



## Prescient to Present at AVID 2022 Meeting

**MELBOURNE Australia, 3 May 2022:** Prescient Therapeutics Limited ("Prescient"; ASX: PTX), a clinical stage oncology company developing personalised therapies to treat cancer, is today presenting at the 9<sup>th</sup> Australasian Vaccines and Immunotherapeutics Development Meeting (AVID 2022), a scientific conference attended by researchers, clinicians and biopharmaceutical industry experts that focusses on immunotherapeutic drug development.

Prescient will present selected technical progress on its OmniCAR platform during the Cellular Immunotherapy session, which will be chaired by Professor Phil Darcy of the Peter MacCallum Cancer Centre. The presentation is attached.

- Ends -

To stay updated with the latest company news and announcements, [please update your details](#) on our investor centre.

### About Prescient Therapeutics Limited (Prescient)

Prescient Therapeutics is a clinical stage oncology company developing personalised medicine approaches to cancer, including targeted and cellular therapies.

#### Cell Therapies

**OmniCAR:** is a universal immune receptor platform enabling controllable T-cell activity and multi- antigen targeting with a single cell product. OmniCAR's modular CAR system decouples antigen recognition from the T-cell signalling domain. It is the first universal immune receptor allowing post- translational covalent loading of binders to T-cells. OmniCAR is based on technology licensed from Penn; the SpyTag/SpyCatcher binding system licensed from Oxford University; and other assets.

The targeting ligand can be administered separately to CAR-T cells, creating on-demand T-cell activity post infusion and enables the CAR-T to be directed to an array of different tumour antigens. OmniCAR provides a method for single-vector, single cell product targeting of multiple antigens simultaneous or sequentially, whilst allowing continual re-arming to generate, regulate and diversify a sustained T-cell response over time.

Prescient is developing OmniCAR programs for next-generation CAR-T therapies for Acute Myeloid Leukemia (AML); Her2+ solid tumours, including breast, ovarian and gastric cancers; and glioblastoma multiforme (GBM).

**Cell Therapy Enhancements:** Prescient has several other initiatives underway to develop new cell therapy approaches.

#### Targeted Therapies

**PTX-100** is a first in class compound with the ability to block an important cancer growth enzyme known as geranylgeranyl transferase-1 (GGT-1). It disrupts oncogenic Ras pathways by inhibiting the activation



of Rho, Rac and Ral circuits in cancer cells, leading to apoptosis (death) of cancer cells. PTX- 100 is believed to be the only GGT-1 inhibitor in the world in clinical development. PTX-100 demonstrated safety and early clinical activity in a previous Phase 1 study and recent PK/PD basket study of hematological and solid malignancies. PTX-100 is now in a Phase 1b expansion cohort study in T cell lymphomas.

**PTX-200** is a novel PH domain inhibitor that inhibits an important tumour survival pathway known as Akt, which plays a key role in the development of many cancers, including breast and ovarian cancer, as well as leukemia. Unlike other drug candidates that target Akt inhibition, PTX-200 has a novel mechanism of action that specifically inhibits Akt without non-specific kinase inhibition effects. This highly promising compound has previously generated encouraging Phase 2a data in HER2-negative breast cancer and Phase 1b in recurrent or persistent platinum resistant ovarian cancer, with a Phase 1b/2 trial currently underway in relapsed and refractory AML.

The CEO and Managing Director of Prescient Therapeutics Limited has approved the release of this announcement.

Find out more at [www.ptxtherapeutics.com](http://www.ptxtherapeutics.com) or connect with us via Twitter [@PTX\\_AUS](https://twitter.com/PTX_AUS) and [LinkedIn](https://www.linkedin.com/company/ptxtherapeutics).

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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, global pandemics and related disruptions, the impact of pharmaceutical industry development and health care legislation in the United States and internationally, and challenges inherent in new product development. In particular, there are substantial risks in drug development including risks that studies fail to achieve an acceptable level of safety and/or efficacy. 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 announcement. 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.

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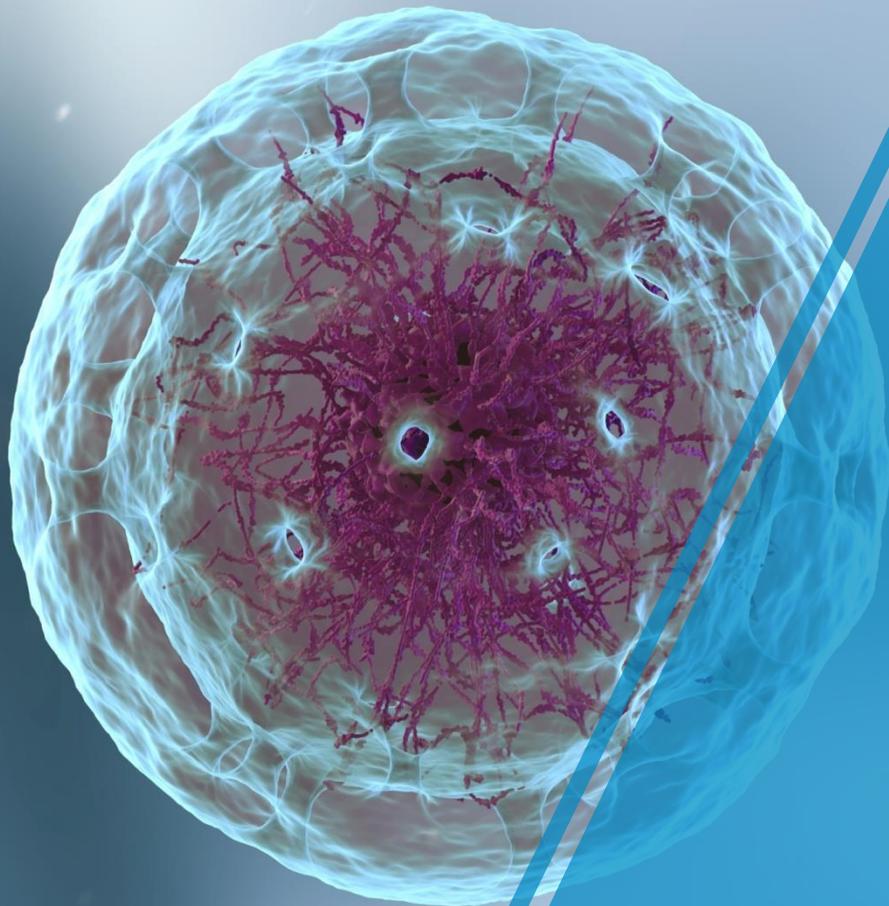


factors that may cause the actual results, performance or achievements of Prescient to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such factors include, among others, the following: the risk that our clinical trials will be delayed and not completed on a timely basis; the risk that the results from the clinical trials are not as favourable 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.

