



# Programmed Cellular Immunotherapies

*Transforming the Treatment of Cancer and Autoimmune Diseases with  
Off-the-shelf, Multiplexed-engineered, iPSC-derived Cellular Immunotherapy*

November 2023

# Forward-Looking Statements



*This presentation contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the safety and therapeutic potential of the Company's product candidates, the advancement of and plans and timelines related to the Company's ongoing and planned clinical studies and the clinical investigation of its product candidates, the timing for the Company's receipt and announcement of data from its clinical trials and preclinical studies, the Company's clinical development and regulatory strategy, and the Company's expectations regarding progress and timelines, and potential payments under its collaboration, and the objectives, plans and goals of its collaboration with Ono Pharmaceutical, Ltd. These and any other forward-looking statements in this presentation are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, the risk that results observed in studies of its product candidates, including interim results and results from earlier studies, may not be predictive of final results or results observed in ongoing or future studies involving these product candidates, the risk of a delay in the initiation of, or in the enrollment or evaluation of subjects in, any clinical studies, and the risk that the Company may cease or delay manufacture, or preclinical or clinical development, of any of its product candidates for a variety of reasons (including regulatory requirements, difficulties in manufacturing or supplying the Company's product candidates, prioritization of other of its product candidates for advancement, and any adverse events or other negative results that may be observed during preclinical or clinical development). These statements are also subject to other risks and uncertainties as further detailed in the Company's most recently filed periodic report, and subsequent periodic reports filed by the Company, under the Securities Exchange Act of 1934, as amended, any of which could cause actual results to differ materially from those contained in or implied by the forward-looking statements in this presentation. The Company is providing the information in this presentation as of the date hereof and does not undertake any obligation to update any forward-looking statements contained in this presentation unless required by applicable law.*

