

Prescient
Therapeutics



OmniCAR

**Creating next-gen cell therapies
that are controllable, flexible & adaptable**

Prescient Therapeutics Limited (ASX: PTX)

Cell & Gene Meeting on the Mesa

October 2021

Disclaimer and Safe Harbor



Certain statements made in this document are forward-looking statements within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. These forward-looking statements are not historical facts but rather are based on the current expectations of Prescient Therapeutics Limited (“Prescient” or the “Company”), their estimates, assumptions, and projections about the industry in which Prescient operates. Material referred to in this document that use the words ‘estimate’, ‘project’, ‘intend’, ‘expect’, ‘plan’, ‘believe’, ‘guidance’, and similar expressions are intended to identify forward-looking statements and should be considered an at-risk statement. These forward-looking statements are not a guarantee of future performance and involve known and unknown risks and uncertainties, some of which are beyond the control of Prescient or which are difficult to predict, which could cause the actual results, performance, or achievements of Prescient to be materially different from those which may be expressed or implied by these statements. These statements are based on our management’s current expectations and are subject to a number of uncertainties and risks that could change the results described in the forward-looking statements. Risks and uncertainties include, but are not limited to, general industry conditions and competition, general economic factors, the impact of pharmaceutical industry development and health care legislation in the United States and internationally, and challenges inherent in new product development. Investors should be aware that there are no assurances that results will not differ from those projected and Prescient cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of Prescient only as of the date of this presentation. Prescient is not under a duty to update any forward-looking statement as a result of new information, future events or otherwise, except as required by law or by any appropriate regulatory authority.

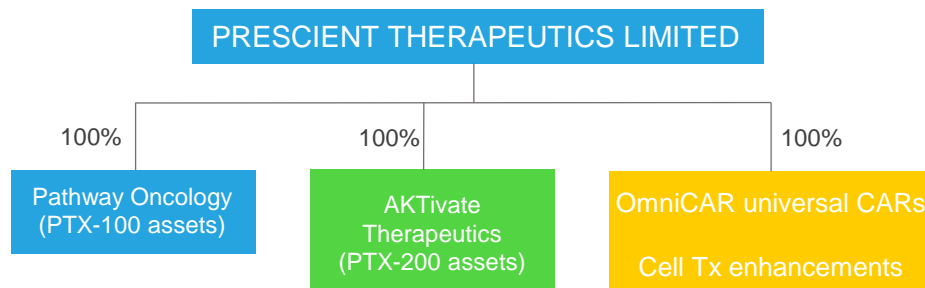
Certain statements contained in this document, including, without limitation, statements containing the words “believes,” “plans,” “expects,” “anticipates,” and words of similar import, constitute “forward-looking statements.” Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of Prescient to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such factors include, among others, the following: the risk that our clinical trials will be delayed and not completed on a timely basis; the risk that the results from the clinical trials are not as favorable as we anticipate; the risk that our clinical trials will be more costly than anticipated; and the risk that applicable regulatory authorities may ask for additional data, information or studies to be completed or provided prior to their approval of our products. Given these uncertainties, undue reliance should not be placed on such forward-looking statements. The Company disclaims any obligation to update any such factors or to publicly announce the results of any revisions to any of the forward-looking statements contained herein to reflect future events or developments except as required by law.

This document may not contain all the details and information necessary for you to make a decision or evaluation. Neither this document nor any of its contents may be used for any other purpose without the prior written consent of the Company.

The contents of this document are confidential information of Prescient. These contents are made available on a ‘for your eyes only’ basis to the person to whom it was sent by Prescient. The purpose of the disclosure is to facilitate commercial and confidential discussions between the discloser and Prescient. It should not be forwarded without without the prior written consent of the Company.

OVERVIEW

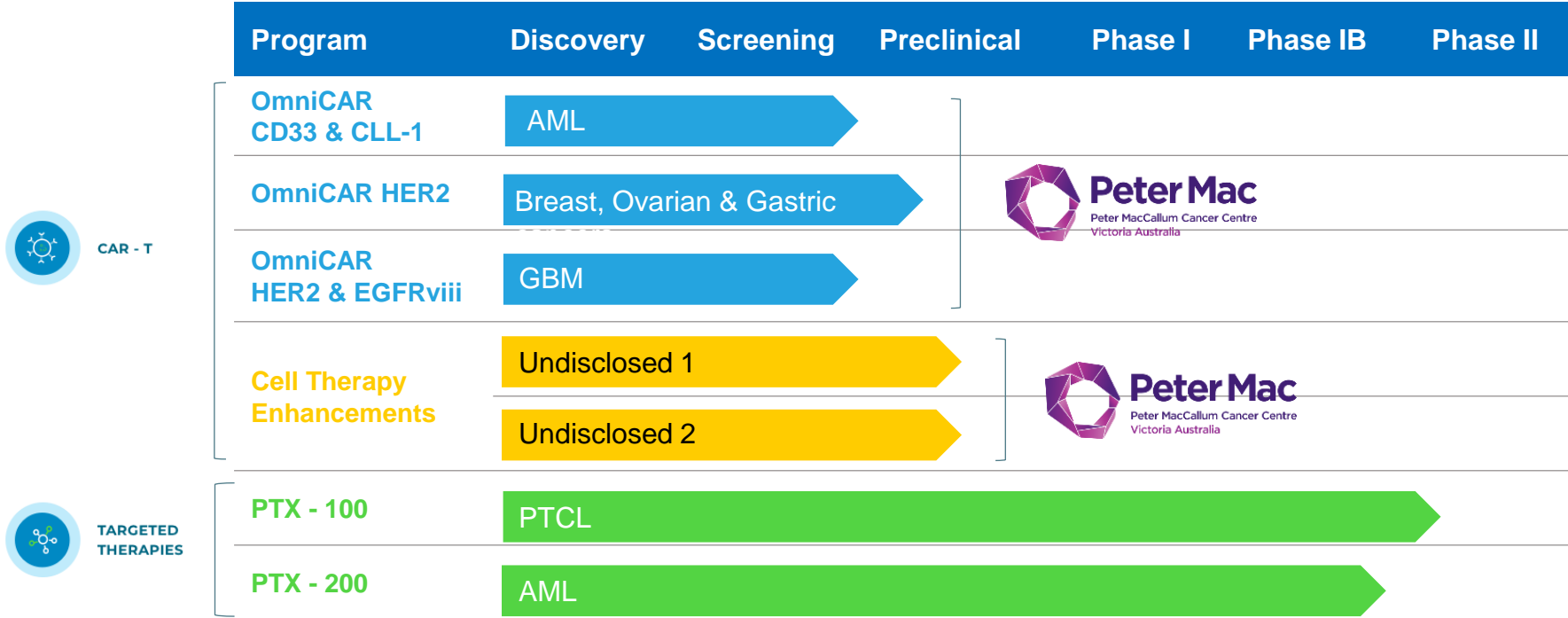
- HQ in Melbourne, Australia, with activities in Australia and US
- Est 2014 with assets from Yale (PTX-100) and Moffitt/USF (PTX-200); and UPenn/Oxford (OmniCAR) in 2020
- Programs in US & Australia
- Listed on ASX, with wholly owned private subsidiaries



METRICS

ASX Ticker	PTX
Total Issued Capital	643 M shares
Listed Options	93.4 M
Unlisted Options	12.1 M
Share Price ¹	A\$0.27 (US\$0.20)
Market Capitalisation¹	A\$174 M (US\$127 M)
Market Cap fully diluted¹	A\$202 M (US\$148 M)
Cash Position²	A\$16 M (US\$12 M)
Top 20 Own	17%

Innovative Pipeline in Personalised Medicine

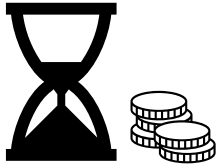




OmniCAR

Universal, Next Generation CAR-T

Key Challenges Confronting the field of CAR-T



Time and Cost
of delivering treatment



Targets

Finding targets that work;
Antigen heterogeneity - esp. in solid tumours



Safety

CAR-T can have serious
safety concerns



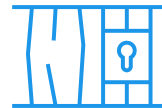
Exhaustion

Persistent stimulation of CAR-
Immune cells leads to exhaustion



No Control

Clinicians have no control
of cells post infusion



Escape

Antigen loss leads to relapse

OmniCAR Universal Immune Receptor Platform



- Pre-clinical **modularised** universal immune receptor (**UIR**) platform
- Potential best-in class UIR
- Based on multi-disciplinary technology licensed from **Penn**
- Only UIR system with post-translational covalent binding
- Unique, powerful and flexible
 - **Controllable activity**
 - **Flexible antigen targeting**