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### **Supplemental COVID-19 Risk Factors**

Please see our website : [Supplemental COVID-19 Risk Factors](#)



**Prescient**  
Therapeutics

OmniCAR –

A Covalent Universal Immune Receptor  
Platform for CAR-T Therapy

**AVID 2022**

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# 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



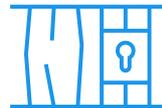
## Exhaustion

Persistent stimulation of CAR-  
Immune cells leads to exhaustion



## No Control

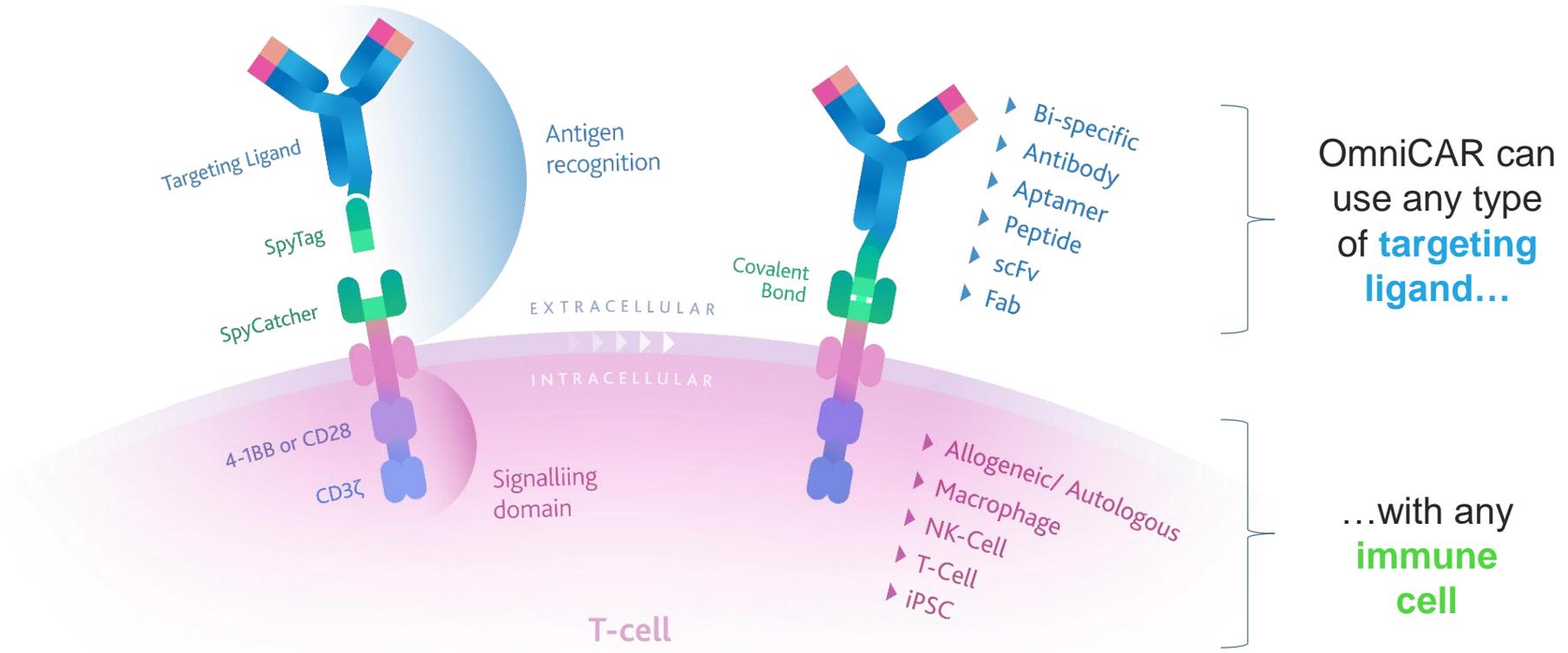
Clinicians have no control  
of cells post infusion



