

**Prescient**  
Therapeutics

Unveiling



**CellPryme**

**Novel platform for  
enhancing cell therapies**

Prescient Therapeutics Limited (ASX: PTX)

# CellPryme-M: Prescient's newest family member



## PLATFORM TO ENHANCE CELL THERAPIES

- Current gen and next gen
- Complementary to OmniCAR

## PRODUCES SUPERIOR CELLS

- Doubles tumour control & survival
- Longer lasting
- Tumour trafficking & penetration

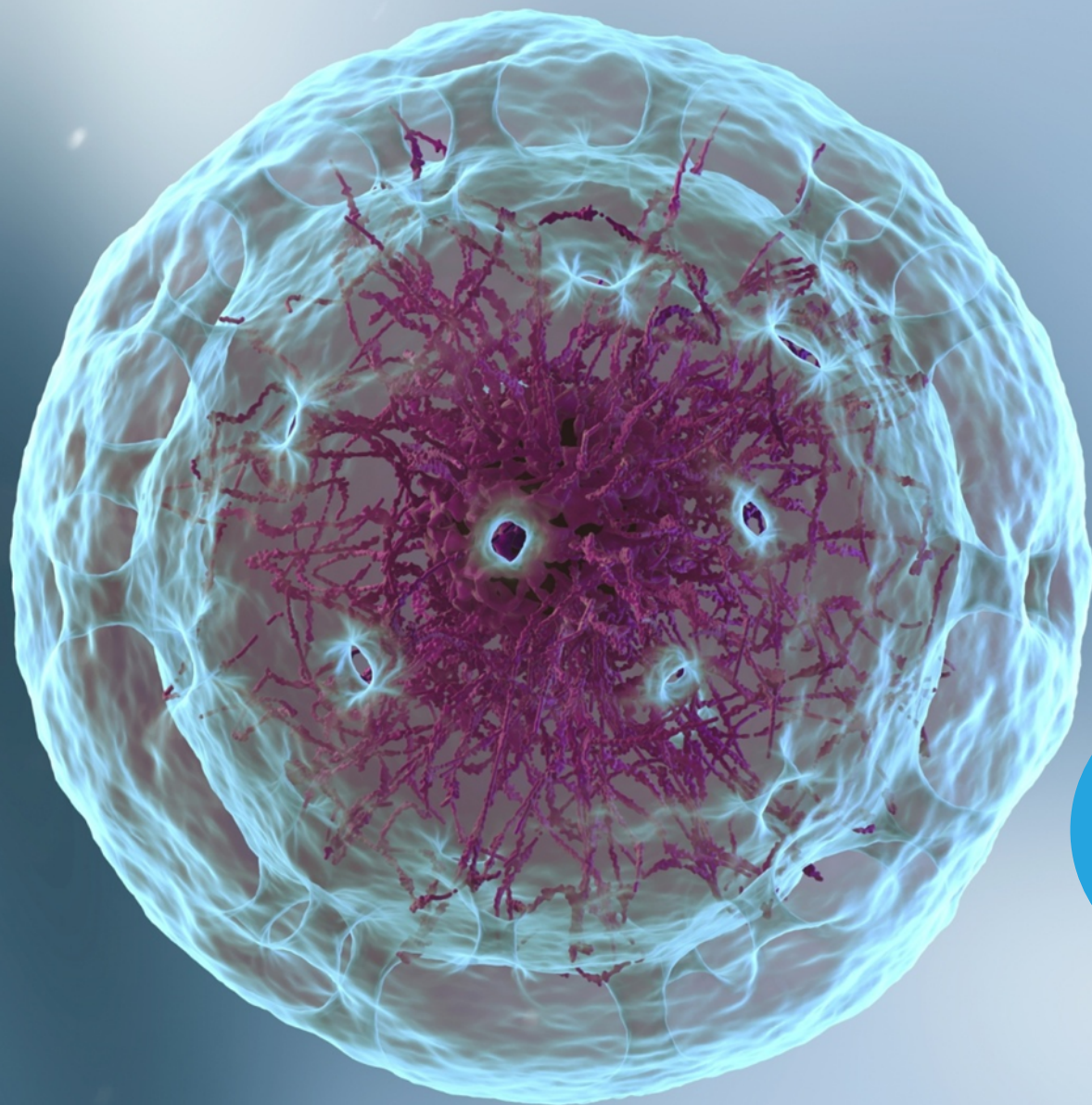
## DEVELOPMENT OPPORTUNITIES

- Internal PTX programs
- External collaboration & sales to 3<sup>rd</sup> parties
- Use with any existing CAR-T manufacturing process with no loss of time

## READY FOR CLINICAL TESTING

## IP FULLY OWNED BY PTX

Developed by PTX in collaboration with Peter Mac



**What is CellPryme-M?**

# What does CellPryme-M do?

CellPryme-M is a single, rapid manufacturing step that produces a better, more effective cell type:

## LONGER LASTING CELLS FOR SUSTAINED TUMOUR KILLING

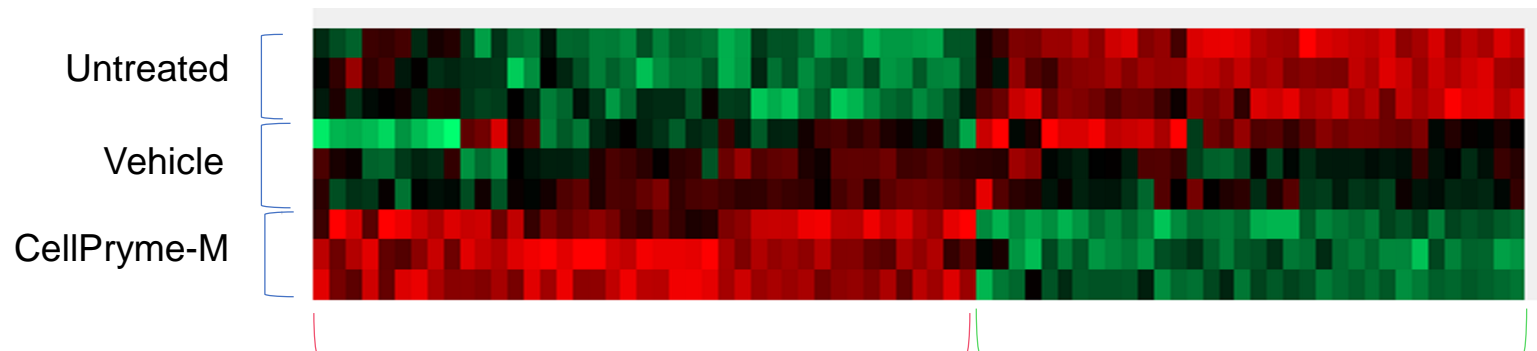
- 50% more memory T cells
- Doubles helper T cells
- Doubles tumour control

## CELLS THAT CAN BETTER LOCATE THE TUMOUR

- Significantly more chemokine receptors for improved trafficking to tumour sites
- Important in solid tumours

# How does CellPryme-M work?

- Rapid, single 24-hour preconditioning step with standard manufacturing protocols
- Influences gene expression in immune cells
- “Pushes” the cells towards a more favourable phenotype