Co-inventors

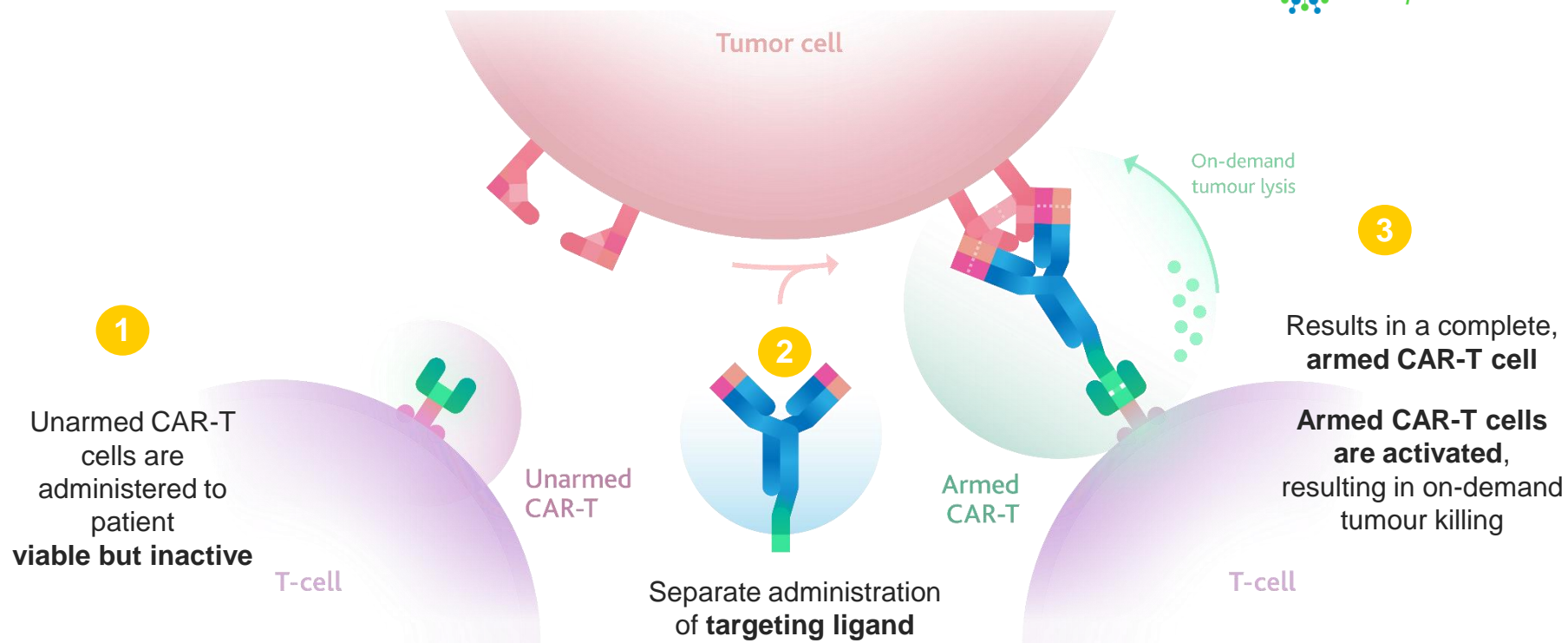


Associate Professor
Daniel J. Powell, Jr



Professor
Andrew Tsourkas

How OmniCAR works



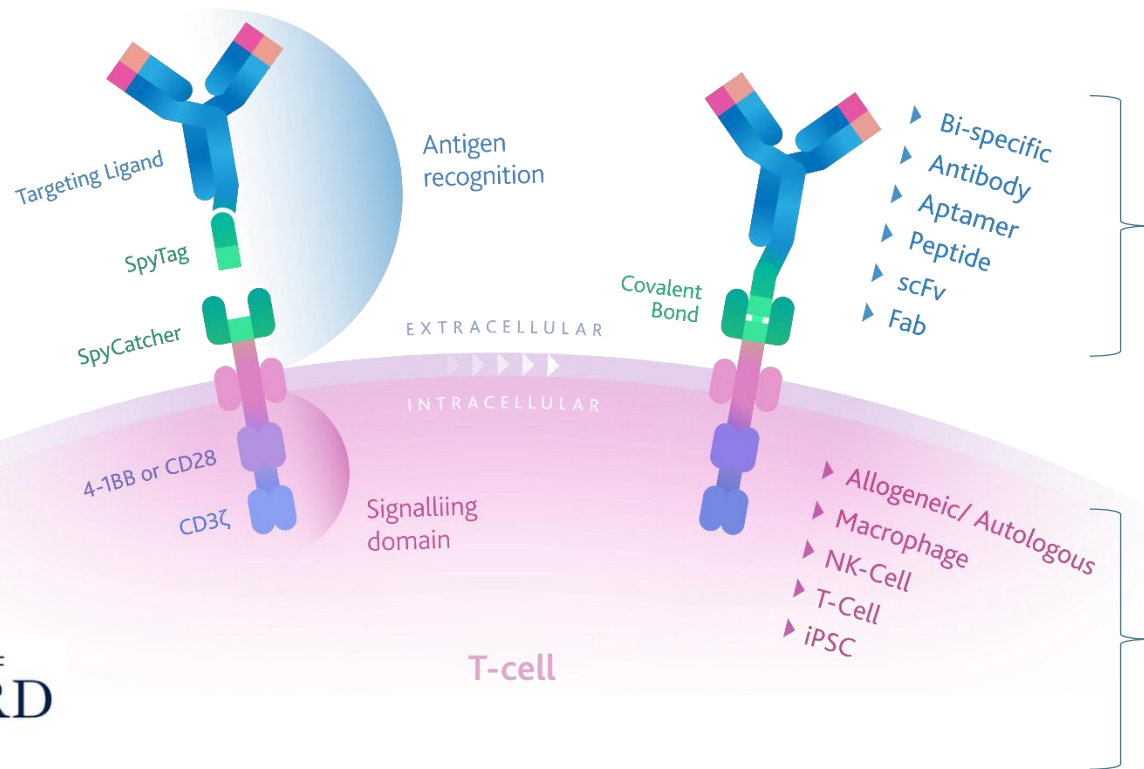
 CAR-T cell activity is **now controllable**

 Target specificity CAR-T cell can be **switched at will**, by administering a different targeting ligand

An elegant and effective approach

Only UIR with spontaneous, autocatalytic, **covalent** bond formation

Binds targeting ligand to cell signalling domain



OmniCAR can use any type of **targeting ligand**...

...with any **immune cell**

Safety: Ability Control Dose & Activity

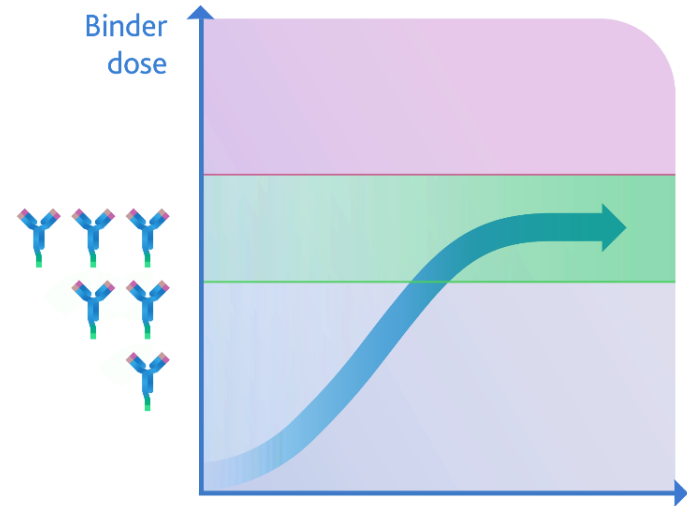
Conventional CAR-T

- Clinicians have **no control** over CAR-T activity once injected
- Estimate optimal dose **before infusion**
- Half-doses of CAR-T cells provide limited fidelity