## Escape

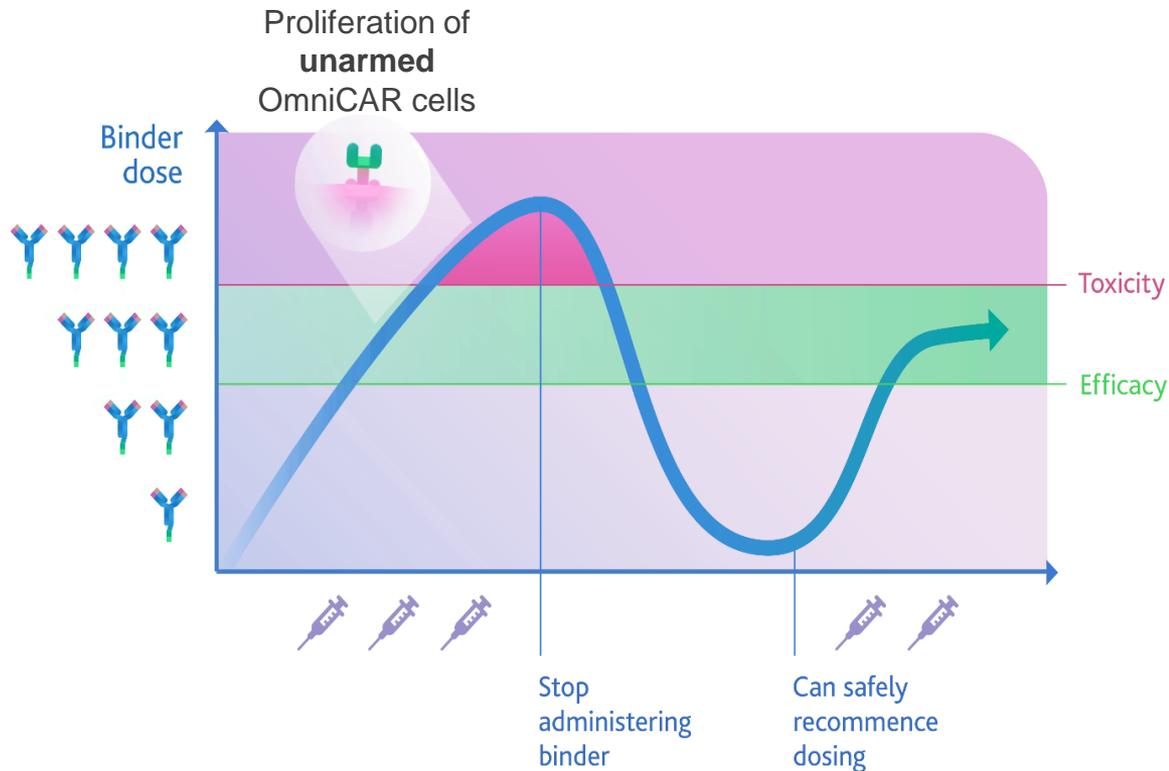
Antigen loss leads to relapse

# The modularity of the OmniCAR platform

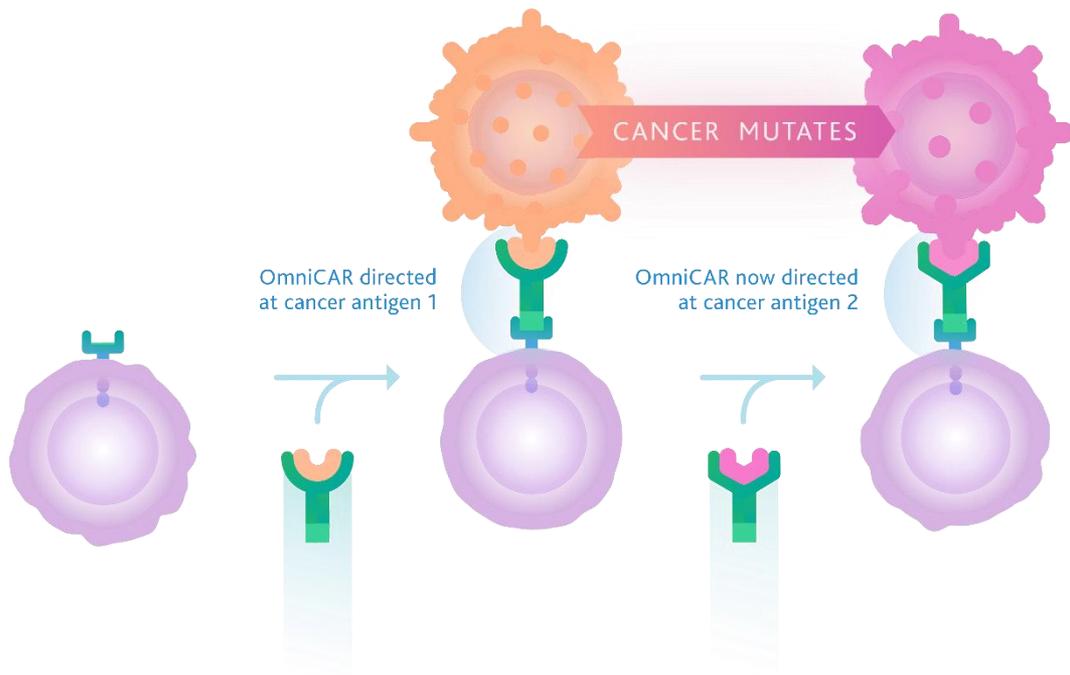


# Safety: Built-in on/off switch

- 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**

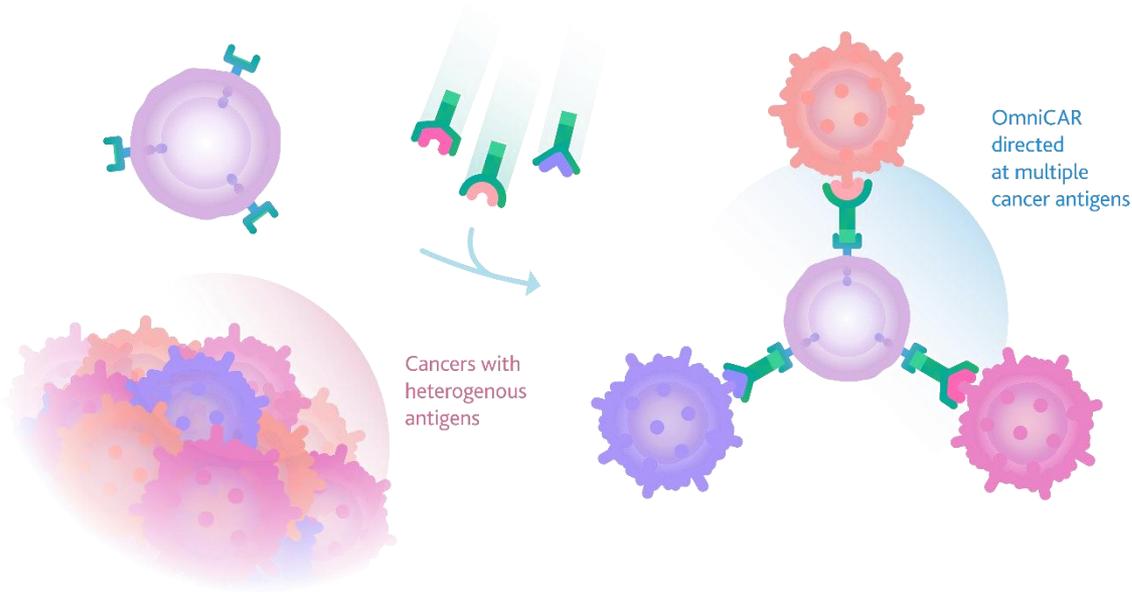


# Target Multiple Antigens *Sequentially*



- 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*



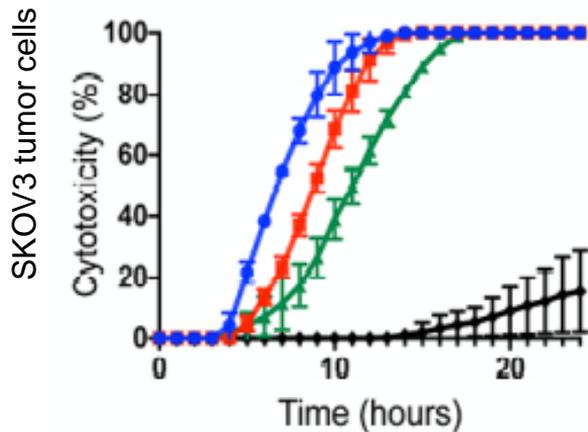
- Multiple antigen targeting with single vector/cell product
- Could broaden anti-tumour immune response
- Address antigen escape
- Tailor arming combinations and proportions
- Utility in many solid tumours

