Solupore® Integrated Advanced Therapy Manufacturing Platform

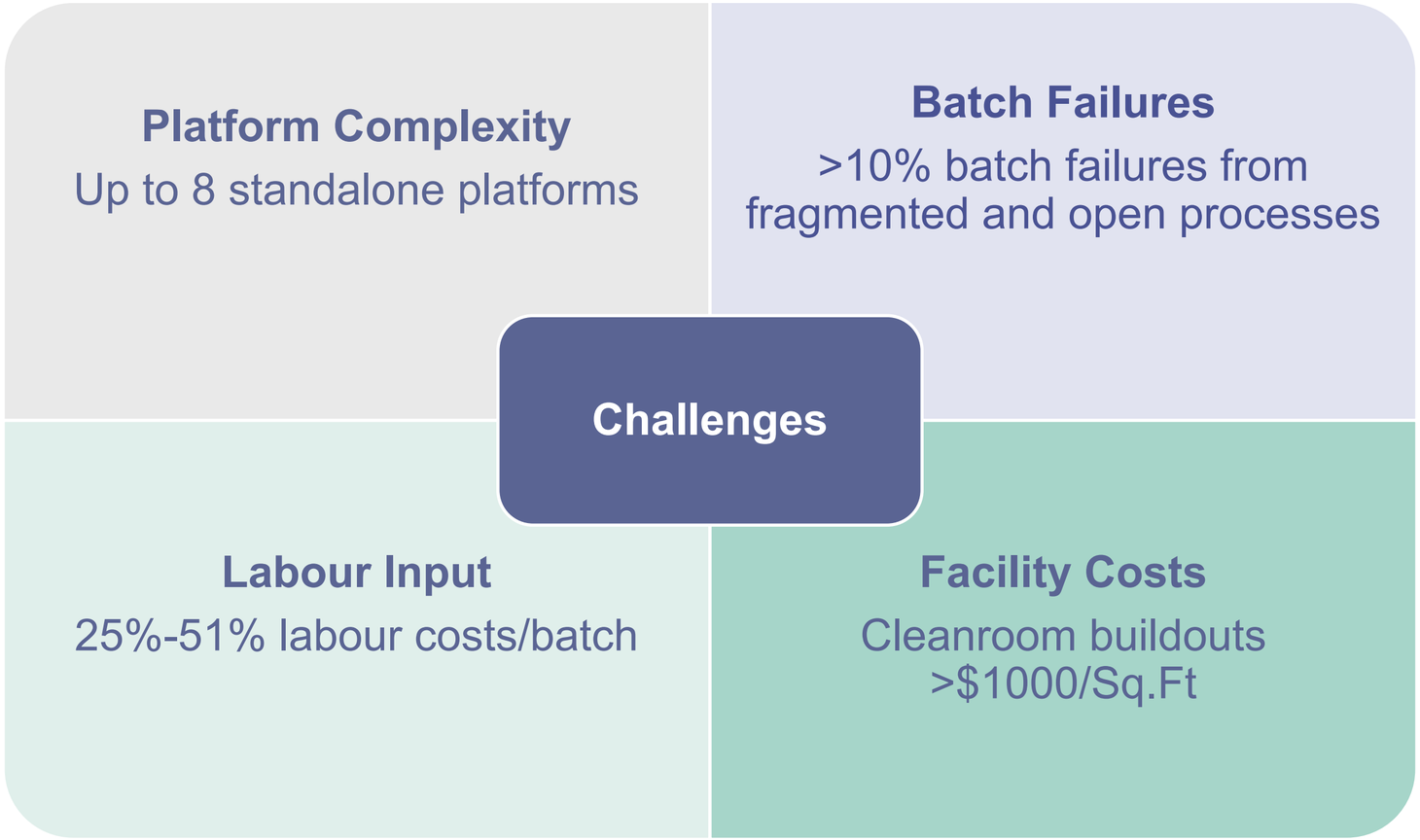
Driving Affordable Cell Therapies to Enhance Patient Access

Advanced Therapies Week February 2026

Lisa O’Flynn, PhD

Challenges to Affordable Cell Therapies

Manufacturing complexity, not biology, remains the primary barrier to CAR-T scale