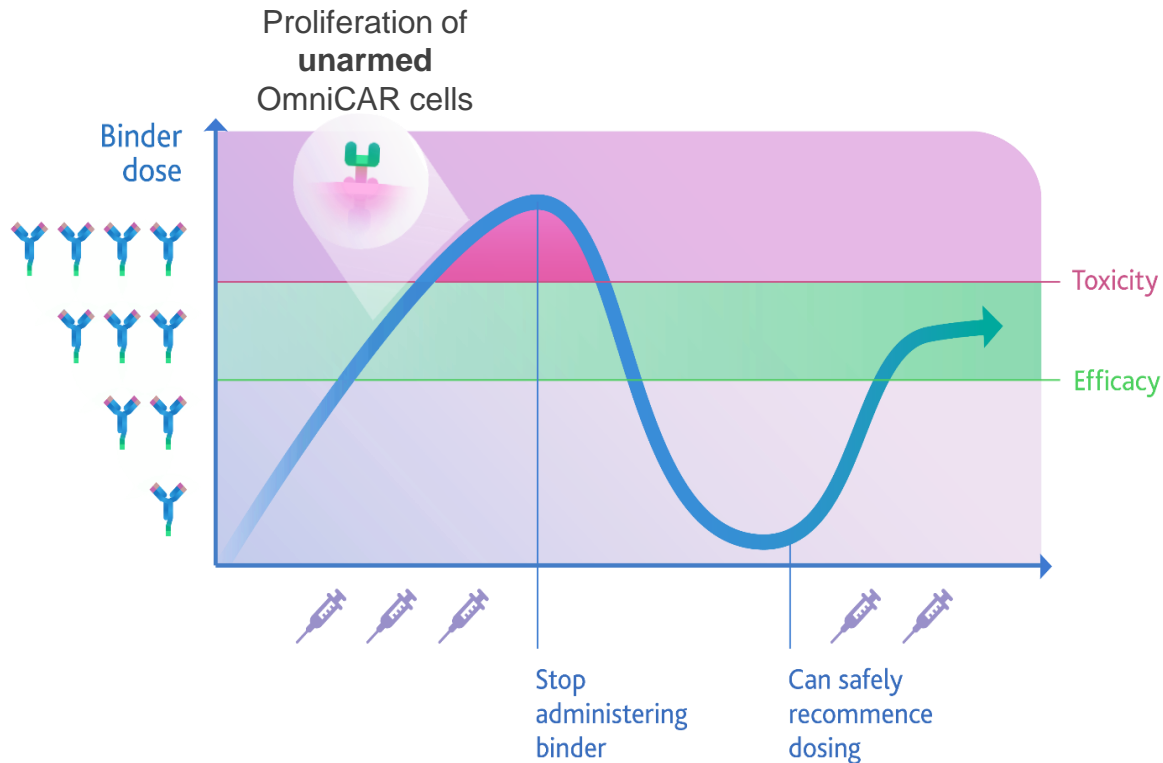
OmniCAR

- Clinician control **post infusion**
- Controlling subsequent **dose** of binder controls CAR-T **activity**
- Titrate dose to **safe and efficacious** levels

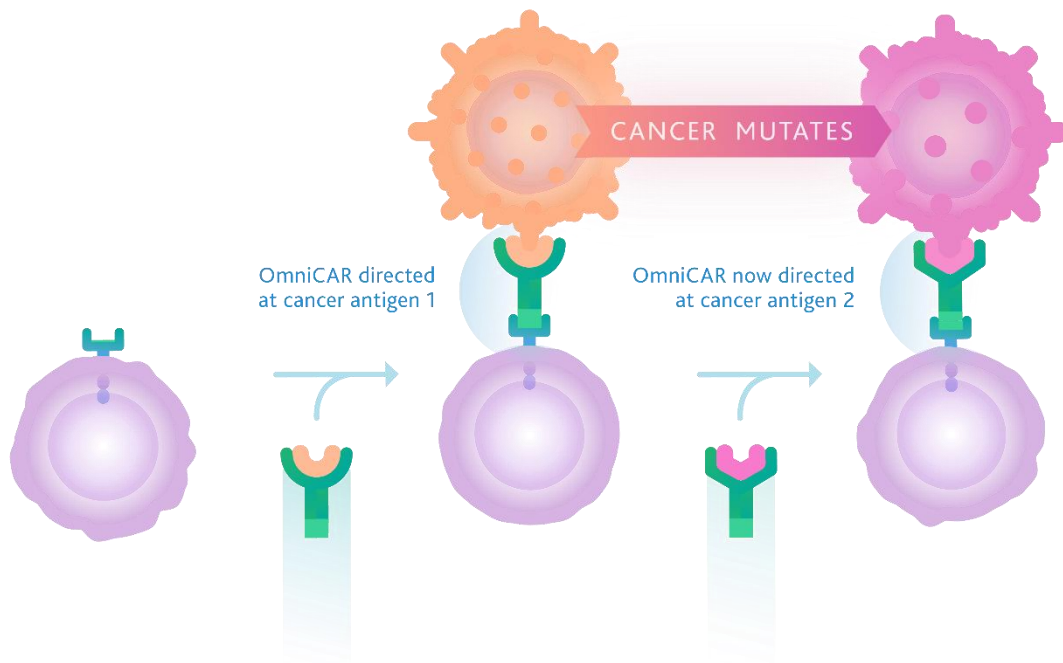


Safety: Built-in on/off switch

- Cell activity can be **switched off at-will**
- Cells remain **viable but inactive**
- OmniCAR can be **safely reactivated**
- No uncontrolled activity
- **Ongoing stimulation for greater efficacy & persistence**