# Covalent Binding:

## Superior tumor killing & other advantages

### Covalent

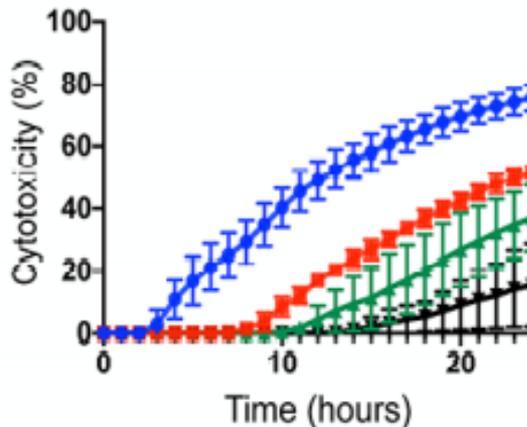
SC28ζ + Herceptin-ST



● 100ng    ■ 10ng    ▲ 5ng    ■ T cells only

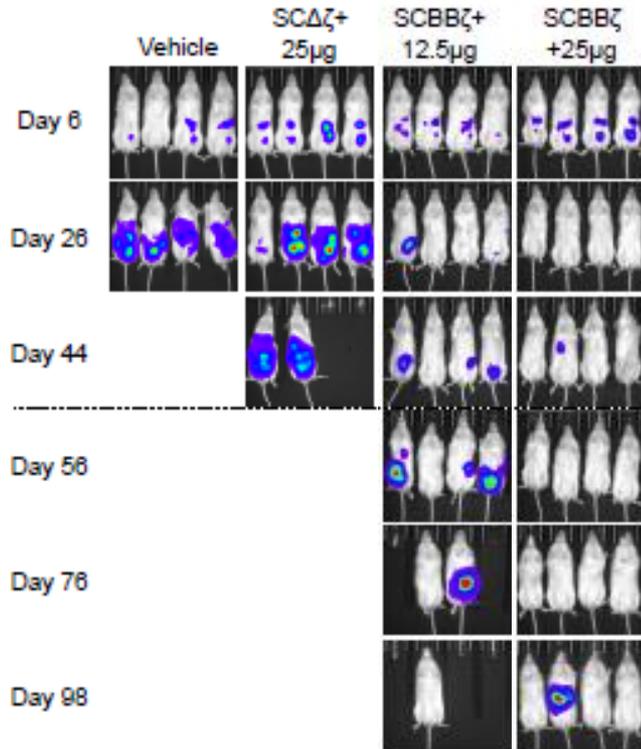
### Non-Covalent

SC28ζ + Herceptin-STD A

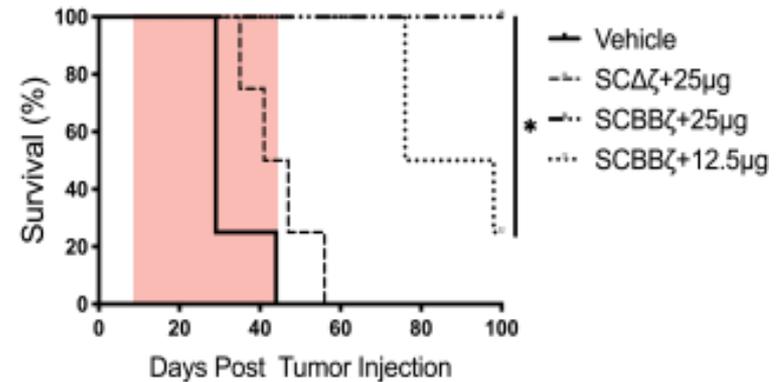


- **Covalent** binding improves SpyCatcher T-cell **loading and tumour cell lysis**
- Covalent binding has additional advantages in:
  - Efficacy
  - Predictability
  - Clinical utility
  - Regulatory considerations

# Control: Dose-dependent CAR-T activity

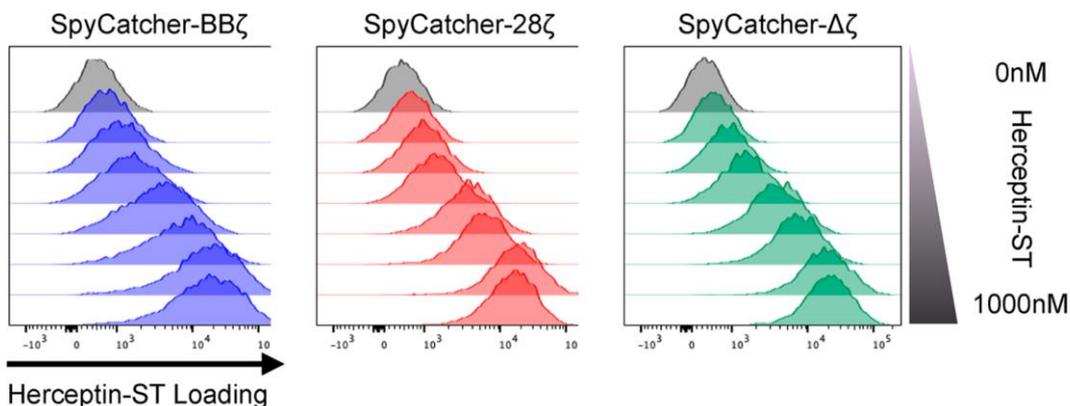


- Ovarian cancer model, using anti-HER2 OmniCAR
- Loading more binder results in **proportionate killing** of cancer...
- ...and **proportionate survival**