## Down-regulated:

- Cell metabolism
- Protein folding & mRNA splicing

## Up-regulated:

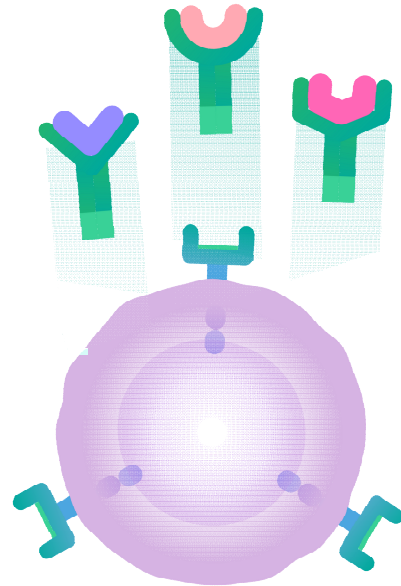
- Type 1 interferon signalling
- Cytokine signalling
- Genomic stability
- Potent anti-viral pathways

# CellPryme-M Complements OmniCAR



## OmniCAR

- Multi-targeting
- Redirection
- Control & safety
- Any target; any cell



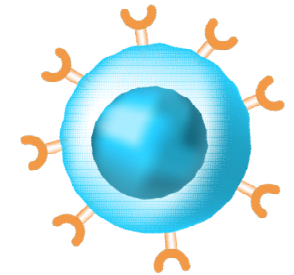
Next generation  
Cell therapies



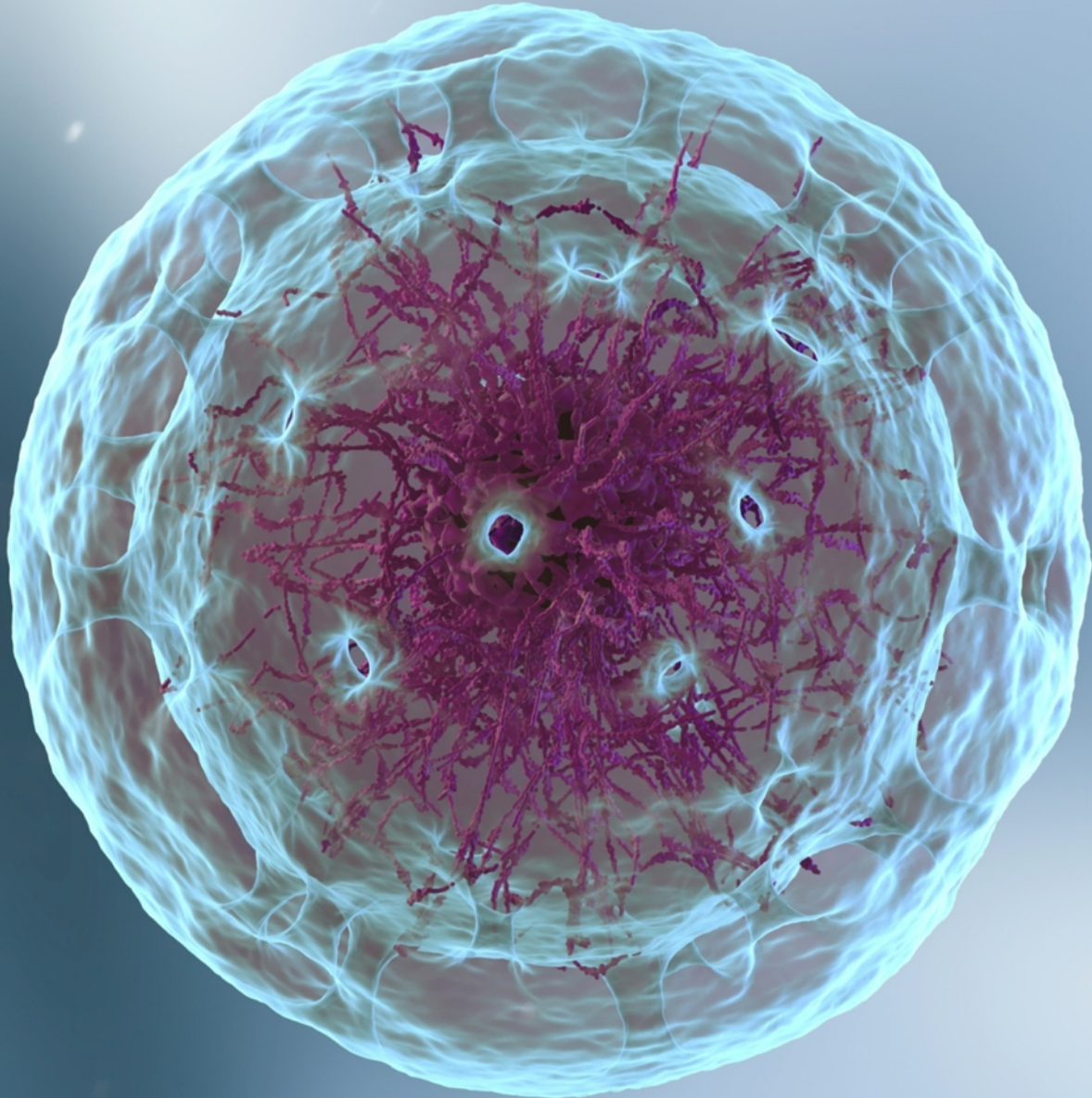
## CellPryme-M

Process that produces  
a better cell type

- Persistence
- Trafficking



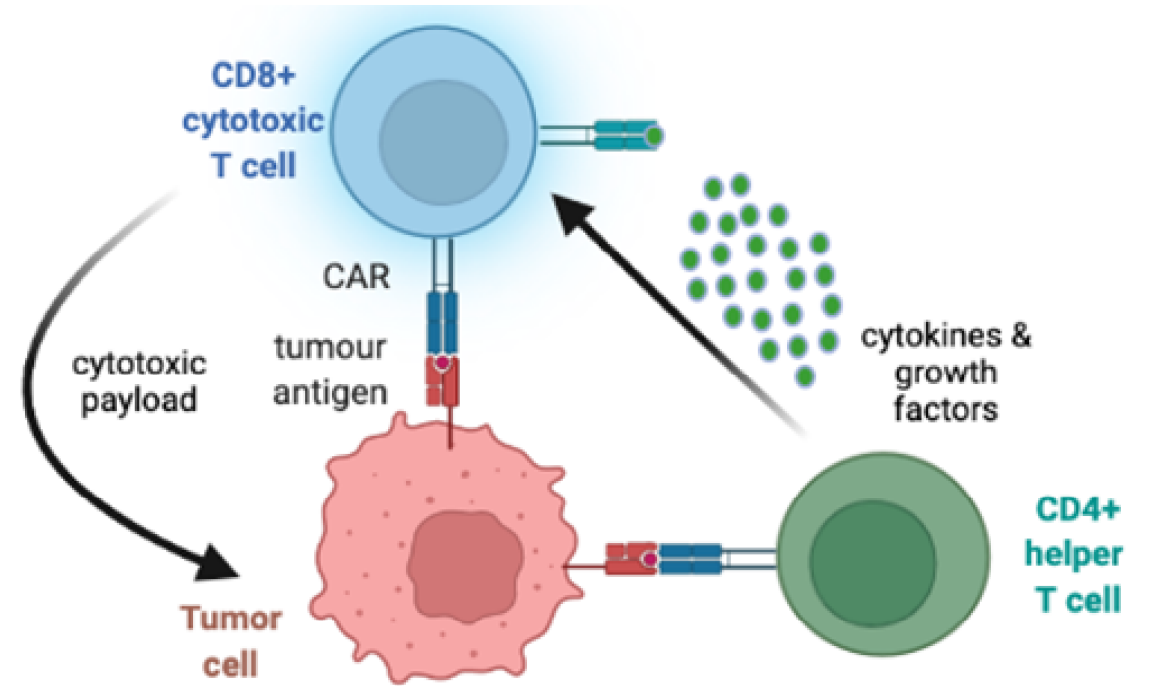
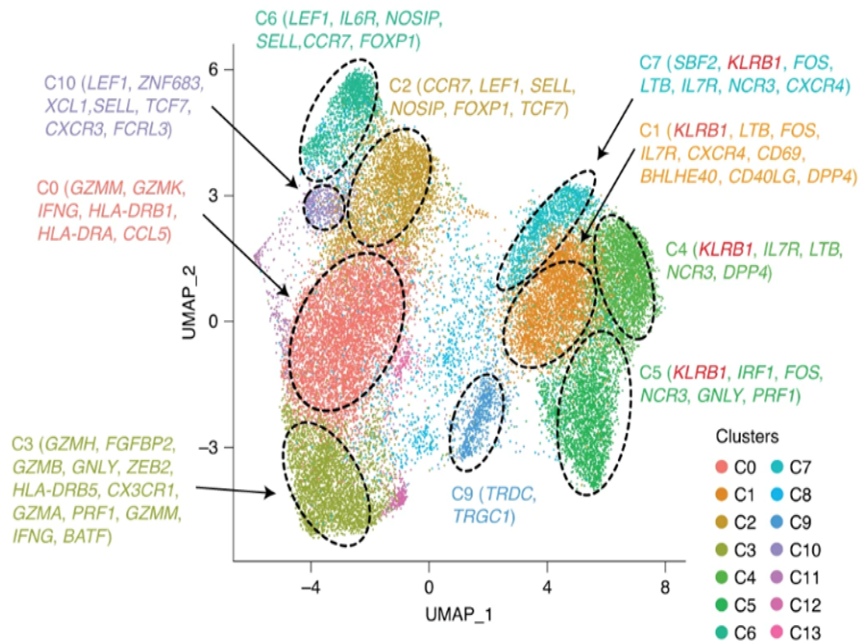
Current generation  
cell therapies



**What problems does  
CellPryme-M overcome?**

# CAR-T cells: Not just one cell type!

T cells are extremely heterogenous, each with their own unique “fingerprint” that dictates **where** they go and **what** they do