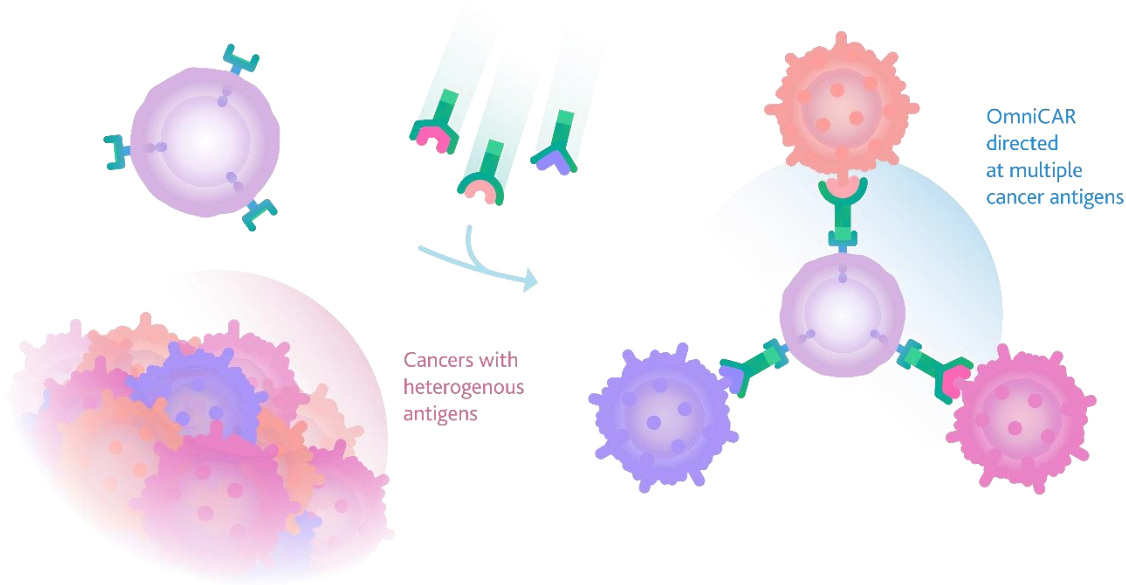


Target Multiple Antigens *Sequentially*



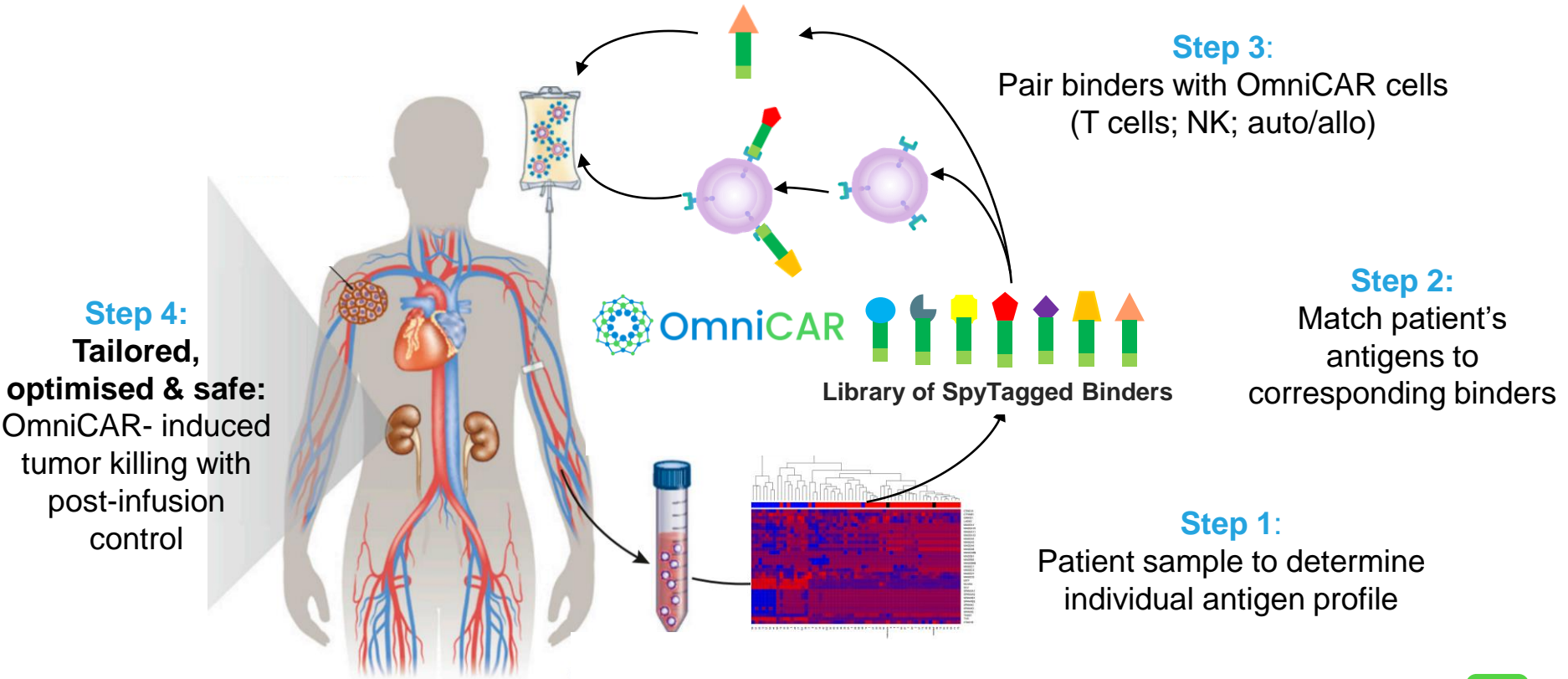
- Switching binder redirects the T-cell
- Uses single vector/cell product
- Addresses escape
- Useful for rapidly mutating cancers, esp those that cannot afford time for another CAR-T production run
 - E.g. AML

Target Multiple Antigens *Simultaneously*



- Multiple antigen targeting with single vector/cell product
- Could broaden anti-tumour immune response
- Prevents escape
- Tailor arming combinations and proportions
- Utility in many solid tumours

The future of ACT is efficient yet personalized: OmniCAR cells + “plug & play” binder library



Step 3:
Pair binders with OmniCAR cells
(T cells; NK; auto/allo)

Step 2:
Match patient's
antigens to
corresponding binders

Step 1:
Patient sample to determine
individual antigen profile

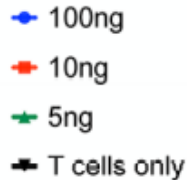
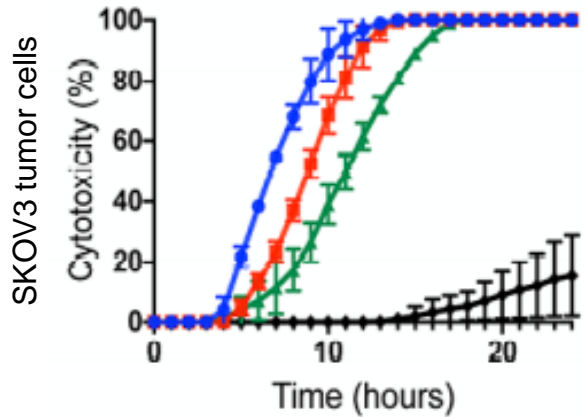
Step 4:
Tailored,
optimised & safe:
OmniCAR- induced
tumor killing with
post-infusion
control

Covalent Binding:

Superior tumor killing & other advantages

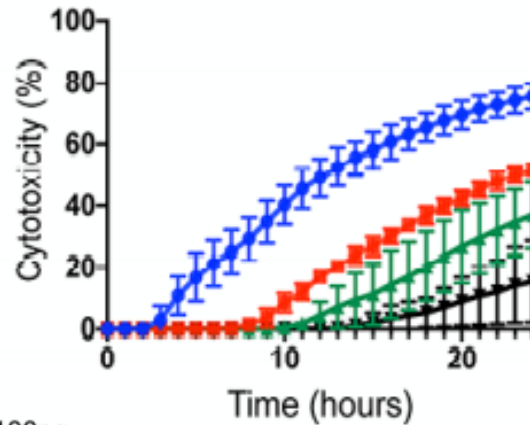
Covalent

SC28ζ + Herceptin-ST



Non-Covalent

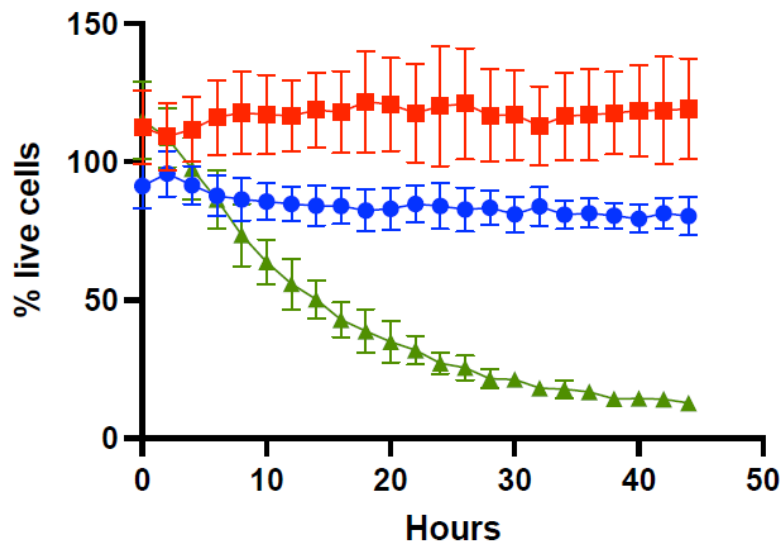
SC28ζ + Herceptin-STDA



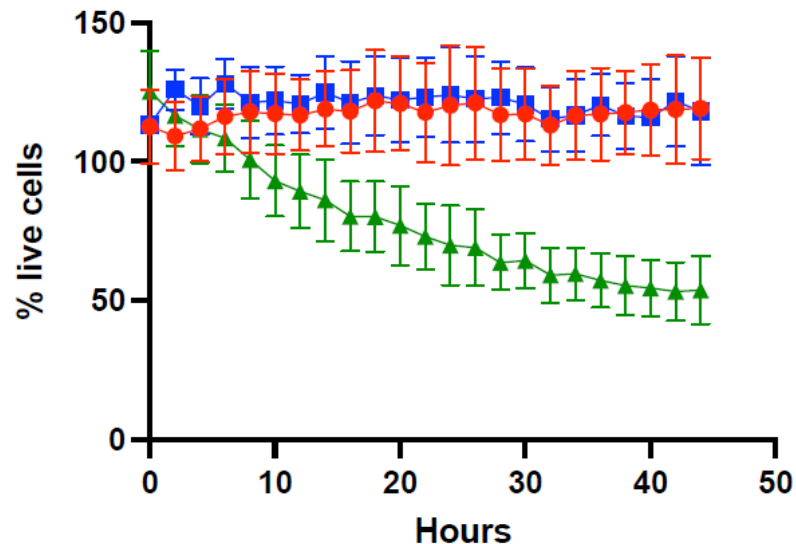
- **Covalent** binding improves SpyCatcher T-cell **loading and tumour cell lysis**
- Covalent binding has additional advantages in:
 - Efficacy
 - Predictability
 - Clinical utility
 - Regulatory considerations