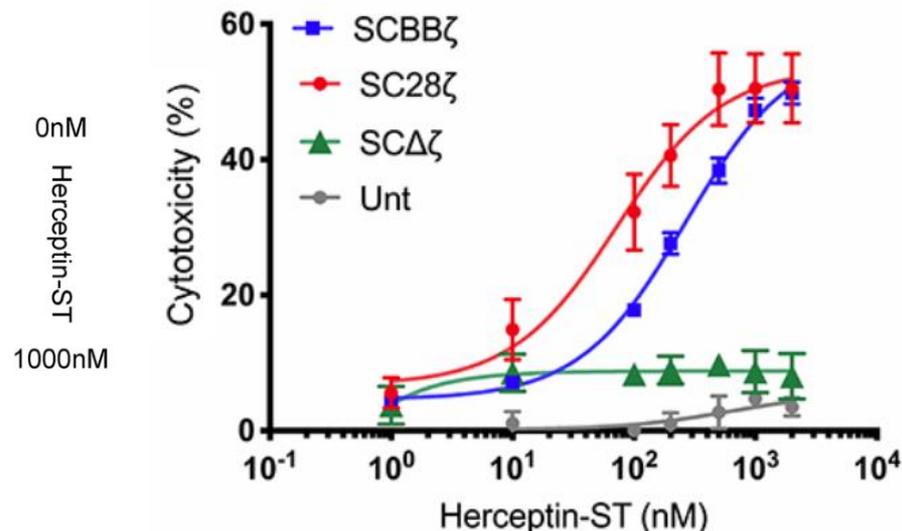


# Flexible Loading and Dose-Dependent Lysis

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

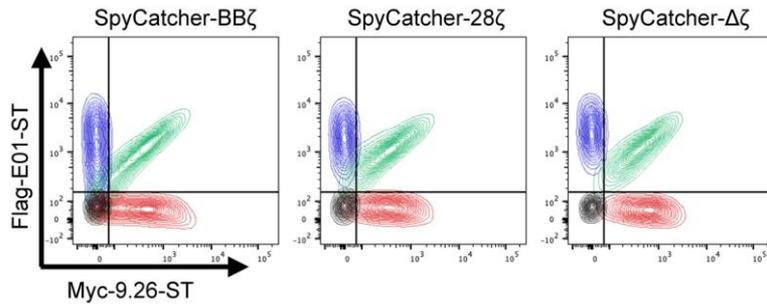


- Increasing targeting ligand concentration results in increased lytic capacity



# Equal Arming & Equal Tumour Killing

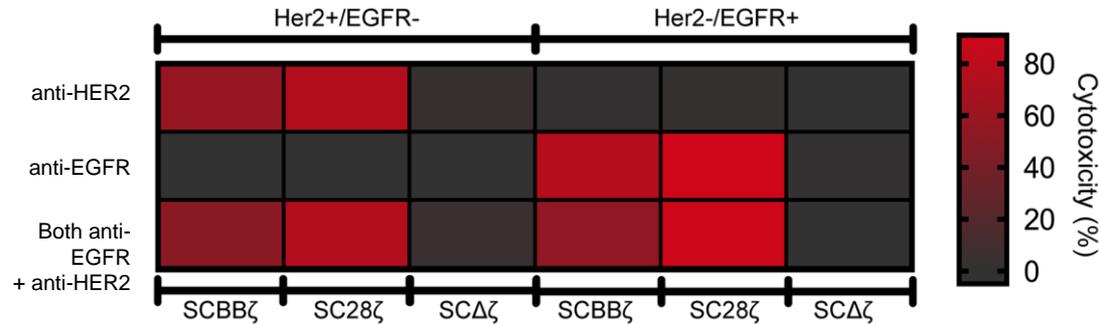
## Equal arming



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

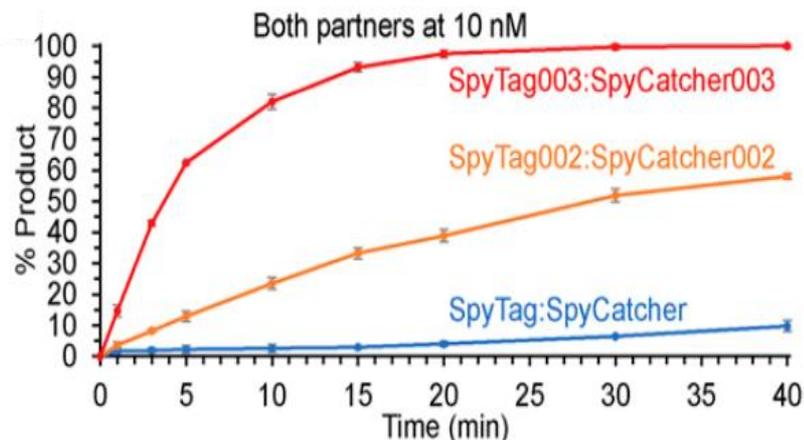
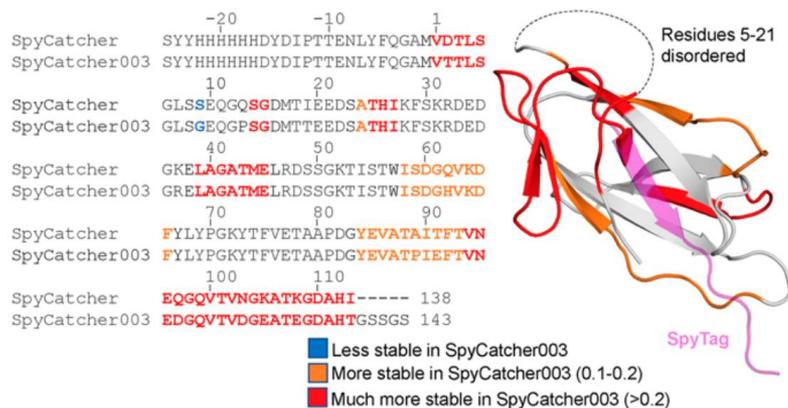
# V3 of OmniCAR: Stronger, Faster, Better

## Approaching infinite affinity through engineering of peptide–protein interaction

Anthony H. Keeble<sup>a,1</sup>, Paula Turkki<sup>b,c,1</sup>, Samuel Stokes<sup>a</sup>, Irsyad N. A. Khairil Anuar<sup>a</sup>, Rolle Rahikainen<sup>a</sup>,  
 Vesa P. Hytönen<sup>b,c,2</sup>, and Mark Howarth<sup>a,2</sup>

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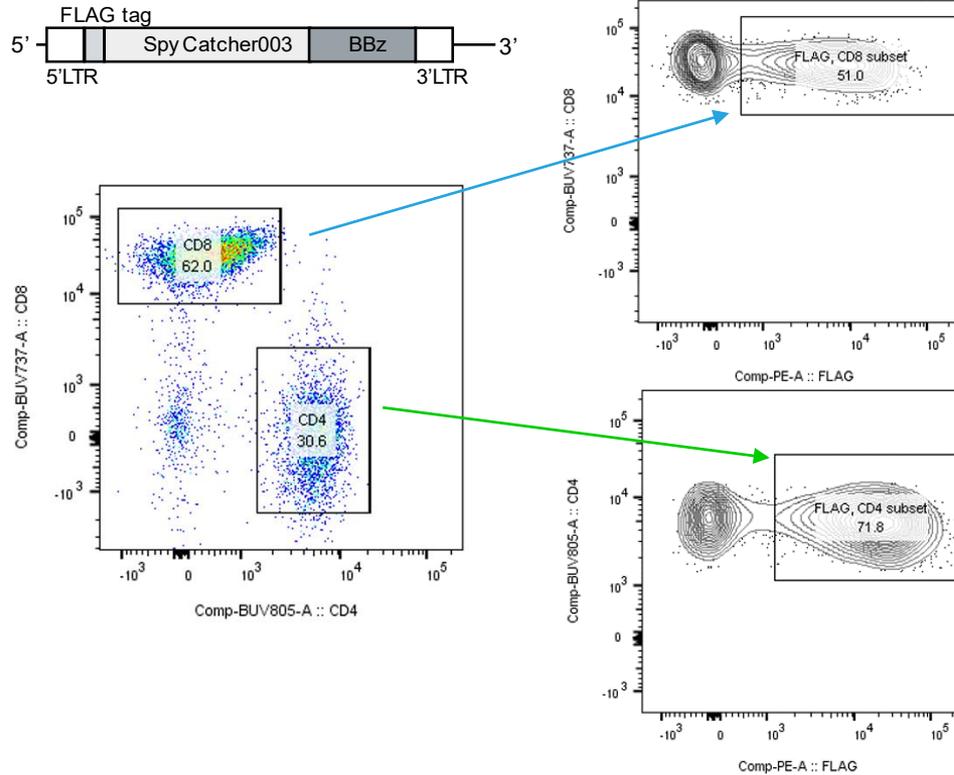
PNAS | December 26, 2019 | vol. 116 | no. 52 | 26523–26533