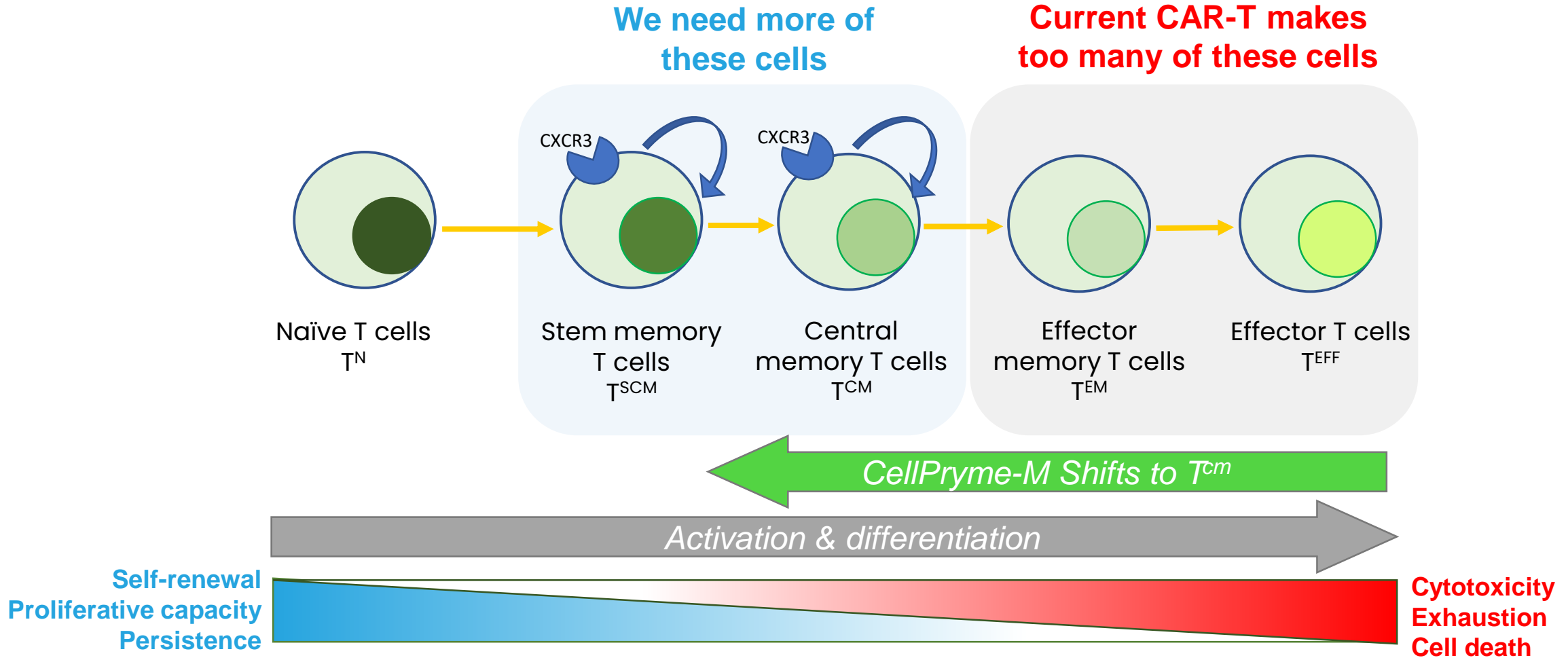


**CD8+ T cells** deliver the payload to kill cancer cells  
**CD4+ T cells** release cytokines and growth factors to sustain CD8+ T cells



# More memory cells required for clinical efficacy

- Clinical efficacy of CAR-T therapy remains dependent on the T cell phenotype
- It is possible to control this during the manufacturing step



# Overcoming CAR-T's key challenges

 **OmniCAR**  
Next generation

 **CellPryme**  
Conventional CAR-T      Next generation

			Conventional CAR-T	Next generation
	Poor cell expansion; manufacturing time & cost	n/a	✓	✓
	Safety	✓		
	Post infusion control	✓		
	Tumour heterogeneity	✓		
	Escape	✓		
	Trafficking	✓	✓	✓
	Tumour penetrance	✓	✓	✓
	Suppressive tumour microenvironment	✓		
	Exhaustion/persistence	✓	✓	✓