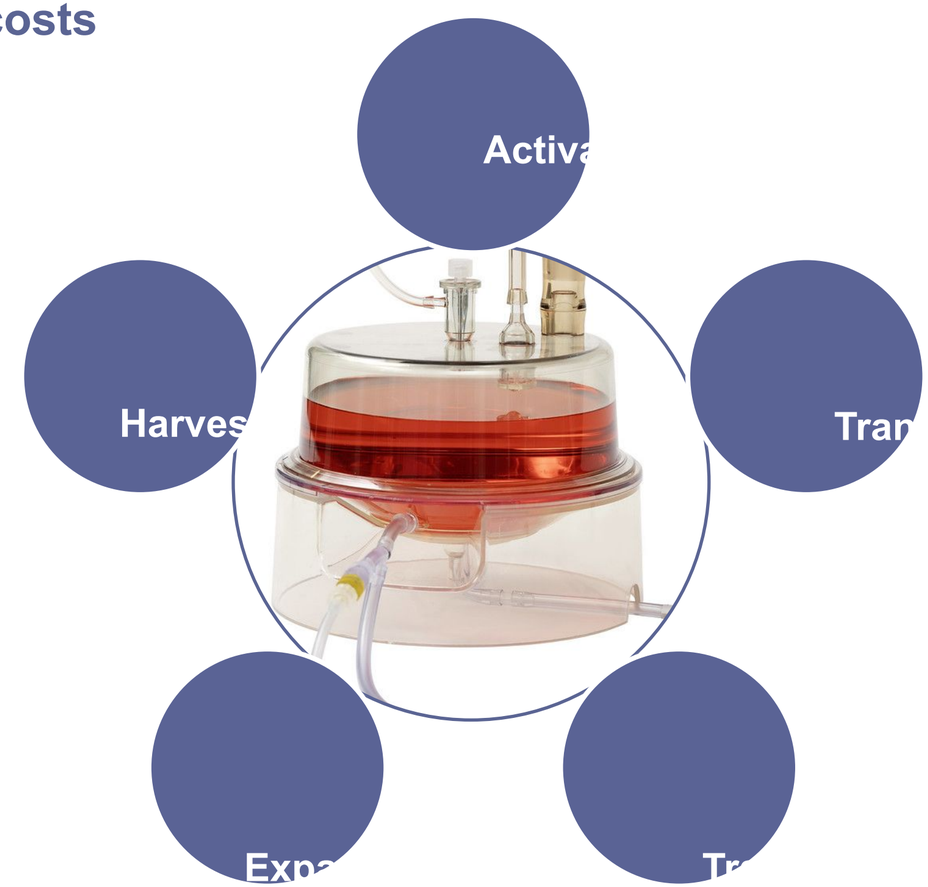


Statistics and source materials: L.E.K. Consulting. (2024). Autologous Cell Therapy: Key Challenges and Bioprocessing Innovations.

Solupore® Integrated: Consumable Based Solution

Core Consumable Driven Manufacturing driving down costs

- Platform Complexity
- Batch Failures
- Labour Input
- Costs



Solupore® Integrated: Consumable Based Solution

Consumable
Research

Controller
Development

Satellites
Commercial

Same Core Consumable from Bench to Clinic

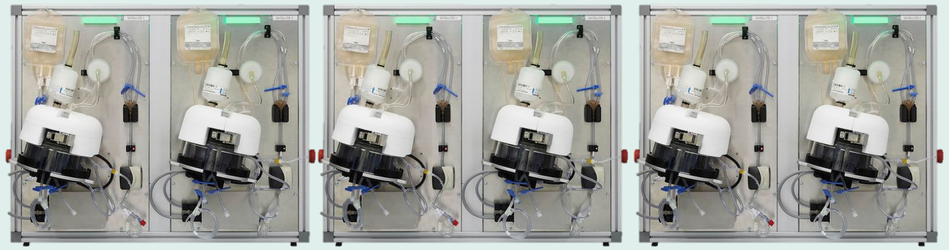
Solupore® Integrated: Consumable Based Solution

Day 0 - 1

- Day 0 high-touch activity carried out on Controller

Day 1 - 7

- Transfer Core Consumable to Satellite day 1
- >7 parallel batches; >350 batches per year
- Capable of manufacturing ~2,800 batches in a standard 1,000 square foot manufacturing suite