Reaction rates of v003 compared to previous versions

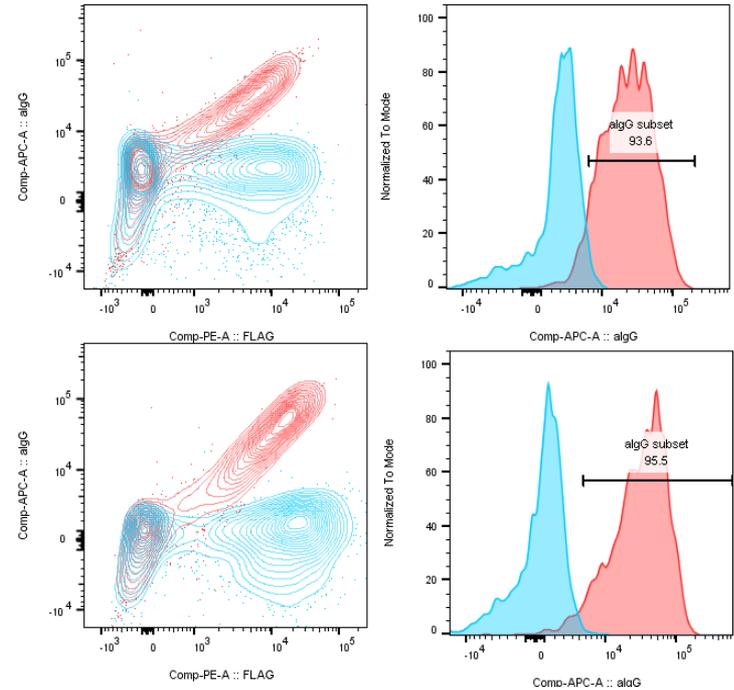
# OmniCAR V3 construct

## N-FLAG



## Highly efficient arming

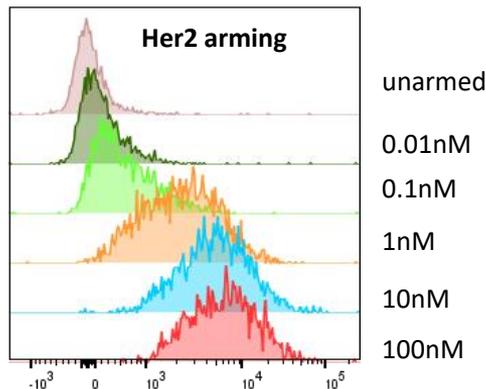
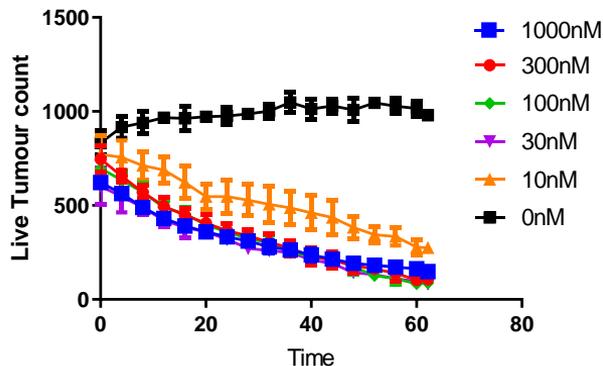
Almost 100% arming within 1 hr