# Changing the Game in Cell Therapy

*Transforming the Cell Therapy Field with a Drug-like Product Paradigm*



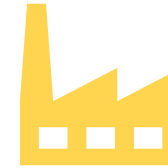
## ***Multiplexed Engineering***

Multiple mechanisms of attack against cancer incorporated into cell product



## ***Drug-like Treatment***

Multi-dose schedules administered in the outpatient setting



## ***Mass Production***

Scalable GMP operations yielding 100s of doses in single campaign



## ***Uniform Products***

Batch-to-batch consistency of cell product features and functionality



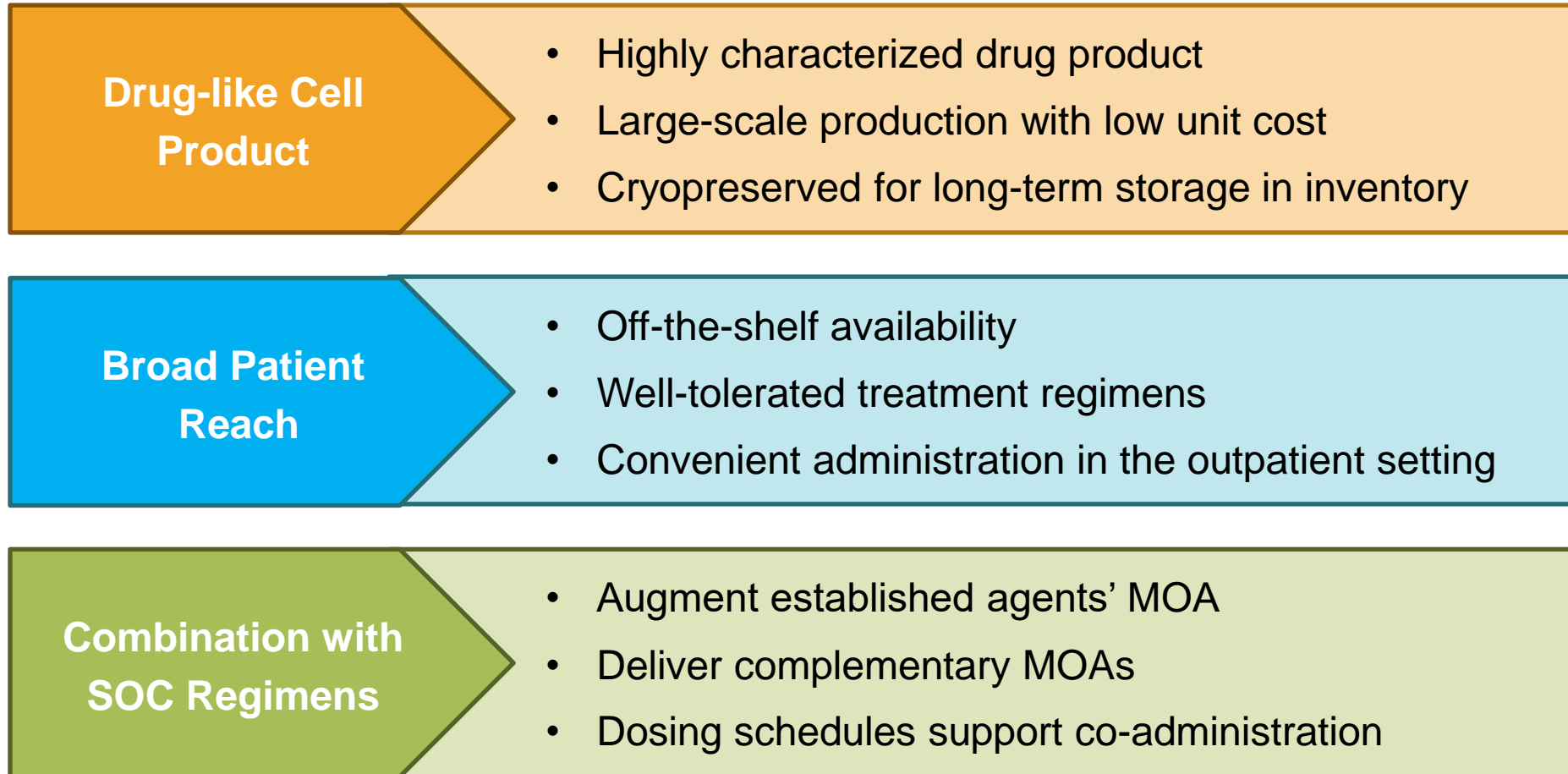
## ***Off-the-Shelf***

Cryopreserved with long-term stability for storage and on-demand availability



# Changing the Game in Cell Therapy

*To Make Cell Therapy Look Like Monoclonal Antibody Therapy*



MOA = Mechanism of Action

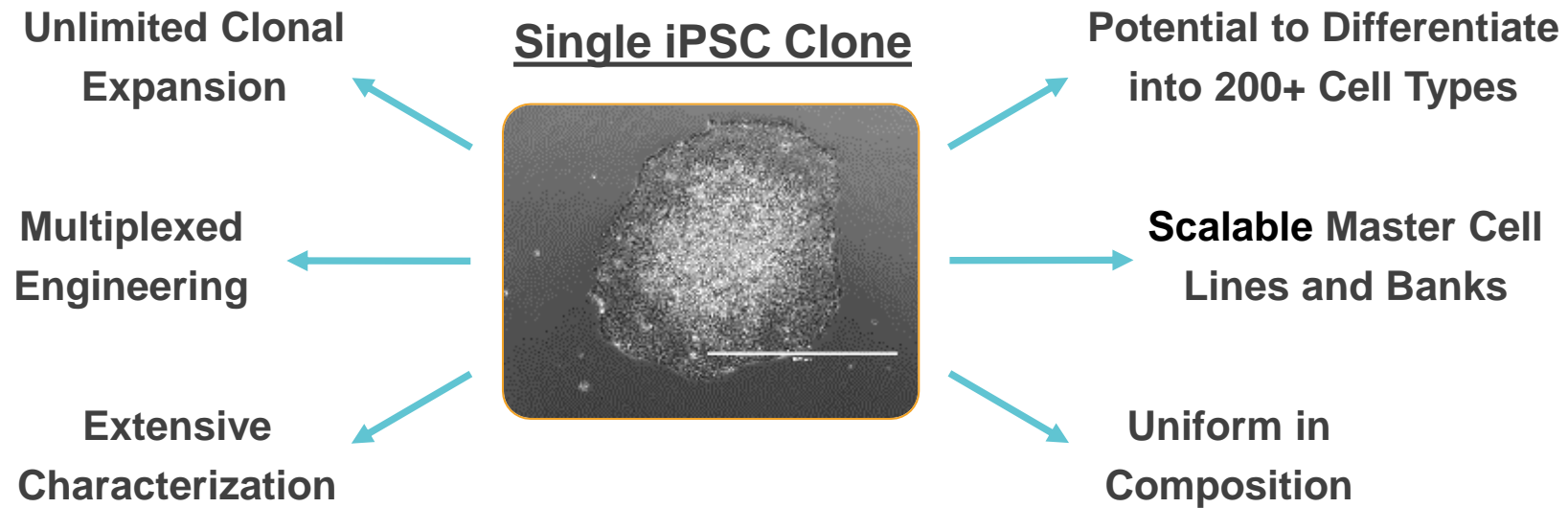
# Disruptive iPSC Product Platform

*Creating Multiplexed-engineered iPSC-derived Cell Products*



## A Single Human Induced Pluripotent Stem Cell (iPSC)

*A renewable source for mass production of cell products*



*Fate Therapeutics' iPSC product platform is supported by an IP portfolio with 400+ issued patents and 450+ pending patent applications*

# Disruptive iPSC Product Platform

*Mass Production of Multiplexed-engineered Cell Products for Off-the-shelf Patient Treatment*

Induced Pluripotent  
Stem Cells



Multiplexed Gene  
Engineering  
(one-time event)



Single-Cell Sorting  
& Clonal Selection



iPSC Expansion &  
Banking

Clonal Master Engineered  
iPSC Bank



Renewable Starting  
Cell Source

Off-the-shelf, On-demand Treatment in Outpatient Setting



iT Cells