600% Throughput of doses

75% Facility investment

>25% COGS

Core Consumable Transfers from Controller to Satellite

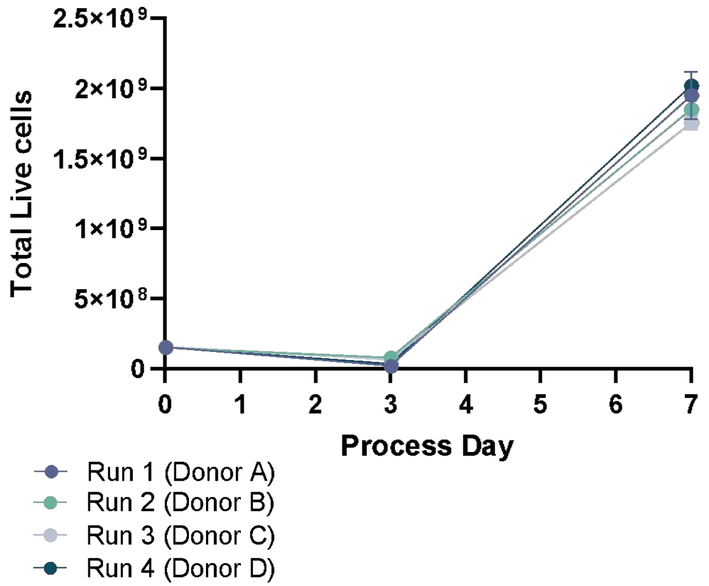
Solupore® Integrated: Core Consumable Performance

avectas
excelling beyond

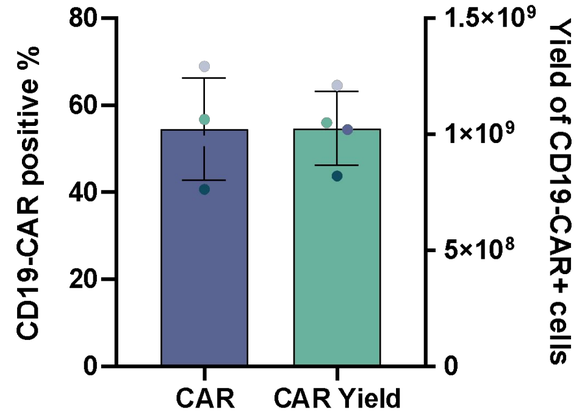
Single consumable, 7-day end-to-end CAR-T process

Core Consumable
Research

Reproducible Consumable-Only Process



>50% CAR Expression



Activation | Transduction | Expansion | Harvest

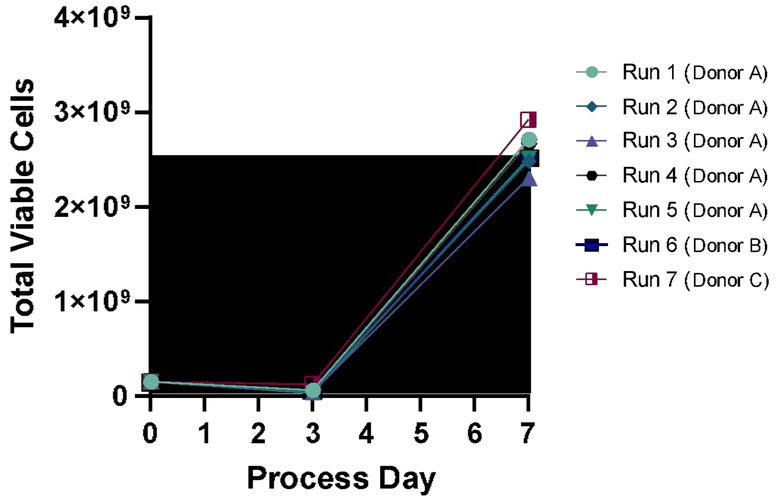
150M Post Thaw CD3+ Cell Input
MOI 1

Solupore® Integrated: Controller Performance

7-day CAR-T Cell process consistently yields >2.5bn total cells; >1bn CD19-CAR+ cells