# CellPryme-M produces CAR-T cell types with ideal characteristics and attributes



## Persistence

For longevity of effects and continued tumour control



## Trafficking

CAR-T cells able to find their way to the tumour



## Tumour penetrance

Cells that can penetrate solid tumours



## Immune memory

Central memory T cells typically persist 10-20 years and as long as 75 years



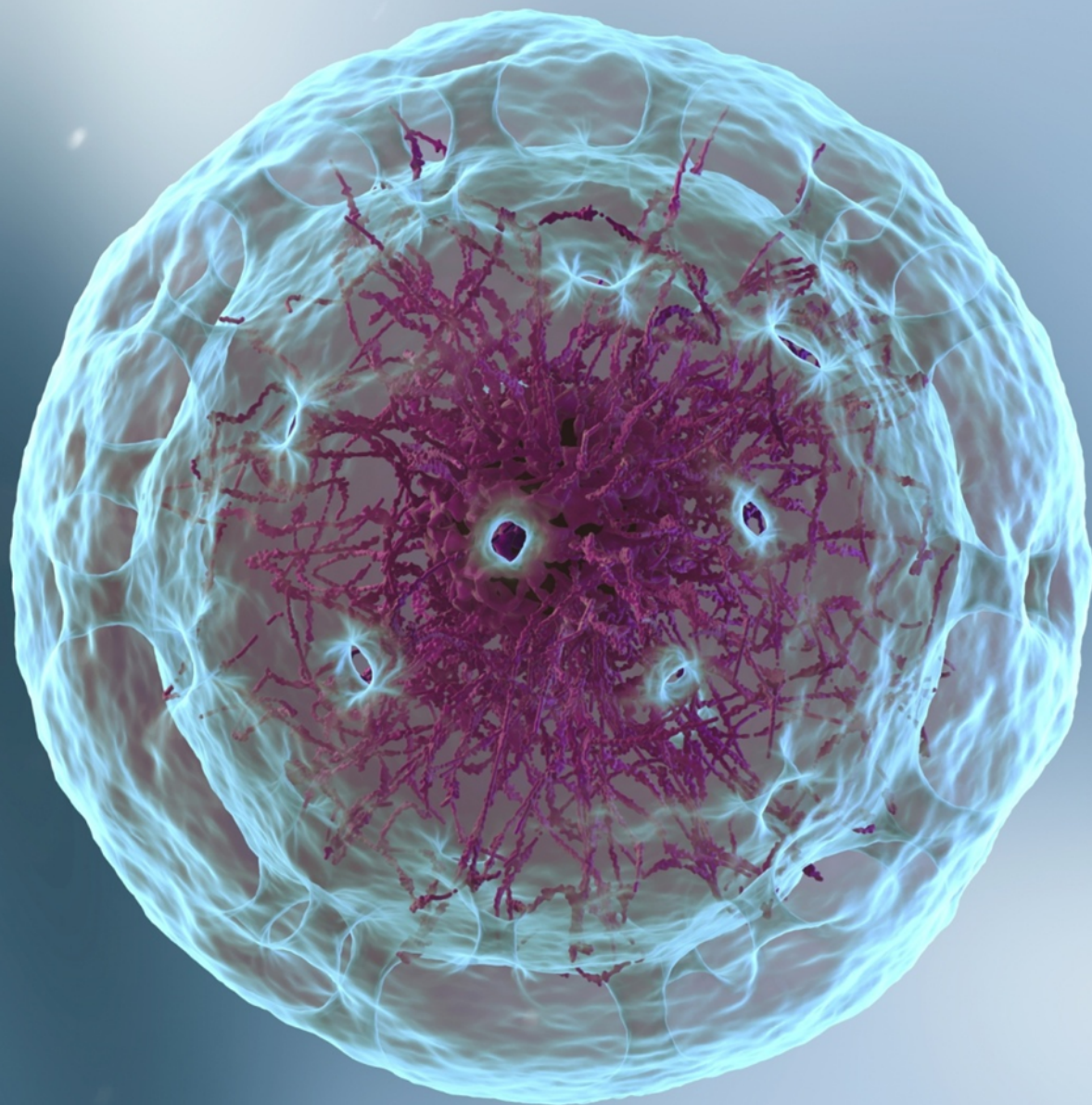
## Genomic stability

Cells with enhanced self-renewal due to greater genomic stability



## Anti-viral

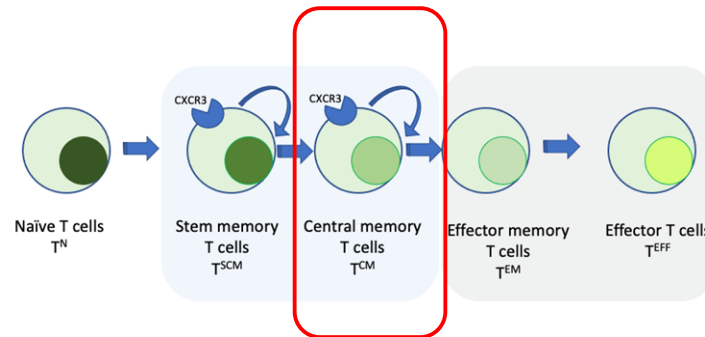
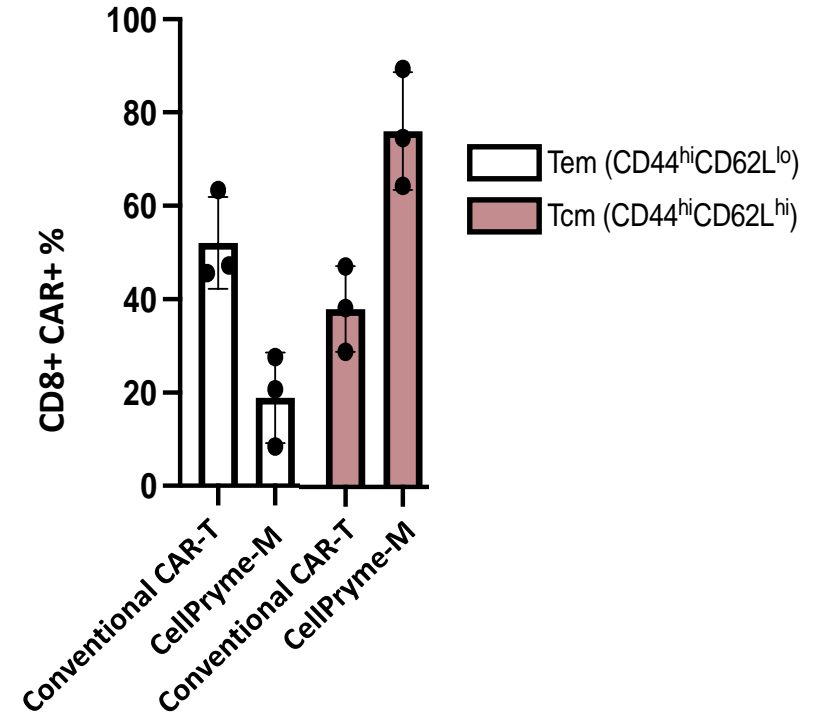
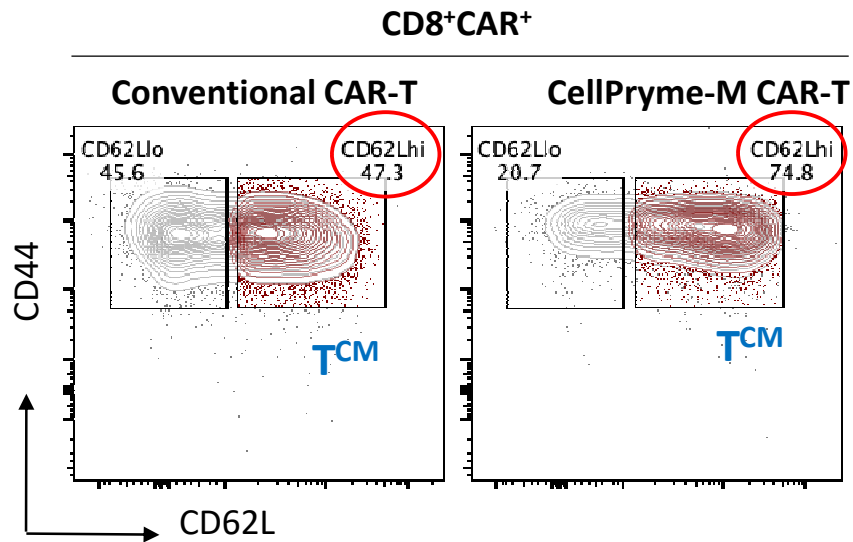
Cells with potent anti-viral characteristics