OmniCAR HER2: predictable cytotoxicity

4:1 HER2 OmniCAR



2:1 HER2 OmniCAR

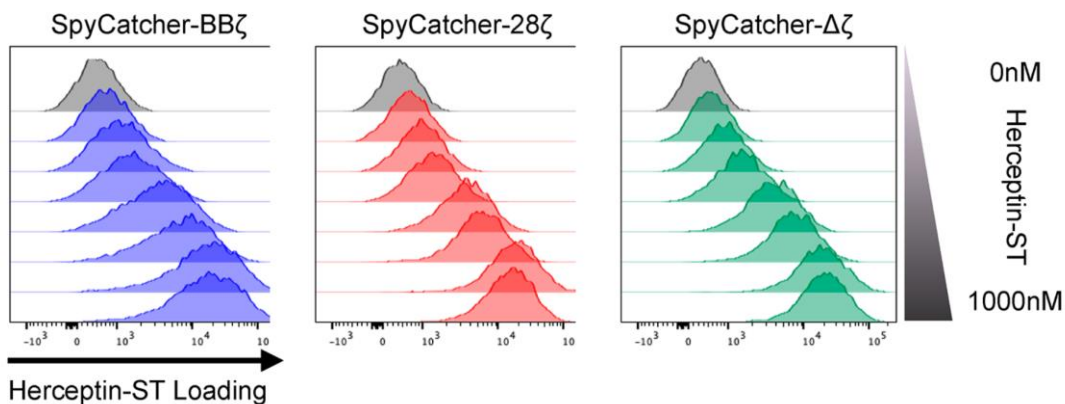


- Tumor Cells
- Unarmed OmniCAR
- ▲ HER2 Armed OmniCAR

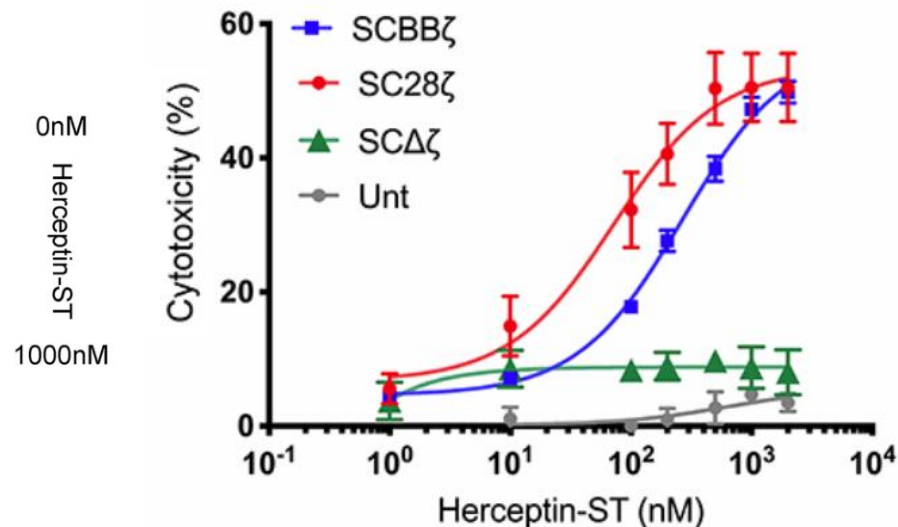
At 2:1, OmniCAR achieves cytotoxicity at a rate that aims to **balance efficacy** whilst **avoiding CRS and exhaustion**

Flexible Loading and Dose-Dependent Lysis

- OmniCAR T-cells capable of being armed with varying amounts of SpyTagged targeting ligand

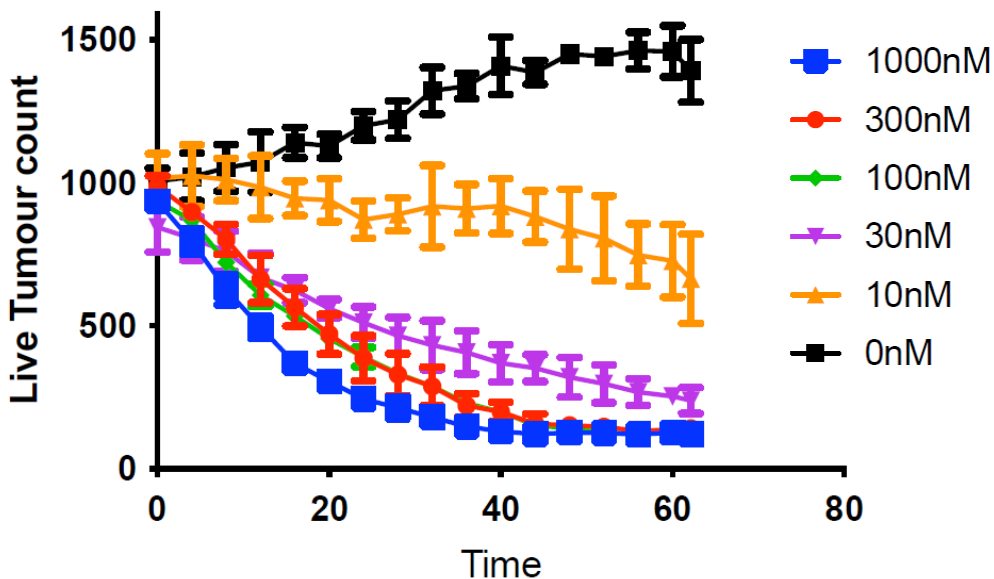


- Increasing targeting ligand concentration results in increased lytic capacity



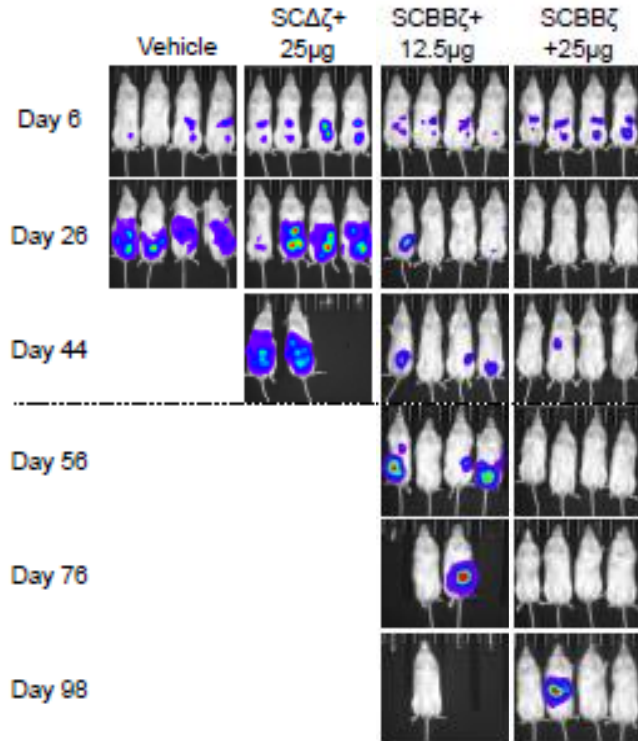
Dose response: High potency with less binder required

2:1 ST-EGFRviii binder vs U251 EGFRviii cells

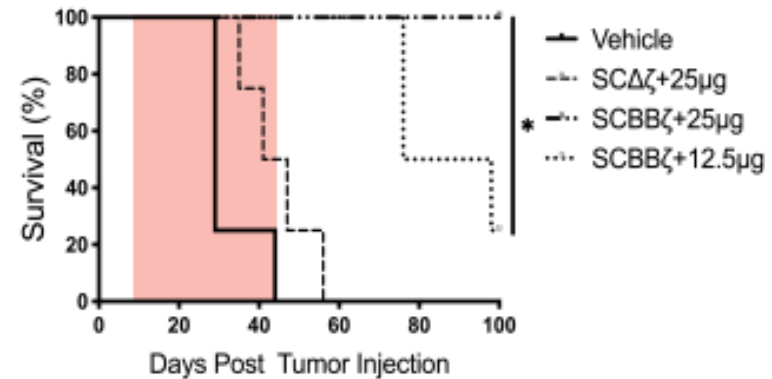


- **Dose-dependent CAR-T activity**
- V3 OmniCAR significantly more potent, and likely safer, than V1 system and competitor UIRs
- Potency with **60 fold less binder** (low nM range)
- Means **improved safety** and **lower cost of goods**