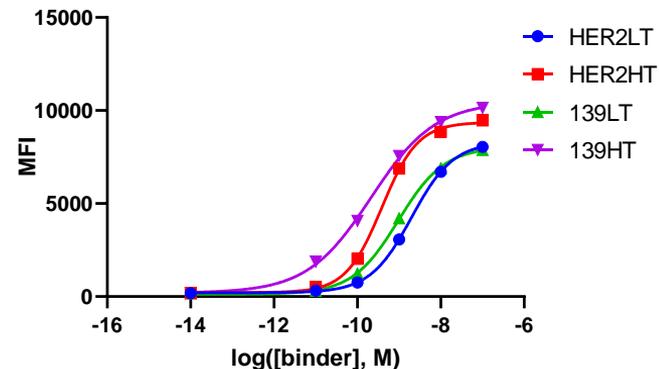
HER2 armed (1hr) + algG + aFLAG

# Dose response: High potency with less binder required

2:1 Her2 armed OmniCAR vs U251-Her2+ cells



NFLAG003 BBz



## EC50 in the very low nM range

	HER2LT	HER2HT	139LT	139HT
NFlag003 EC50 (nM)	2.001	0.3878	0.9588	0.2147

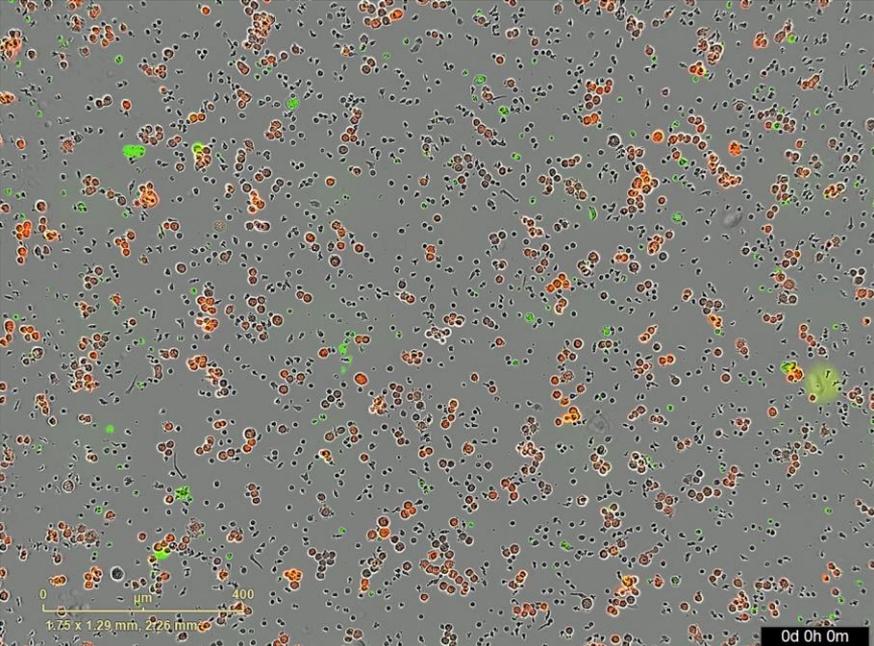
# Potency of OmniCAR comparable to conventional CAR



## Conventional CAR T (Her2)

MCF7 (2:1 ratio)

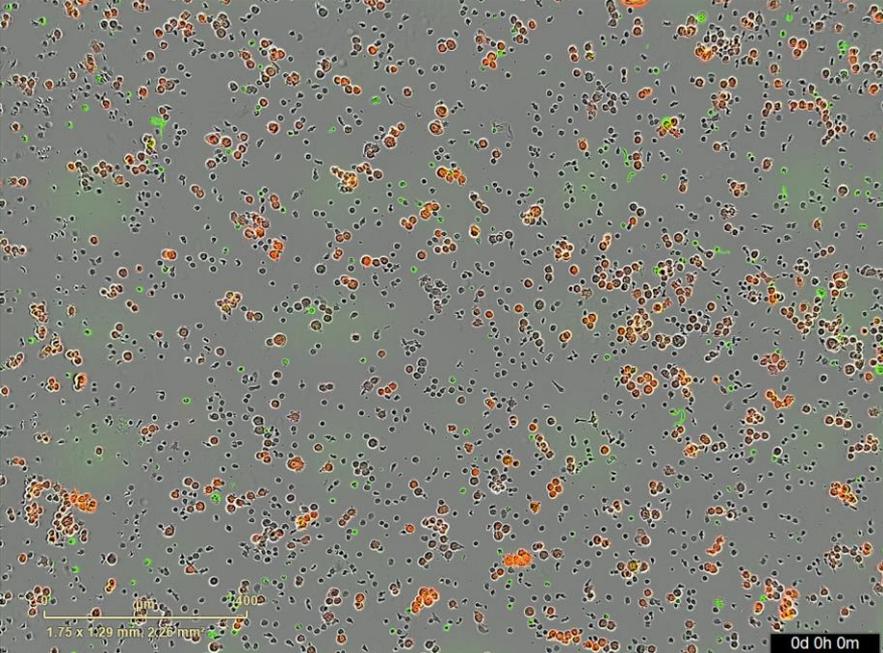
Caspase 3/7



## OmniCAR T (Her2)

MCF7 (2:1 ratio)

Caspase 3/7



# Re-Arming: OmniCAR Her2 can be Re-Armed

T cell activation    Transduction    Armed    Cytotoxicity assay

Day 0    Day 3    Day 7    Days 8–10

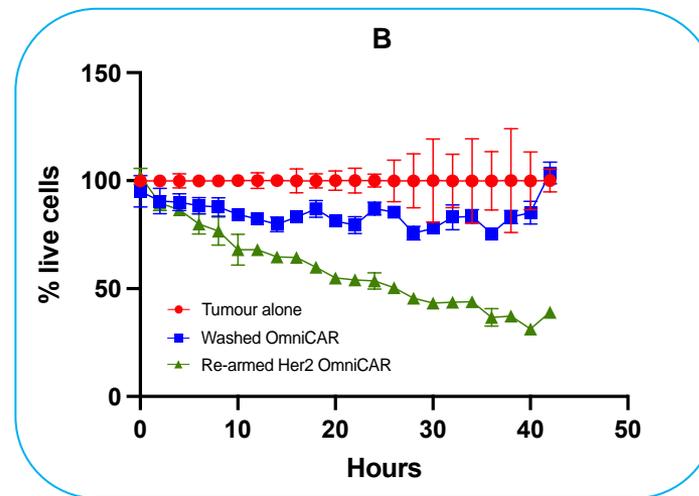
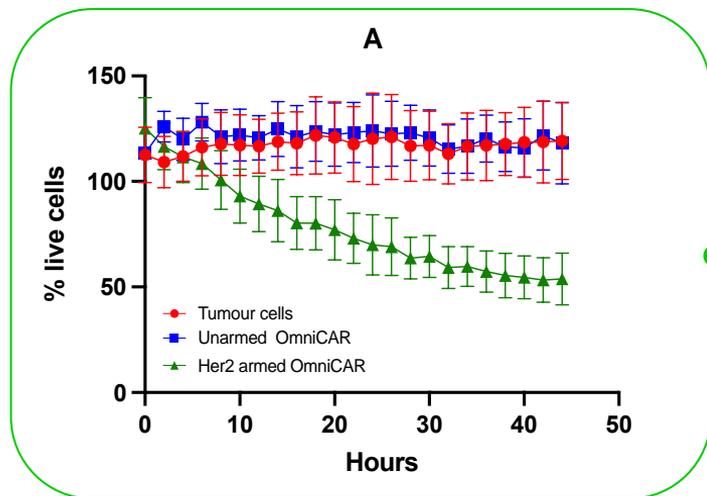
Wash; Rest