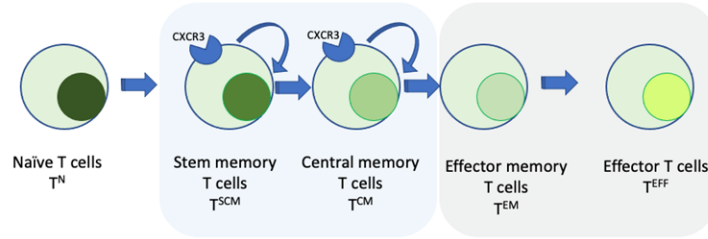
**Compelling data**

# Greater Persistence: 50% more central memory cells than conventional CAR-T

CellPryme-M increases central memory T cells 1.5-fold within 24hrs



# Greater Persistence/Less Exhaustion

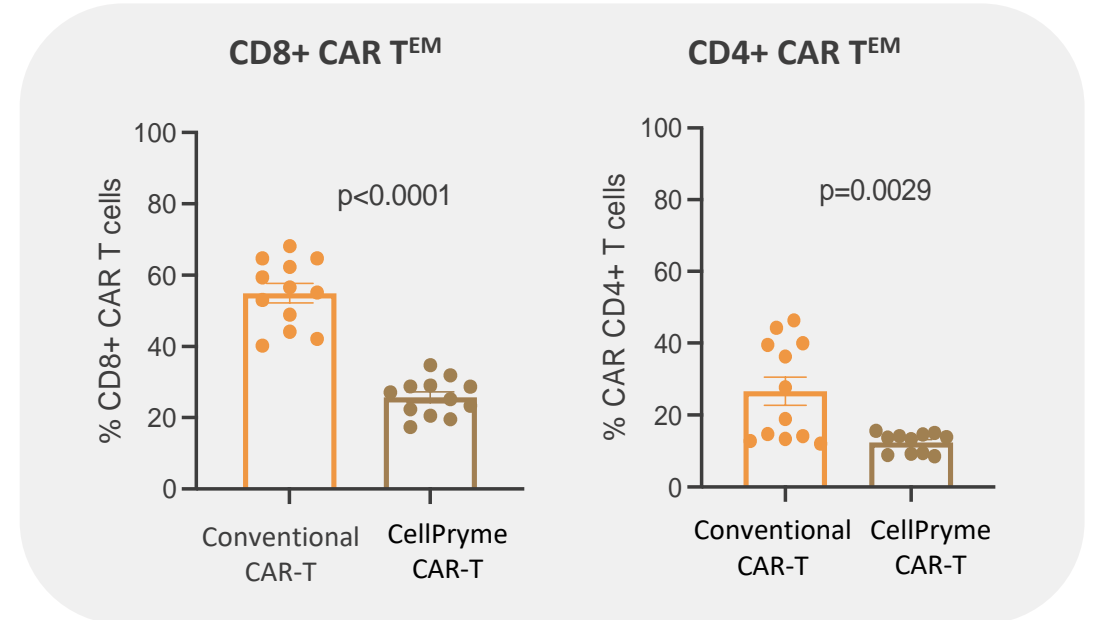
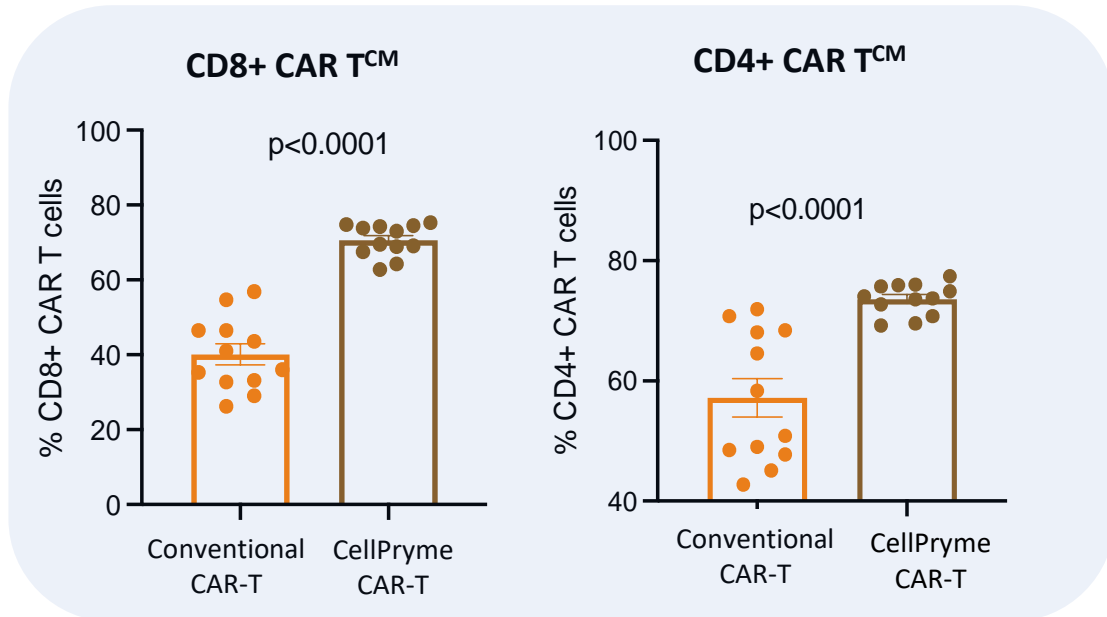