iNK Cells

*Multiplexed engineering to incorporate multiple MOAs*


*Clonal master iPSC bank to mass produce uniform and well-characterized drug product*

*Off-the-shelf availability to enable broad patient access*

# First-in-class Cell Product Pipeline

*Multiplexed-engineered, iPSC-derived CAR NK Cell and CAR T-cell Product Candidates*



| Program<br>(Cell Type) | Indication                   | CAR Target(s) | Research    | Preclinical | Phase 1 | Partner   |
|------------------------|------------------------------|---------------|-------------|-------------|---------|---|
| Oncology               |                              |               |             |             |         |   |
| FT576 (iNK)            | Multiple Myeloma             | BCMA          | <div></div> |             |         |   |
| FT522 (iNK)            | B-cell Lymphoma              | CD19, 41BB    | <div></div> |             |         |   |
| FT819 (iT)             | B-cell Malignancies          | CD19          | <div></div> |             |         |   |
| FT825 (iT)             | Solid Tumors                 | HER2          | <div></div> |             |         | <div><br/>ONO PHARMACEUTICAL CO., LTD.</div> |
| Undisclosed            | Solid Tumors                 | Undisclosed   | <div></div> |             |         |   |
| Autoimmune Disorders   |                              |               |             |             |         |   |
| FT819 (iT)             | Systemic Lupus Erythematosus | CD19          | <div></div> |             |         |   |
| FT522 (iNK)            | Undisclosed                  | CD19, 41BB    | <div></div> |             |         |   |

