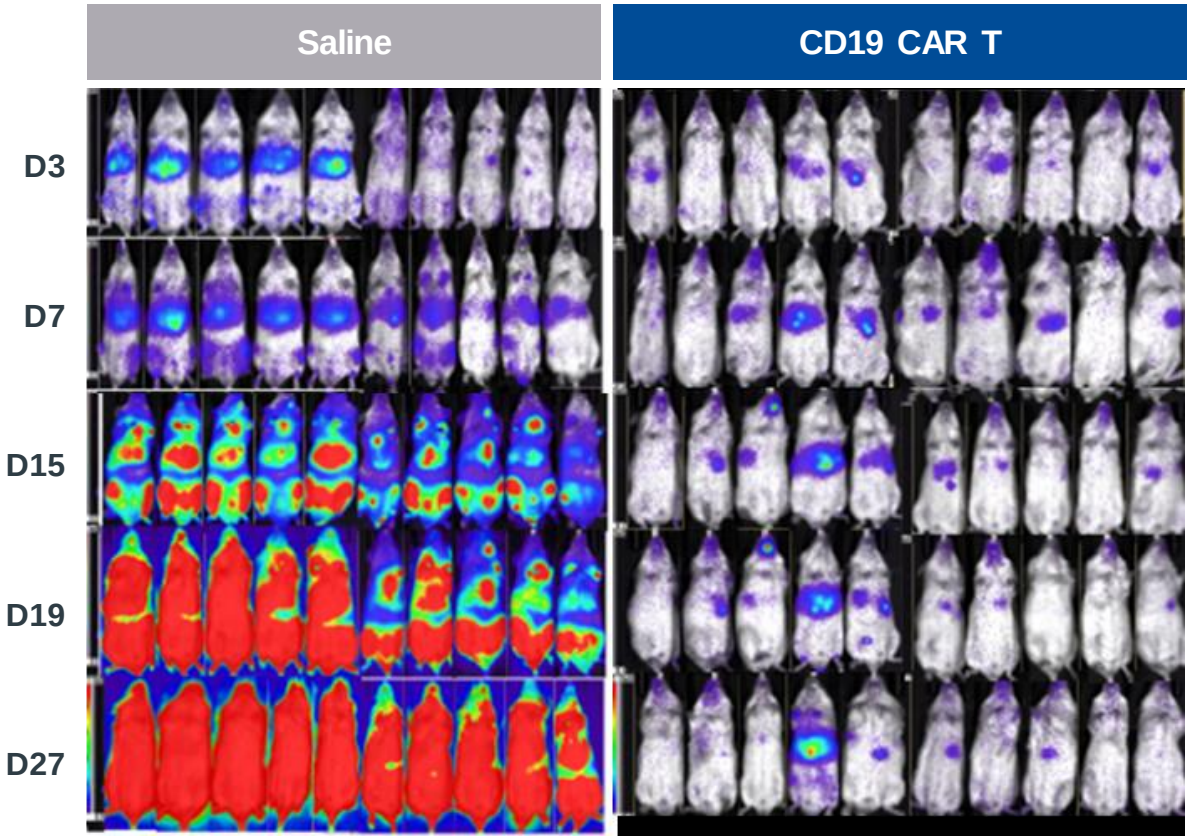
Fusosome performance
- Transduction specificity
- Transduction efficiency

2

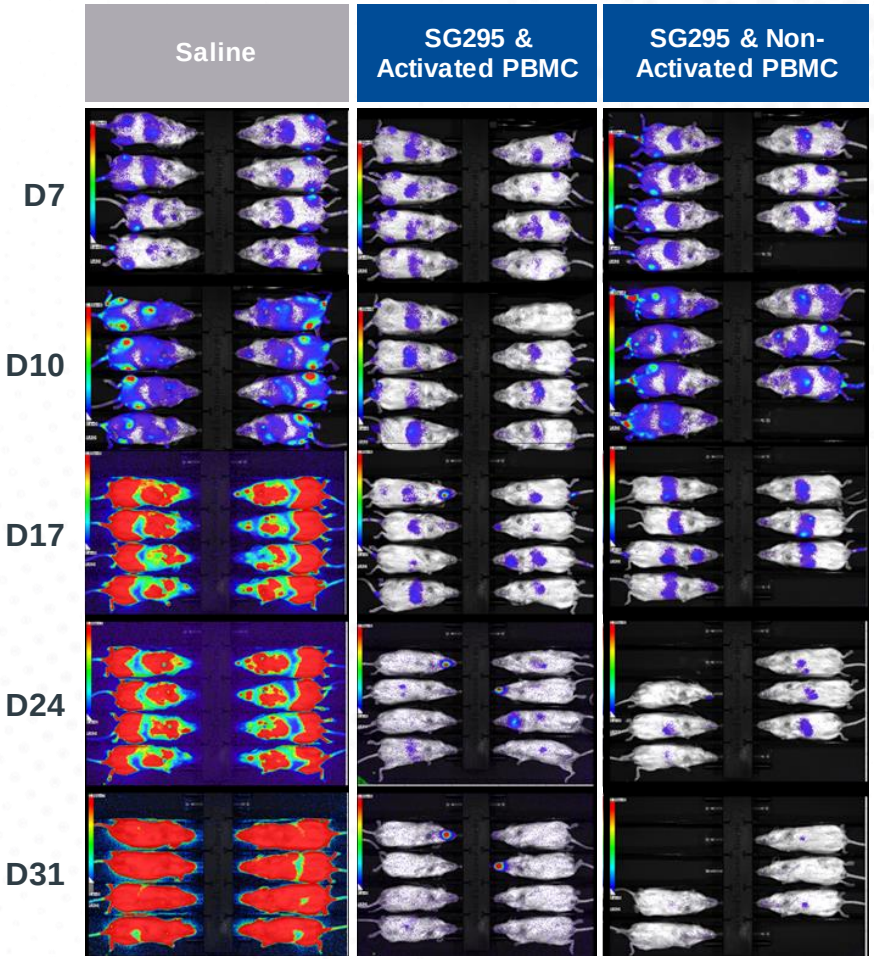
CAR activity
- Expression/recognition
- Amplification
- Target cell killing