Sustained increase in T<sup>CM</sup>

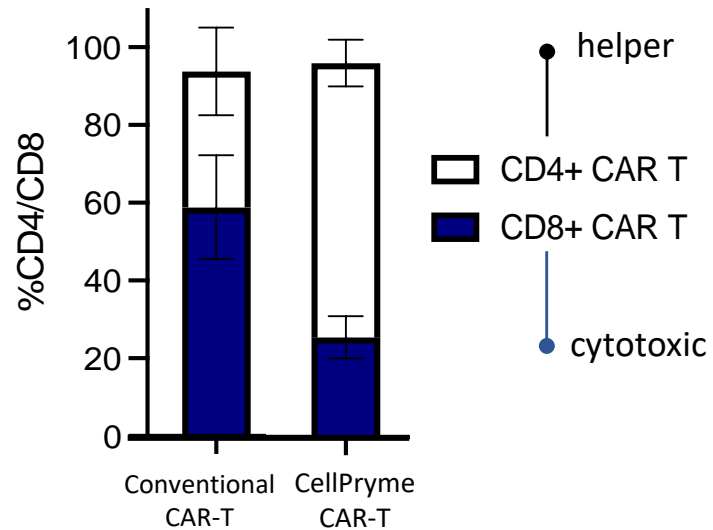
Sustained decrease in T<sup>EM</sup>

for both cytotoxic CD8+ and helper CD4+

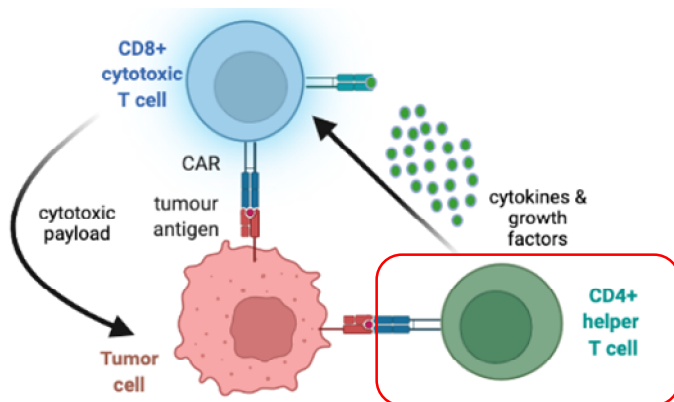
for both cytotoxic CD8+ and helper CD4+



# Synergy: CellPryme-M doubles proportion of helper T cells



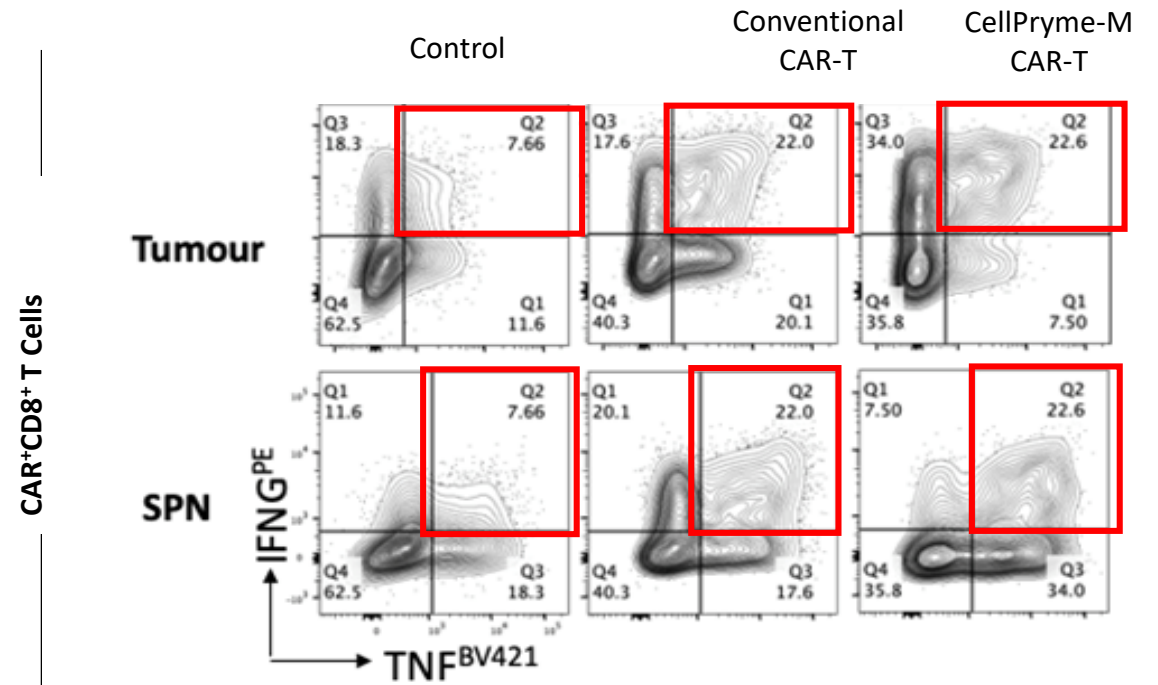
- Shift towards dominant helper CD4+ CAR T cells
- Helper T cells are known to prevent the exhaustion of cytotoxic CD8+ T cells
  - Some can also have tumour killing ability
- Helper & cytotoxic T cells work in synergy to increase CAR-T persistence



# CellPryme-M retains potency of cytotoxic T cells

Better T cell phenotype  
does not come at the expense of:

- Cytotoxic T cells:  
**Potency retained**
- Cytokine production:  
**No increased safety risk of CRS**