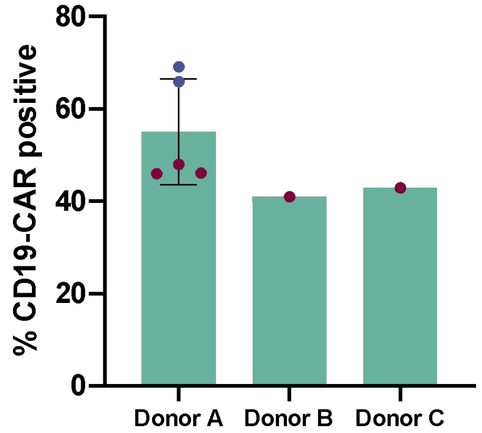
Controller
Development

>2.5bn Total Viable Cells



- Desirable phenotype
- Low T Cell Exhaustion

>50% CAR Expression



- Potent Cytotoxicity at MOI 1
- VCN 0.47 for total population

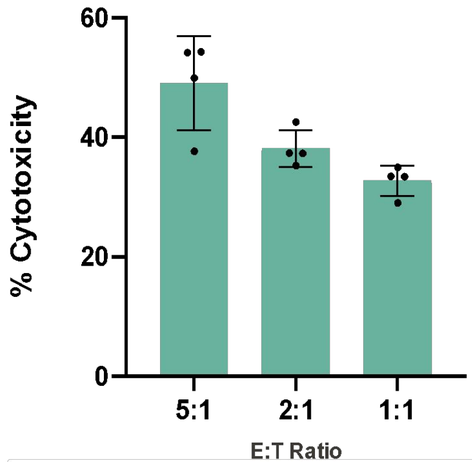
Activation | Transduction | Expansion | Harvest

150M Post Thaw CD3+ Cell Input
MOI 1

Solupore® Integrated: Controller Performance

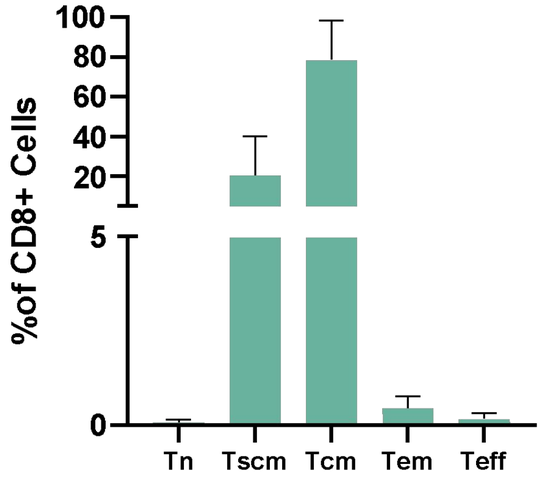
7-day CAR-T Cell process yields potent cells after ~17 fold expansion

Potent Cytotoxicity at MOI 1



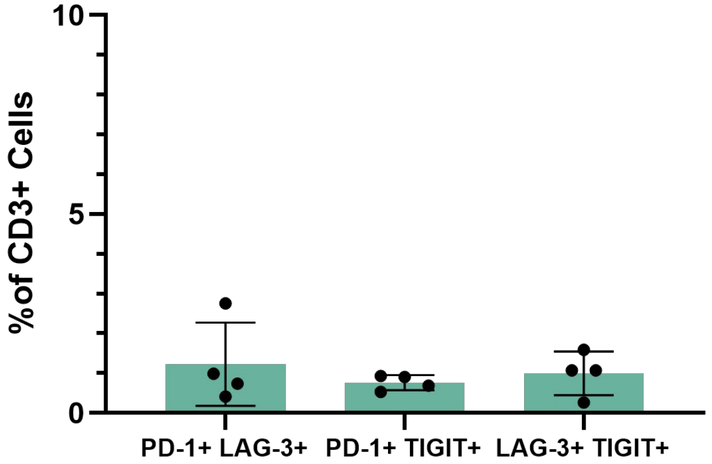
Effector ratios denote total T cells, of which 44% are CAR+
(Target (Raji) killing defined by double positive Tag-it Violet® & Sytox Red cells measured by flow cytometry.)