Re-armed

Cytotoxicity assay

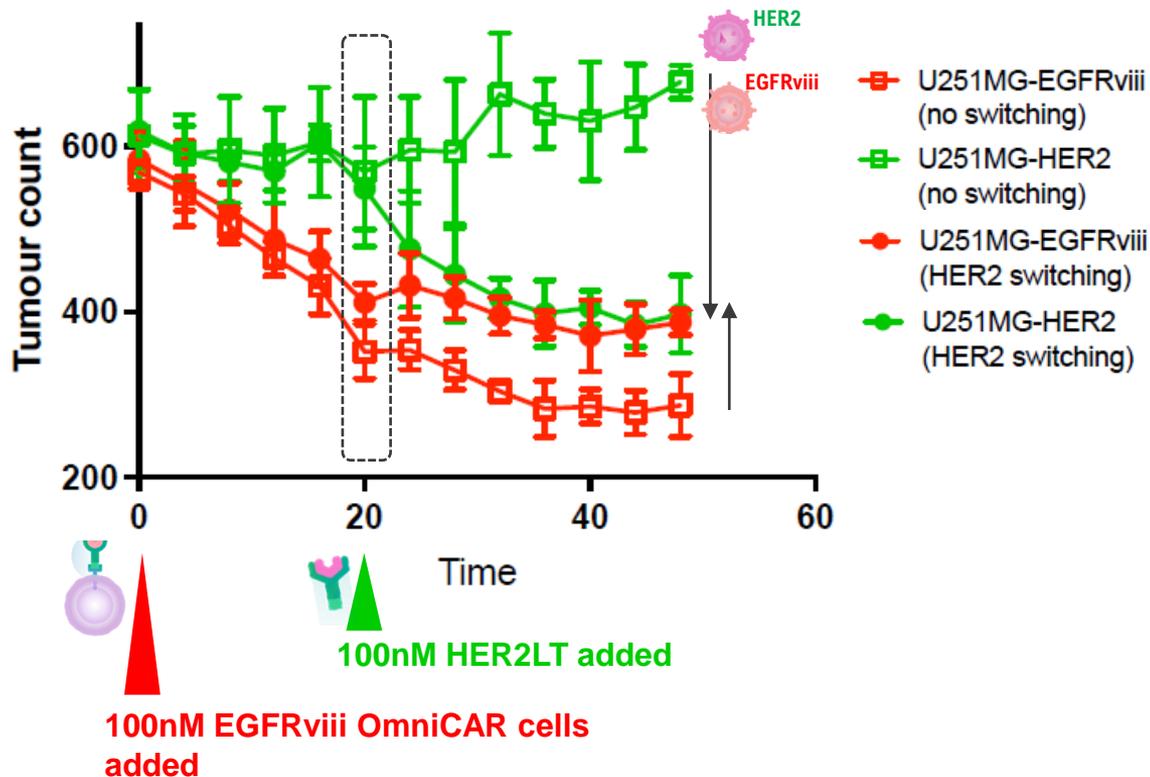
Day 12

Days 13–14



- OmniCAR T cells can be re-armed
- Re-arming results in **same levels and kinetics of cytotoxicity** as pre-armed

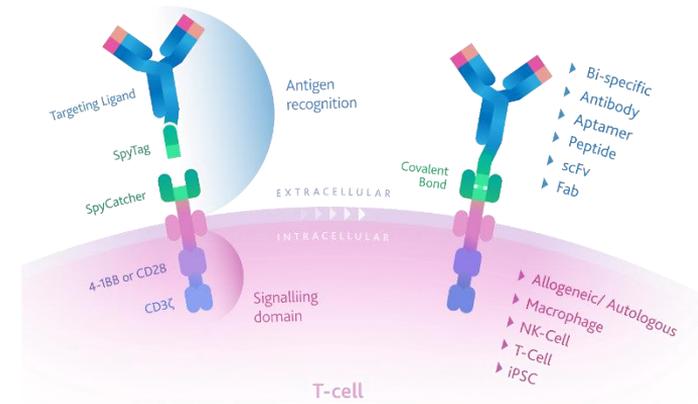
## Antigen Target Re-direction in Coculture of U251 GBM Cells expressing HER2 or EGFRviii



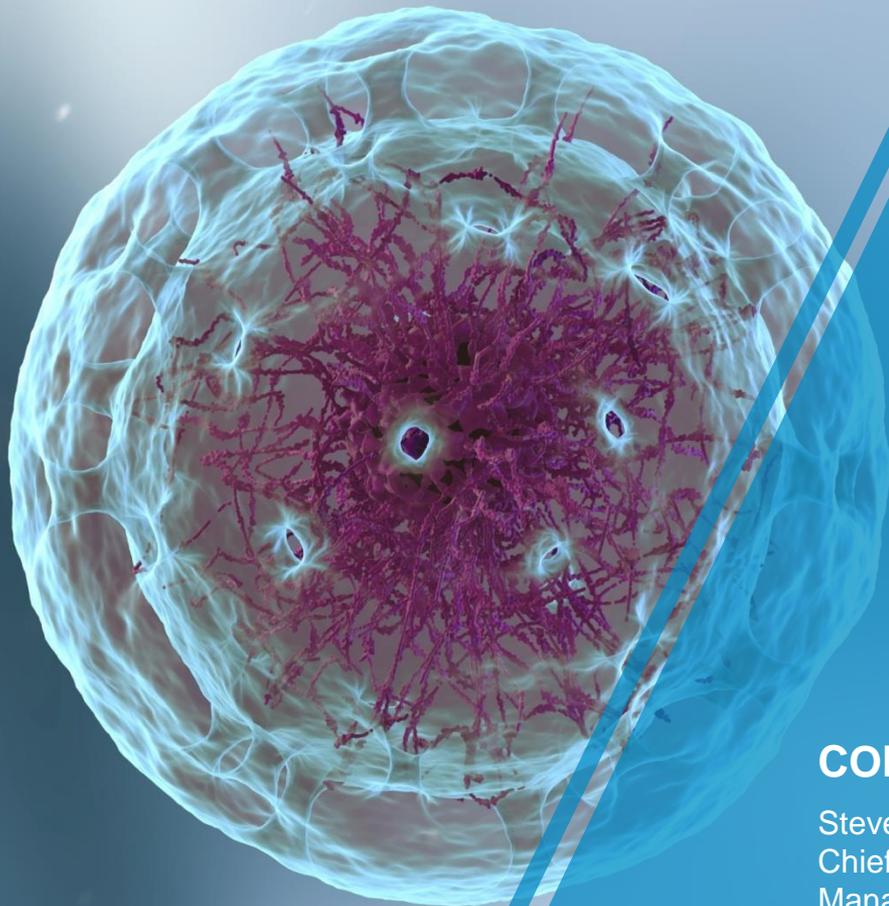
- Rapid cytotoxicity to EGFRviii
- **Rapid switching and cytotoxicity** against HER2+ tumours upon administration of new binder
- OmniCAR cells can be **re-directed to different antigens** upon administration of a different SpyTagged binder **without new cells**

# Summary and Conclusions

- OmniCAR is a universal, modular CAR system
- Agnostic on antigen; targeting ligand; immune cell
- Modularity does not appear to compromise cytotoxicity
- Covalent modularity enables:
  - Control of cytotoxicity
  - Predictable loading
  - Multi-valence
  - Target re-redirection



Special thanks to Phil Darcy  
and his team at Peter Mac



**Thank you.**

**CONTACT**

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