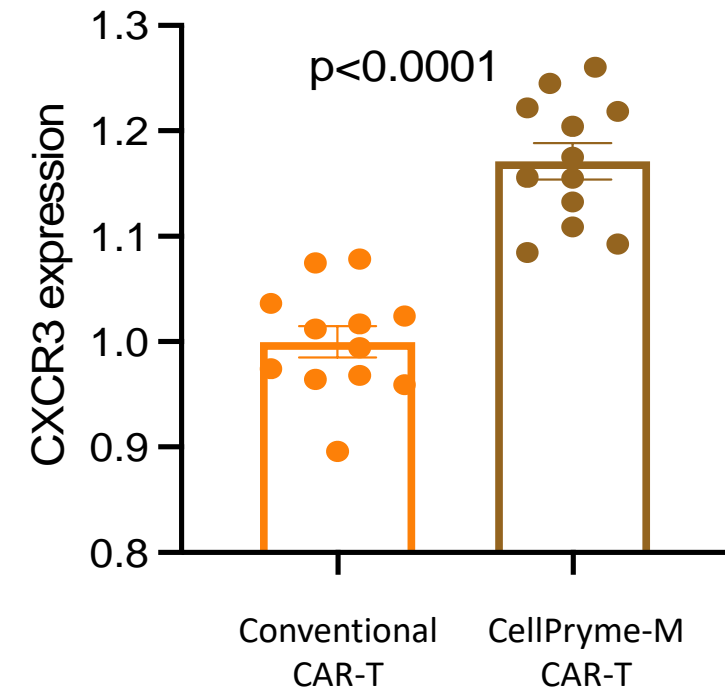




# Trafficking: greater chemokine receptor expression

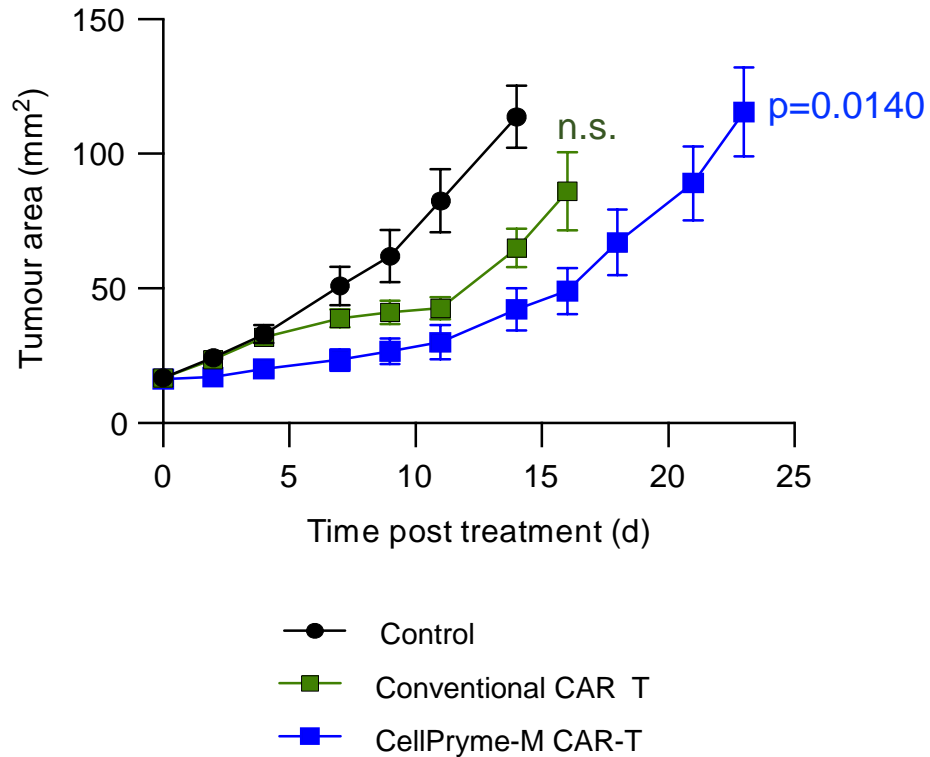
- Effector T cells can downregulate chemokine receptors (CXCR3), limiting the ability of conventional CAR-T cells to locate tumours
- CellPryme-M significantly increases CXCR3 expression on CAR-T cells
- Better trafficking to tumour site
- Better tumour penetrance

Chemokine receptor expression on CD8+ cytotoxic CAR-T cells

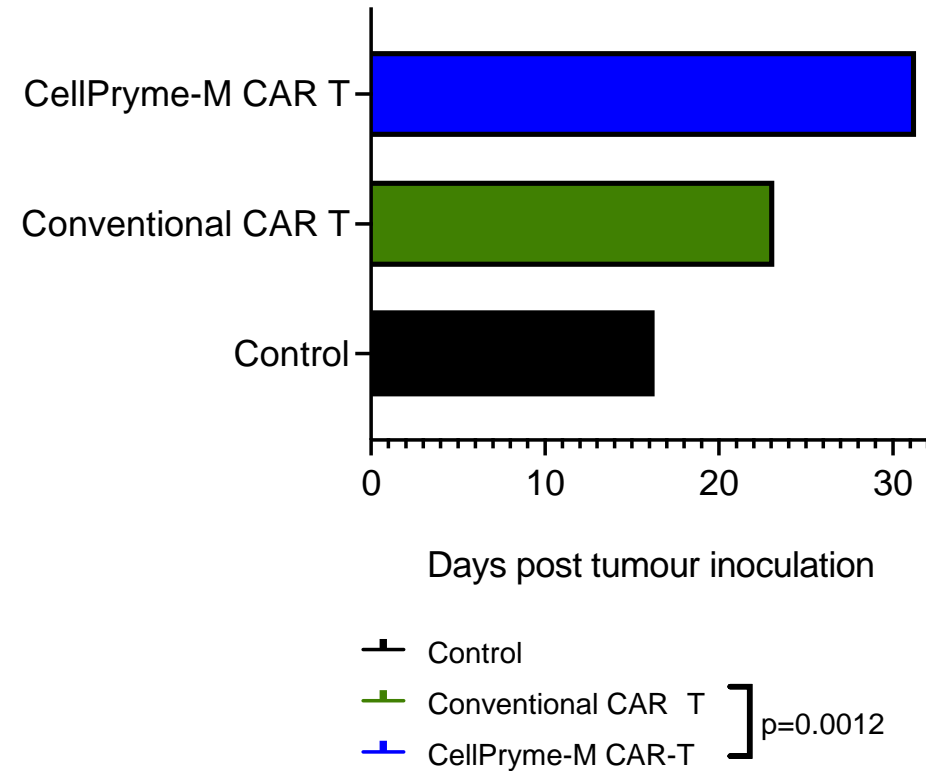


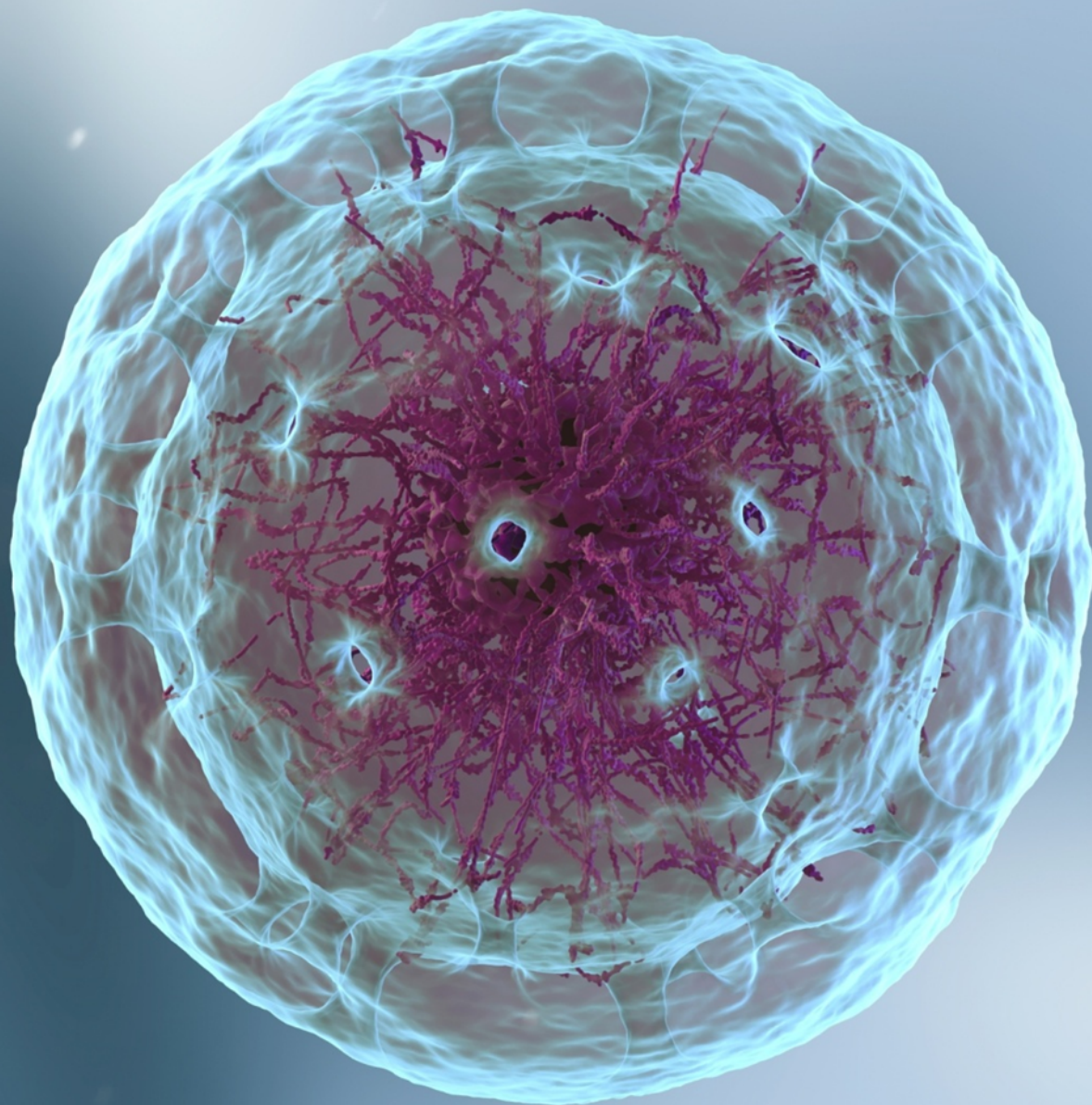
# CellPryme-M doubles tumour control and survival