Control: Dose-dependent CAR-T activity



- Ovarian cancer model, using anti-HER2 OmniCAR
- Loading more binder results in **proportionate killing** of cancer...
- ...and **proportionate survival**
- **Lasting effects** even when cease dosing of binder

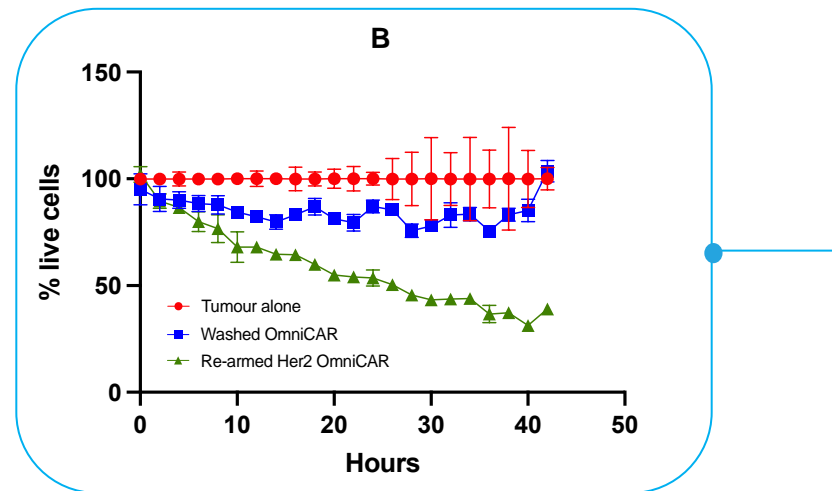
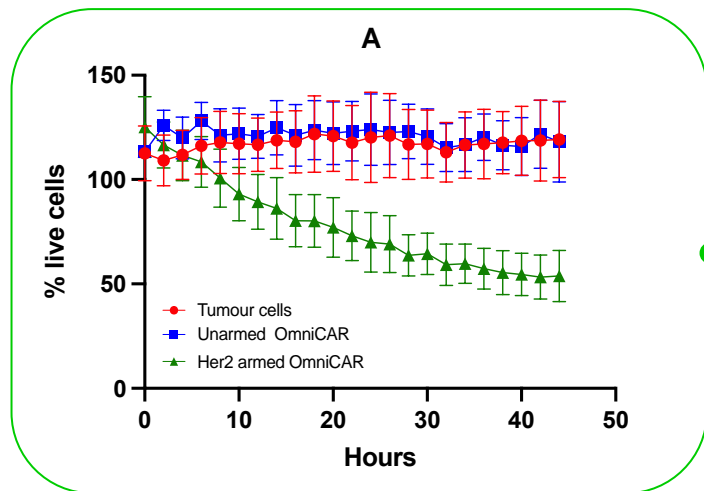


Re-Arming: OmniCAR Her2 can be Re-Armed

T cell activation
Day 0
Transduction
Day 3
Armed
Day 7
Cytotoxicity assay
Days 8–10

Wash; Rest

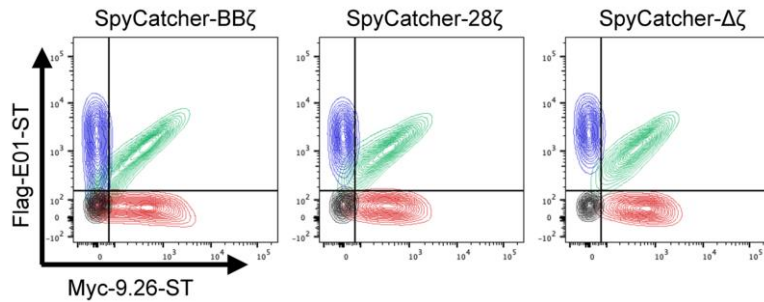
Re-armed
Day 12
Cytotoxicity assay
Days 13–14



- OmniCAR T cells can be re-armed
- Re-arming results in **same levels and kinetics of cytotoxicity** as pre-armed
- Another example of **flexible** yet **predictable** activity

Equal Arming & Equal Tumour Killing

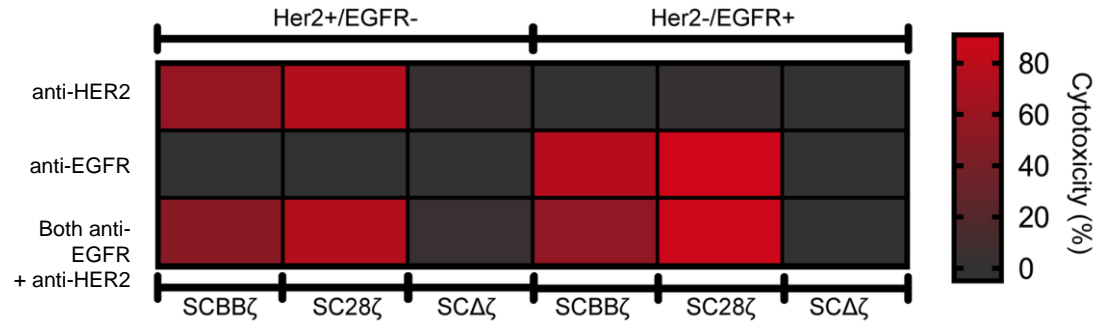
Equal arming



CAR-T equally armed with:

- Both anti-EGFR + anti-HER2
- anti-EGFR
- anti-HER2
- control

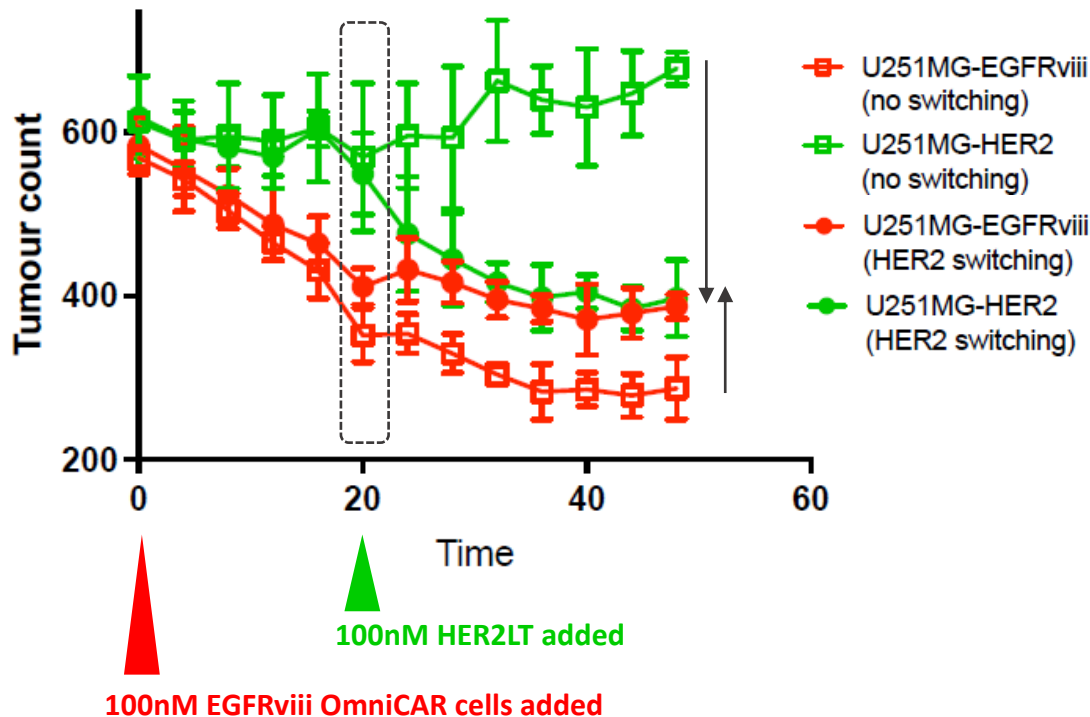
Specifically directed, at-will killing



- Only kills cells that the CAR-T is armed against
- OmniCAR CAR-T cells have similar specific tumour killing capacity, whether **dual**-armed or **single**-armed