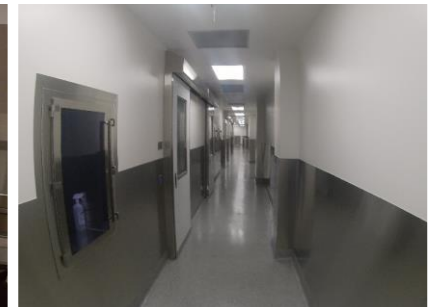
# Integrated Technology Operations

*Advanced Manufacturing Capabilities to Provide Clinical and Early Commercial Supply*



## State of the Art GMP facility (Poway, CA)

- 40,000 SF cGMP cell manufacturing facility co-located with corporate headquarters
- Launched in 2022 with end-to-end capabilities and controls
  - Licensed by the State of California, Department of Health Services, Food and Drug Branch
  - Commissioned and qualified with first drug product manufacturing runs completed
  - On-site integration with quality, assay development, and process development
- Designed to support US and international clinical development as well as initial commercial launch

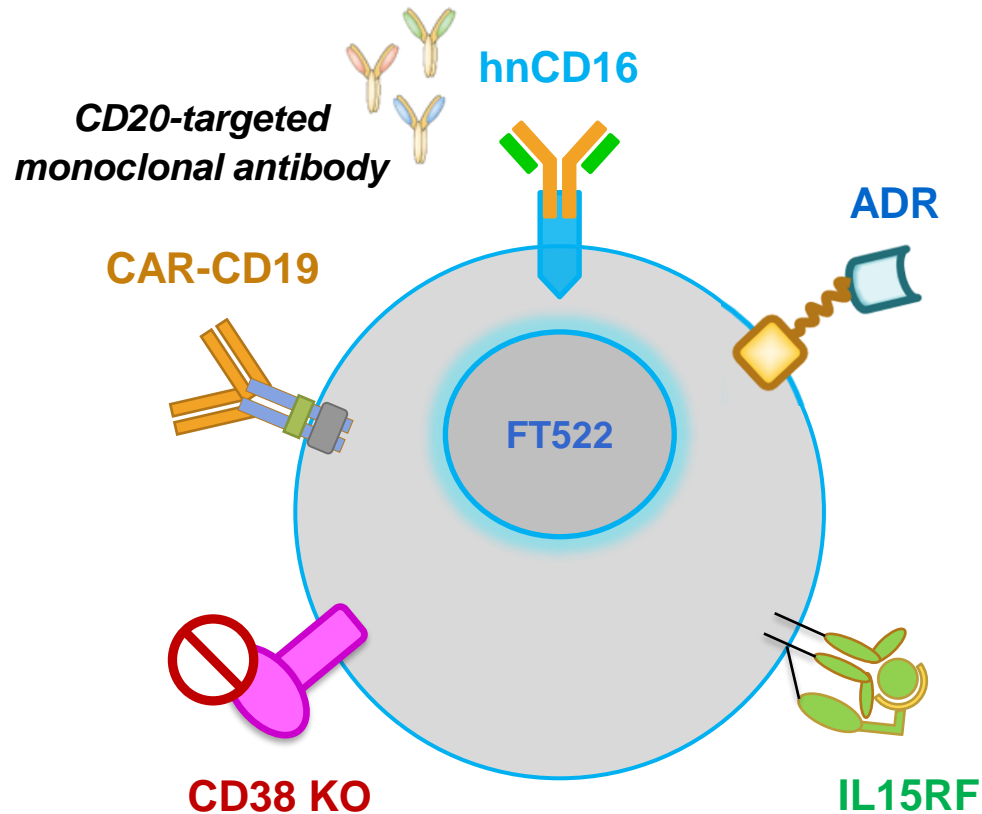




# iPSC-derived CAR NK Cell Programs for Cancer

# FT522: Multi-antigen Targeted CAR NK Cell Product Candidate

Targeting CD19 and CD20 for B-cell Lymphoma



*hnCD16 = high affinity, non-cleavable CD16 Fc receptor*

*IL15-RF = IL 15 receptor fusion*

*CD38-KO = CD38 knock-out*

*CAR-CD19 = chimeric antigen receptor*

*ADR = allo-defense receptor targeting 4-1BB*

## Multi-antigen targeting

- **CD19**: CAR construct targeting CD19
- **CD20**: proprietary hnCD16 receptor designed to augment antibody-dependent cellular cytotoxicity in combination with CD20-targeted mAb