Desirable Stem-Like Phenotype



(Defined by CD3>CD8>CD45RO/CD62L>CD95)

Low T-Cell Exhaustion

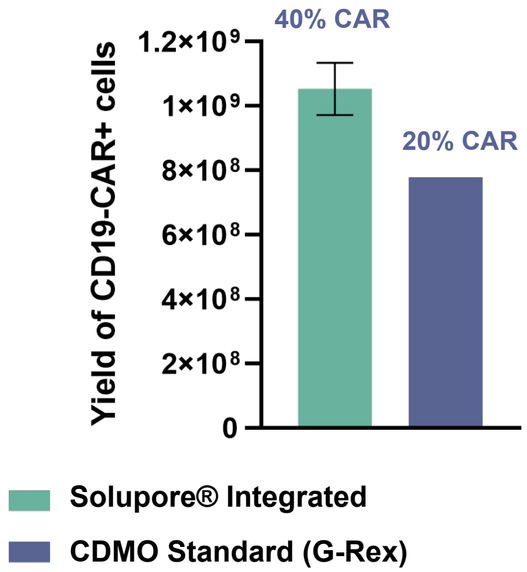


Solupore® Integrated: External CDMO Performance

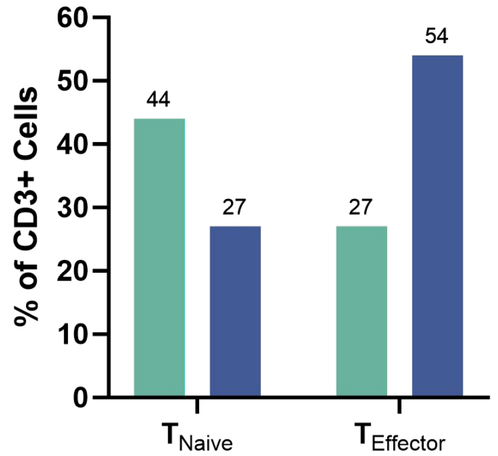
Data validated at an external US-based CDMO

Controller Development

Cell Yield



Cell Phenotype



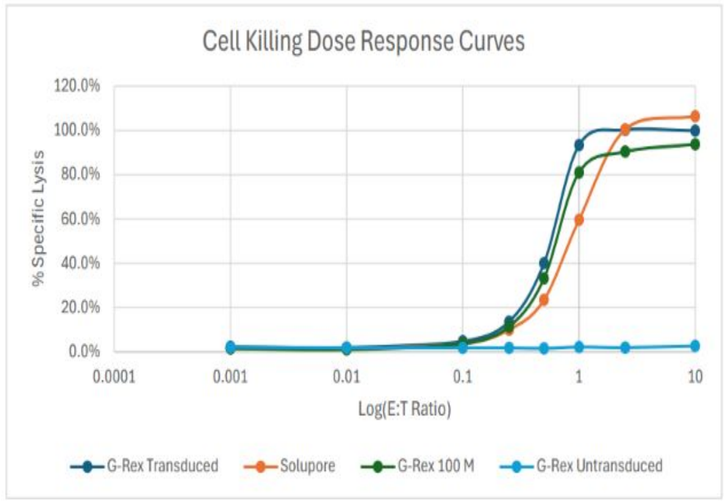
Activation | Transduction | Expansion | Harvest

*** Average of 2 independent Solupore® Integrated runs 150e6 cell input conducted at CDMO**
G-Rex scale used 100M, cell input 50e6 cells, data illustrates projected yield for aligned 150e6 cell input
MOI 1

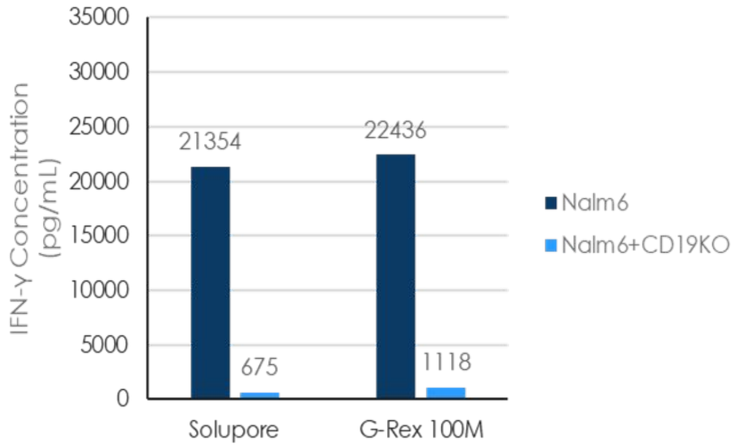
Solupore® Integrated: External CDMO Performance