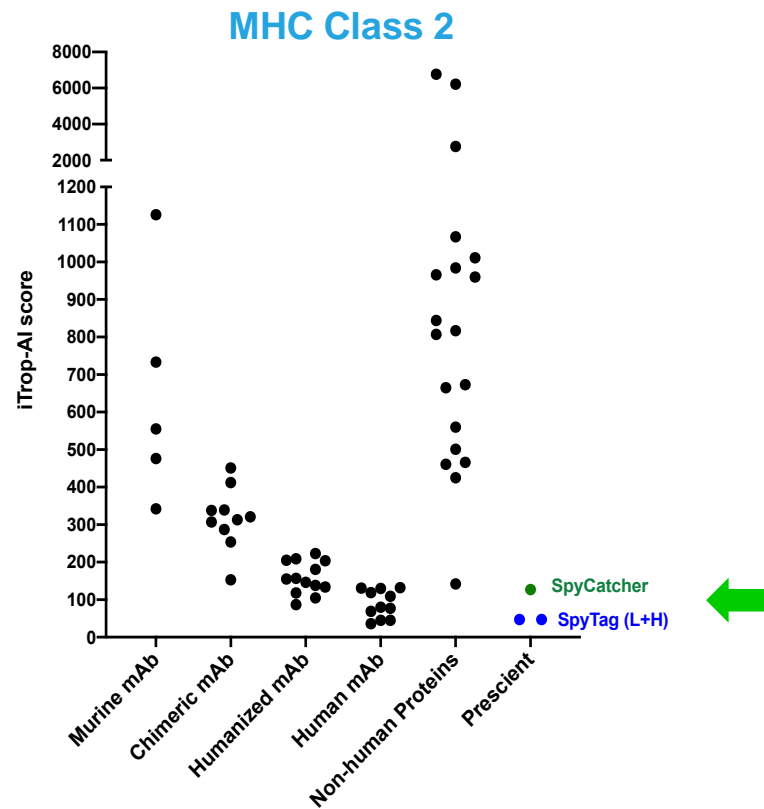
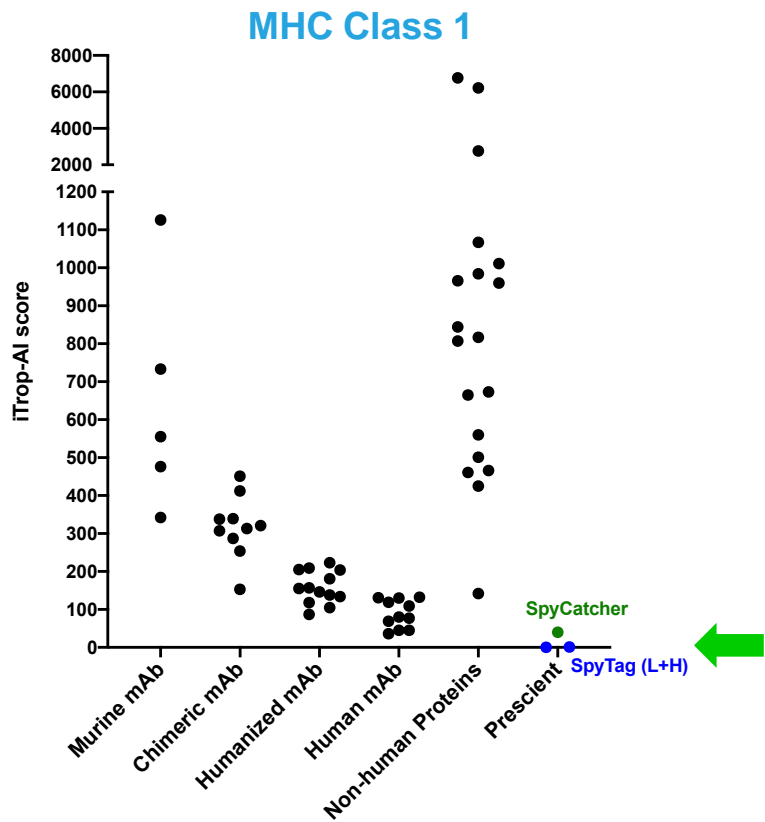
Redirection: Adding new ST-binder can re-direct cytotoxicity

Antigen Target Re-direction in Coculture of U251 GBM Cells expressing HER2 or EGFRviii



- Rapid cytotoxicity to EGFRviii
- **Rapid switching and cytotoxicity** against HER2+ tumours upon administration of new binder
- OmniCAR cells can be **re-directed to different antigens** upon administration of a different SpyTagged binder **without new cells**

In-silico immunogenicity on par with Human mAbs



OmniCAR Internal Program Summary

Targets	Indications	OmniCAR features	Comments
CD33 + CLL-1	Acute Myeloid Leukemia (AML)	<ul style="list-style-type: none"> • Titration for improved safety • Co-arming against CD33 & CLL-1 • Sequential targeting 	<ul style="list-style-type: none"> • Validated targets; expressed on 90%+ of AML blasts & LSCs • 1 of 3 programs worldwide; the only next-gen program
HER2	Ovarian; breast & gastric cancers	<ul style="list-style-type: none"> • Titration for improved safety • Persistent binder dosing for improved efficacy • TME and checkpoint enhancements 	<ul style="list-style-type: none"> • Most mature next-gen HER2 CAR-T program • Builds on Penn pre-clinical PoC
HER2 + EGFRviii	Glioblastoma multiforme (GBM)	<ul style="list-style-type: none"> • Titration for improved safety • Co-arming against HER2 & EGFRviii • Persistent binder dosing for improved efficacy 	<ul style="list-style-type: none"> • 1 of 3 multiple antigen programs in the world • Single antigen targeting is inadequate in GBM

AML

OmniCAR CD33/CLL-1

For CAR-T to succeed in AML, it must overcome:



Safety

AML patients are especially ill with many unable to tolerate vigorous therapies like CAR-T



Rapid Mutations

AML can mutate mid-therapy, quickly rendering single CAR-Ts ineffective



Rapid Disease Progression

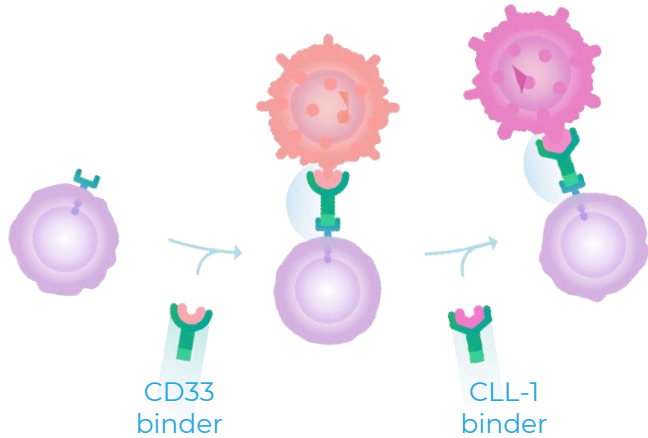
Even if multiple current generation CAR-T therapies were available, resistant patients are likely to progress before subsequent therapies are manufactured for them

OmniCAR is uniquely placed to address these challenges for CAR-T in AML

CD33 & CLL-1 are excellent AML targets for CAR-T

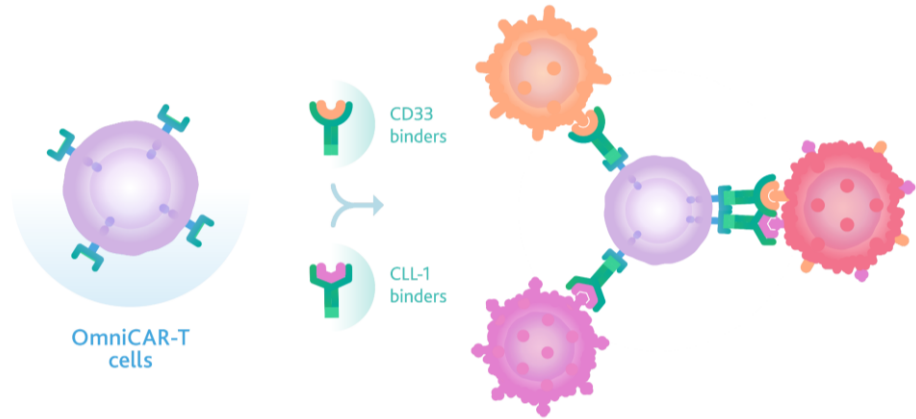
- CD33
 - Validated target in AML with approved anti-body drug conjugate (gemtuzumab ozogamicin, or Mylotarg)
 - CD33 is constantly expressed on both normal and malignant myeloid cells
 - CD33 expressed on >90% adult and childhood AML blasts and on leukemia stem cells, which have the ability to indefinitely replicate to produce cancerous leukemic cells, leading to relapse
- CLL-1
 - Expressed on 92% of AML cells
 - Absent from normal hemopoietic stem cells
 - Importantly, CLL1 is expressed on leukemic stem cells, which produce subsequent cancer cells leading to relapse

Sequentially



- Address antigen escape by redirecting T-cells without new dose of T-cells
- May be a more tolerable approach for sick AML patients

Simultaneously



- Co-Arming against CD33 & CLL1 on a single T-cell product
- Target several cancer cell populations at once:
 - CD33+
 - CLL1+
 - CD33+ CLL1+
- Could broaden anti-tumour immune response.