## CellPryme-M nearly doubles CAR-T tumour control



## CellPryme-M significantly increases survival





**Steps towards  
commercialisation**

# CellPryme-M integration: rapid, value for money



- Integrates seamlessly into standard 3<sup>rd</sup> party manufacturing protocols
- No impact on manufacturing time
  - Rapid (single administration) 24-hour preconditioning step
- Compatible with emerging rapid CAR-T manufacturing protocols
- CellPryme-M has been manufactured at GMP grade and is ready for clinical use

# Next steps and future applications



## IN-HOUSE DEVELOPMENT

- PTX will be its own first customer
- Incorporate into internal OmniCAR programs
- Trade secret manufacturing process

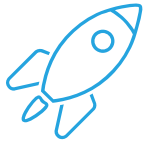


## EXTERNAL OPPORTUNITIES

- Incorporate into 3rd party programs
- Attractive option for improving existing suboptimal CAR T products
- **Haematological malignancies**  
→ to improve persistence
- **Solid tumours**  
→ to improve trafficking and persistence
- Revenue potential for PTX

# CellPryme-M Summary

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## READY FOR CLINICAL TESTING



## IP FULLY OWNED BY PTX

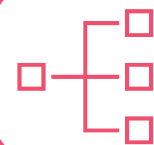


## PRODUCES SUPERIOR CELLS

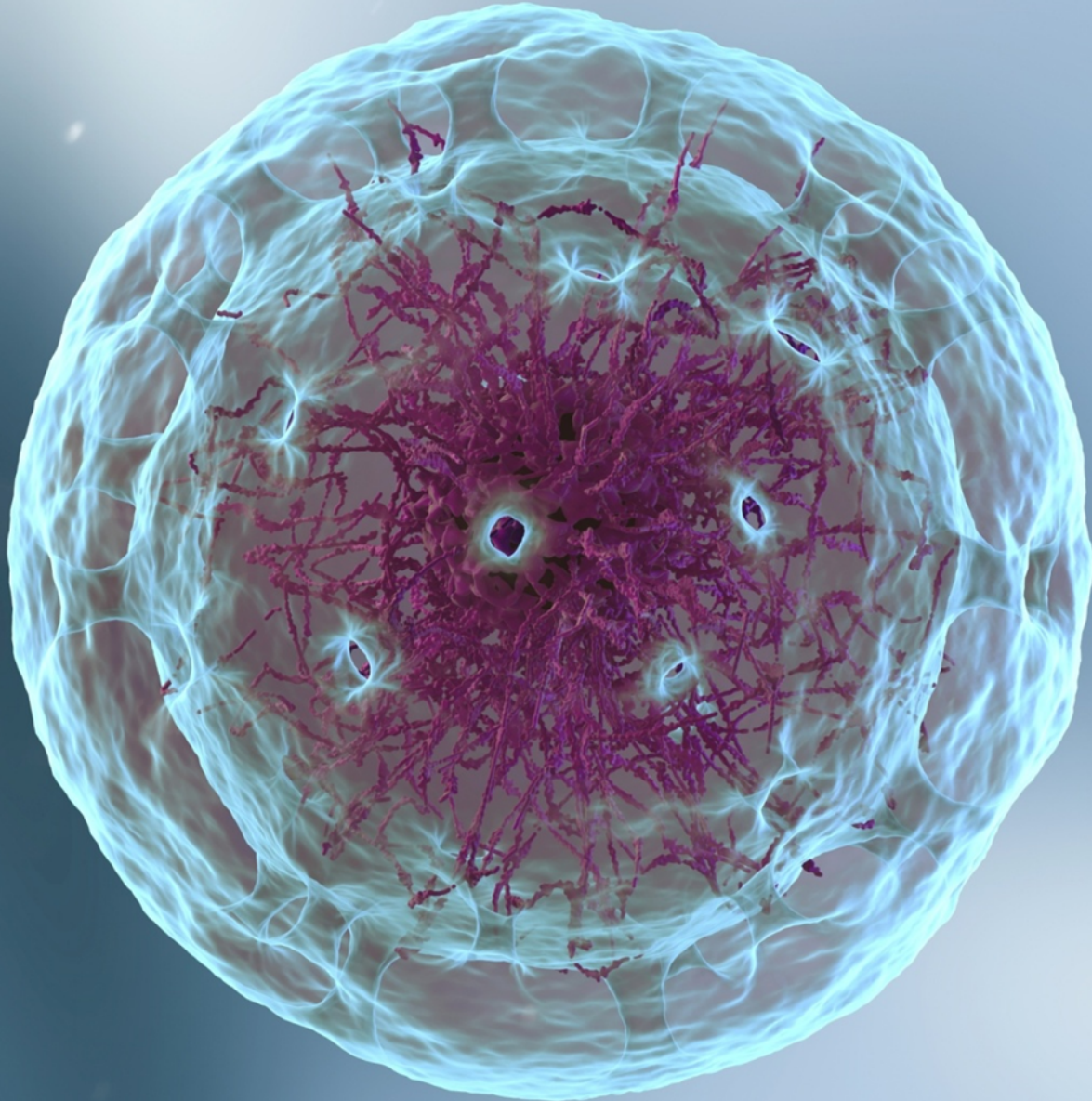


- 50% more memory T cells
- Doubles helper T cells
- More CXCR3 = tumour trafficking
- **Doubles tumour control & survival**
- Greater genomic stability
- Enhanced anti-viral activity

## DEVELOPMENT OPPORTUNITIES



- PTX & 3<sup>rd</sup> party programs
- Use with any existing CAR-T manufacturing process with no loss of time



PTX-100



PTX-200



Coming soon:

 CellPryme-A

A synergistic cell therapy  
enhancement