7-day CAR-T Cell process produces functional cytotoxic CAR-T cells

Potent Cytotoxicity at MOI 1



Functional Cytokine Release

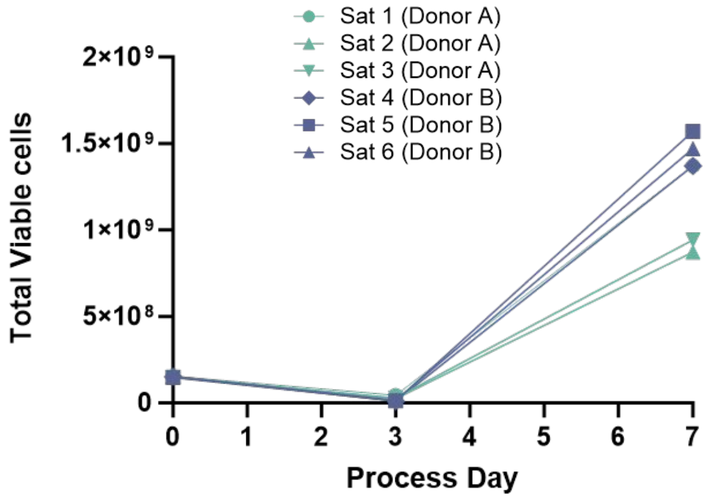


Solupore® Integrated: Satellites Performance

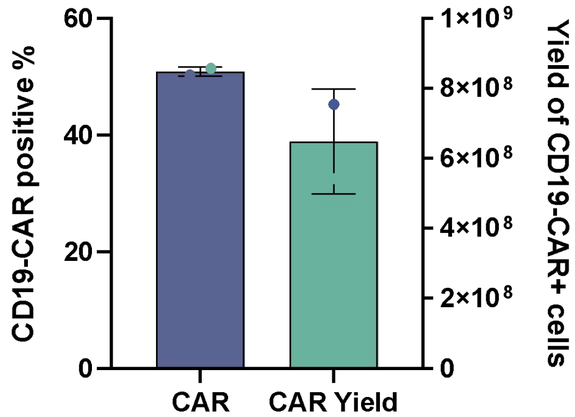
Parallel batches initiated; Controller Day 0, Satellite Day 1 - 7

Satellites
Commercial

Performance Consistent Across Batches



>50% CAR Expression



Controller: Activation | Transduction → Satellites: Expansion | Harvest

150M Post Thaw CD3+ Cell Input
MOI 1

Solupore® Integrated: Satellites Performance

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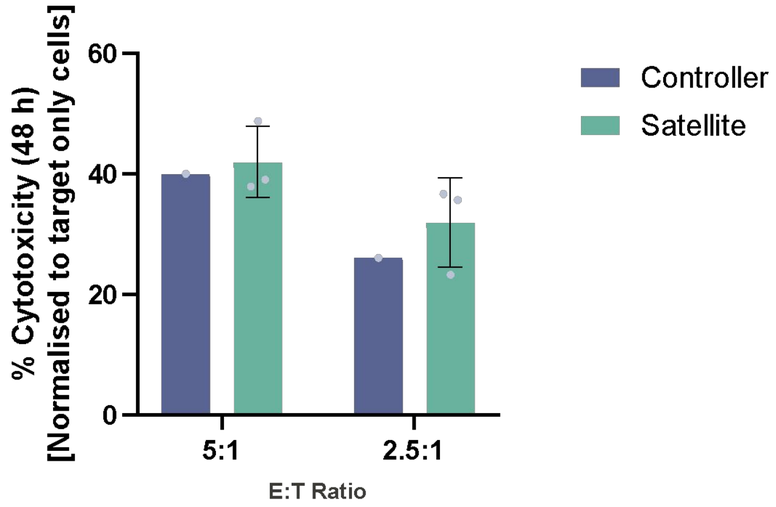
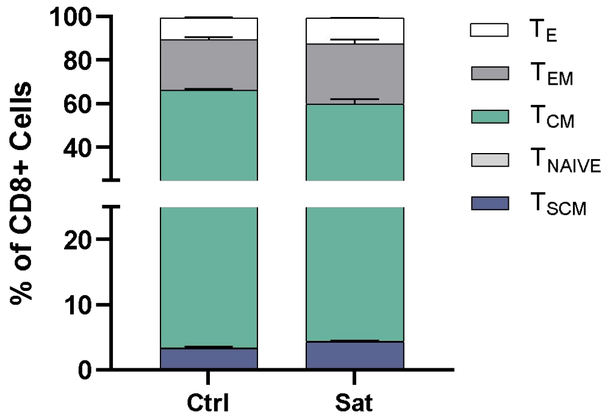
Satellite process maintains functional, stem-like, cytotoxic CAR-T cells