Solid Tumors

OmniCAR HER2

Key challenges for CAR-T in solid tumours



Targets

Limited targets that are cancer-specific
Leads to on-target, off-tumour effects



Safety

Ability to titrate doses safely and switch off in the event of adverse events
Especially important for on-target, off-tumour activity



Trafficking

Inability of T-cells to reach tumour sites and penetrate physical barriers



TME

Overcoming an immunosuppressive Tumour Microenvironment once they get there

OmniCAR's features enable it to address these challenges for CAR-T in solid tumours

Huge market opportunities for HER2+ cancers

	New cases/year worldwide ¹	Proportion that are HER2+ ^{2,3,4}	New HER2+ cases/year
Ovarian Cancer	300,000	29%	87,000
Breast Cancer	1,700,000	20%	340,000
Gastric Cancer	952,000	22%	209,440

- OmniCAR T cells armed against HER2
- Builds upon the encouraging work already undertaken by UPenn with HER2
- Makes OmniCAR HER2 the most advanced next-generation HER2 CAR-T program
- Prescient will take a “basket study” approach to HER2+ cancers
- Even when failing HER2 therapies, tumours can still express HER2, making these patients potential candidates for anti-HER2 CAR-T therapy

1. World Cancer Research Fund

2. Shang AQ, et al. Relationship between HER2 and JAK/STAT-SOCS3 signaling pathway and clinicopathological features and prognosis of ovarian cancer. *Cancer biology & therapy*. 2017:1–9

3. Luo, H et al, The prognostic value of HER2 in ovarian cancer: A meta-analysis of observational studies. *PLoS ONE* 13(1) 2018

4. Bang YJ, et al. Trastuzumab in combination with chemotherapy versus chemotherapy alone for treatment of HER2-positive advanced gastric or gastro-oesophageal junction cancer (ToGA): a phase 3, open-label, randomised controlled trial. *Lancet* 2010;376:687-97.

GBM

OmniCAR HER2/EGFRviii

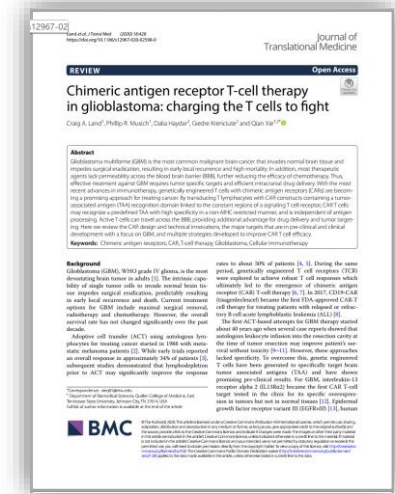
CAR-T challenges in GBM: single antigen targeting

- Composition of GBM, and its ability to rapidly mutate, limits the effectiveness of CAR-Ts only targeting a single antigen
- Targeting a single antigen targeting can result in relapse

“A major limitation of a single-antigen targeting in GBM is the inherent heterogeneity and plasticity of the tumor cells, allowing some cells to escape CAR-T cell killing due to the loss of the targeted antigen...”

“...single antigen-targeting CAR-T cells fail to completely eradicate brain tumors resulting in antigen negative relapses”

- By contrast, CAR-Ts targeting multiple antigens have demonstrated **anti tumor responses** and **more importantly prevented antigen escape *in vivo***



Two targets are better than one in GBM

- Single antigen targeting has been inadequate in GBM
- By contrast, **combination** of HER2 and other antigen targeting shows early promise in overcoming relapse
- Prescient will also explore other targets for GBM

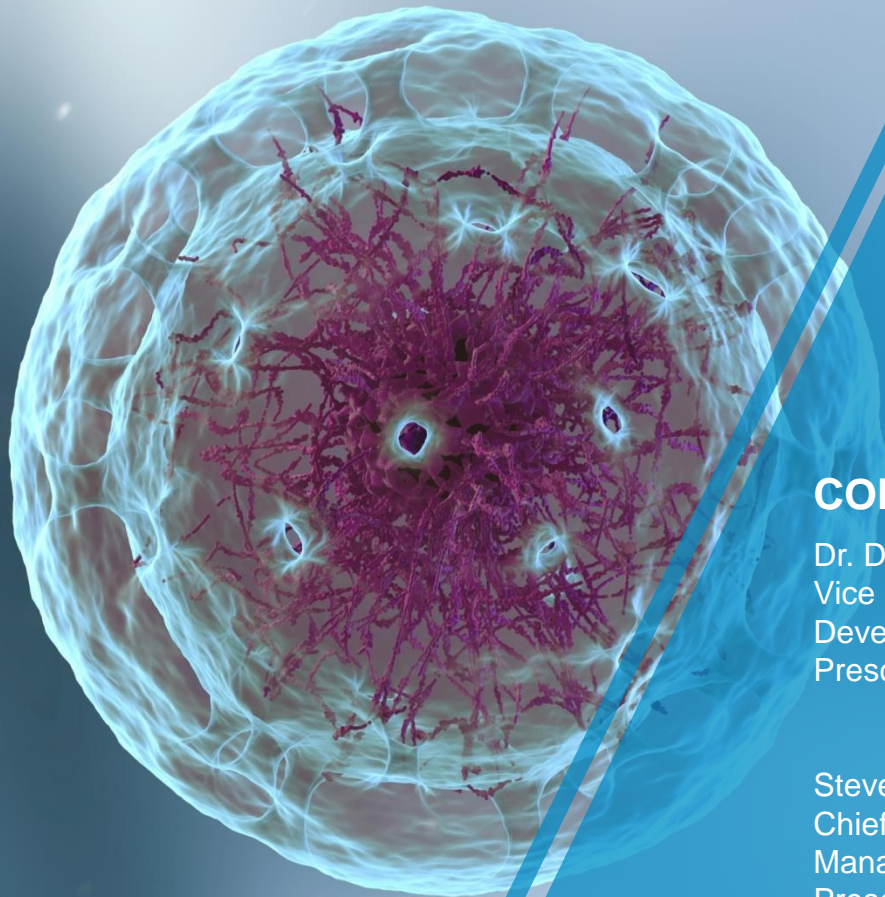


- HER2 occurs in 80% of GBM
- Linked with poor survival



- EGFRviii occurs in 45% of GBM
- Importantly, EGFRviii is only present on GBM and **is not found on healthy tissues**

- OmniCAR addresses problems encountered by current generation CAR-T
- 3 in-house OmniCAR programs, all highly differentiated and representing large opportunities
 - CD33/CLL-1 for AML
 - HER2+ solid tumours
 - HER2/EGFRviii for GBM
- Prescient is open to licensing and collaboration. OmniCAR can enhance the safety, flexibility and efficacy of third-party CAR programs
 - Agnostic on targets; indication; cell type



Prescient
Therapeutics

CONTACT

Dr. Daniel Shelly, MBA
Vice President Business
Development and Alliances
Prescient Therapeutics Limited

E : dshelly@ptxtherapeutics.com
T : 513-309-7409
W : ptxtherapeutics.com

Steven Yatomi-Clarke
Chief Executive Officer &
Managing Director
Prescient Therapeutics Limited

E : steven@ptxtherapeutics.com
T : +61 417 601 440
W : ptxtherapeutics.com