IV administration of CD19 CAR delivered by fusosome can clear B cell tumors in humanized mice comparably to *ex vivo* CD19 CAR T

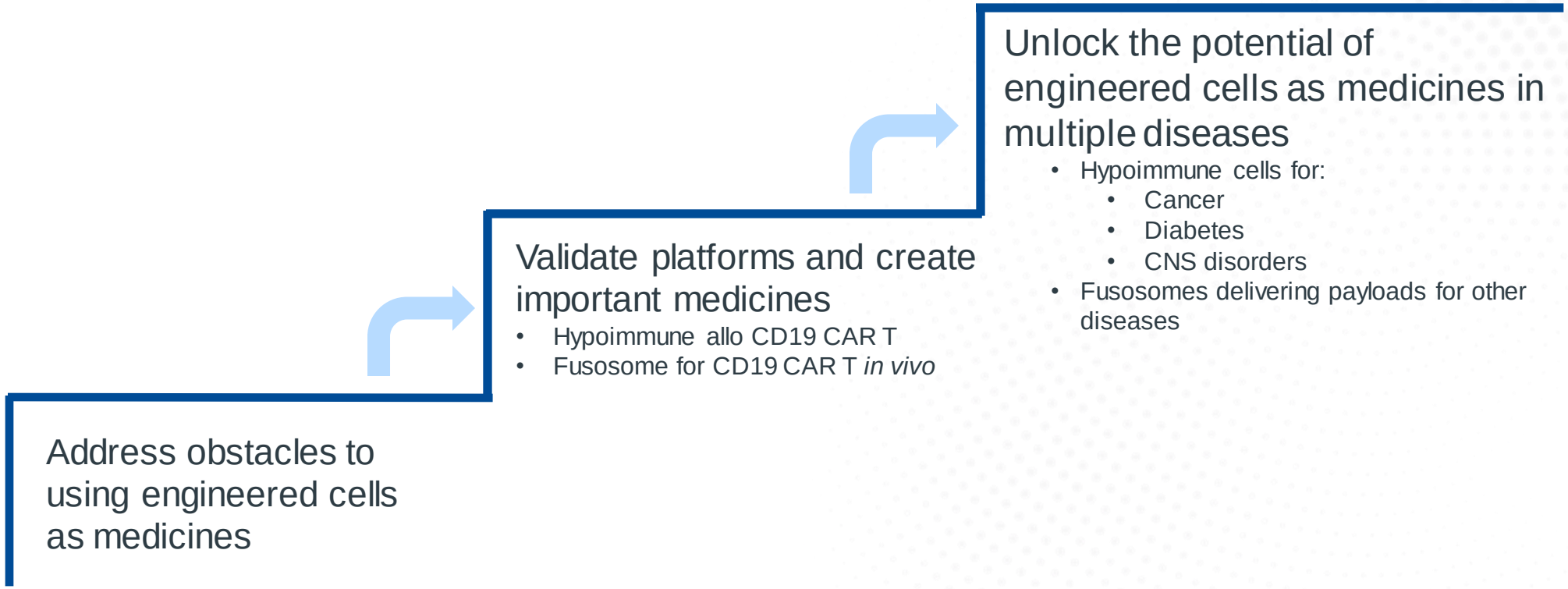
CD19 CAR T: *ex vivo*



CD19 CAR delivered by fusosome: *in vivo*



Sana aspiration: Engineered cells as medicines



Thank You

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