Potent Cytotoxicity at MOI 1



(Target (Raji) killing defined by double positive Tag-it Violet® & Sytox Red cells measured by flow cytometry)

Retains Stem-Like Phenotype across Controller & Satellite



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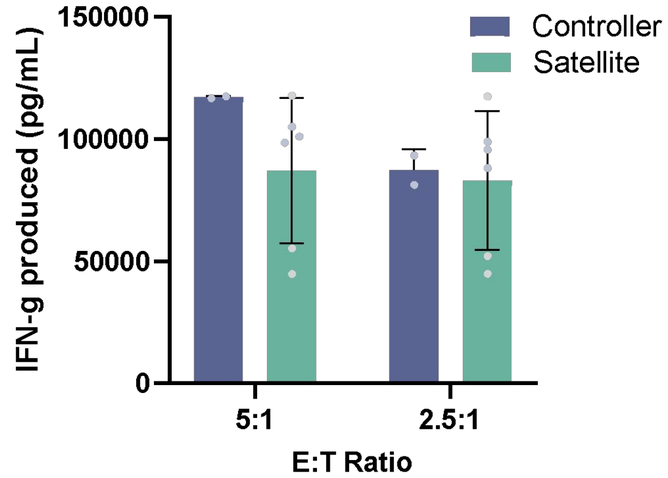
Functional Cytokine Release



IFN-g release upon co-culturing for 24h with target Raji B cells

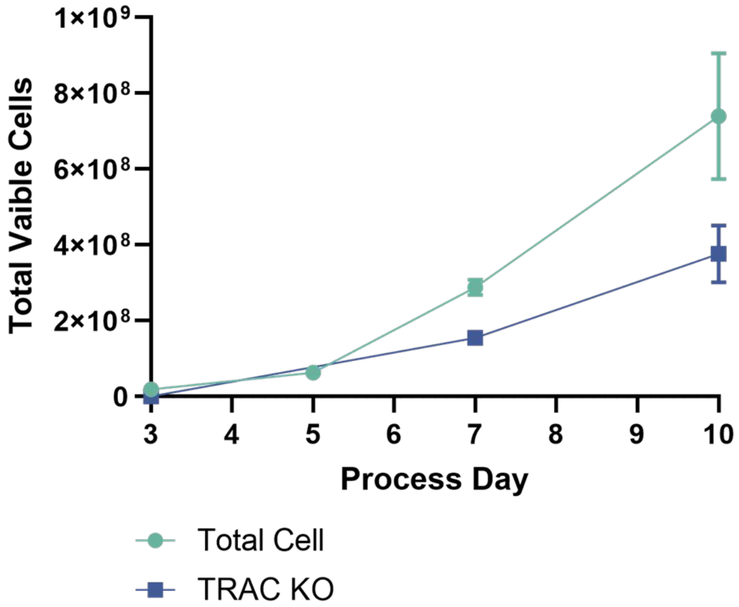
Data for 3 independent satellite E:T ratios denote CAR-T+ cells : target Raji cells

Solupore® Integrated: Transfection

Non-viral editing and expansion within the core consumable

Controller
Development

Integrated Transfection & Expansion



Transfection | Expansion | Harvest

Solupore® Integrated: Operational Readiness

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Regulatory
- GMP consumable
- DMF filed with FDA
- AMT application in progress
- Qualified US supply chain

Automation & Digitalisation
- Automated sampling and sensing; pH and DO
- EBR, 21 CFR Part 11

Technology Transfer
- Bench to Clinic

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Solupore® Integrated Advanced Therapy Manufacturing Platform

Driving Affordable Cell Therapies to Enhance Patient Access

THANK YOU

Contact: loflynn@avectas.com