## Allo-defense technology

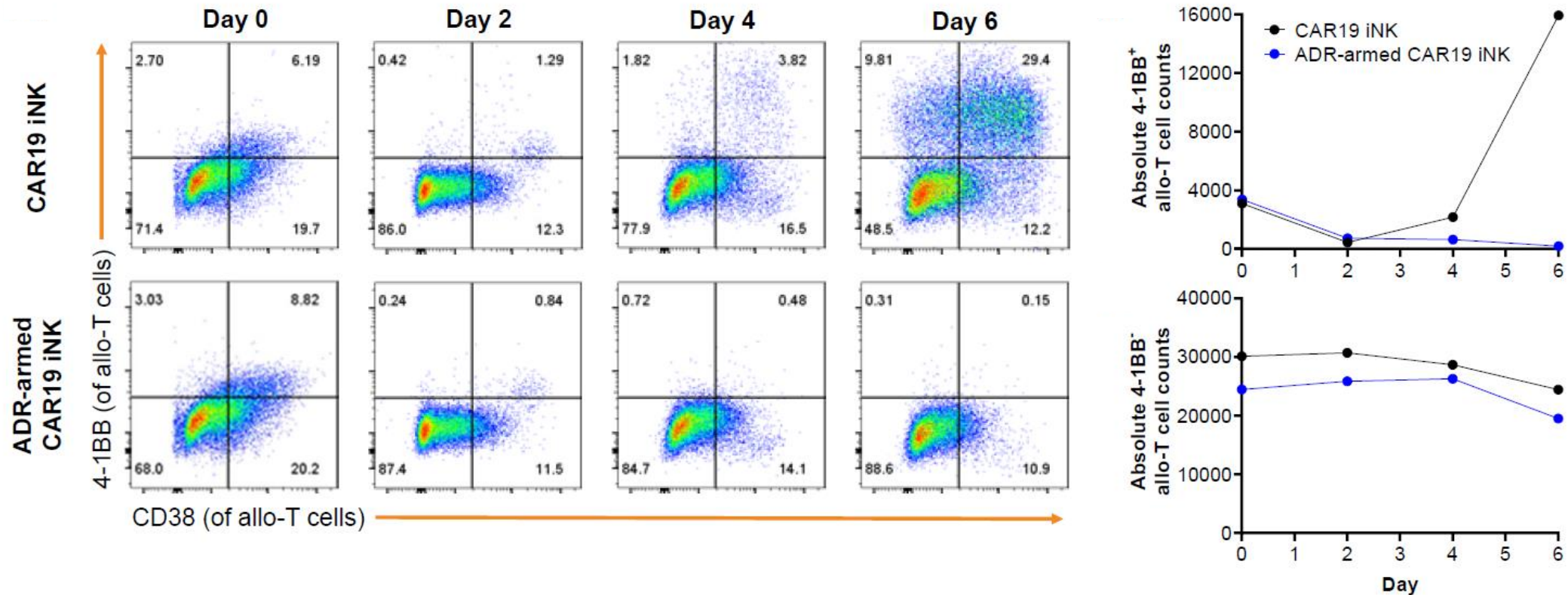
- **ADR**: novel synthetic receptor designed to: 1) selectively deplete host NK and T cells to mitigate rejection; and 2) potentiate cell activation through CD3-zeta signaling

## Functional persistence

- **IL15RF**: promotes cell survival and proliferation to extend functional persistence
- **CD38KO**: enhances metabolic fitness

# FT522: Multi-antigen Targeted CAR NK Cell Product Candidate

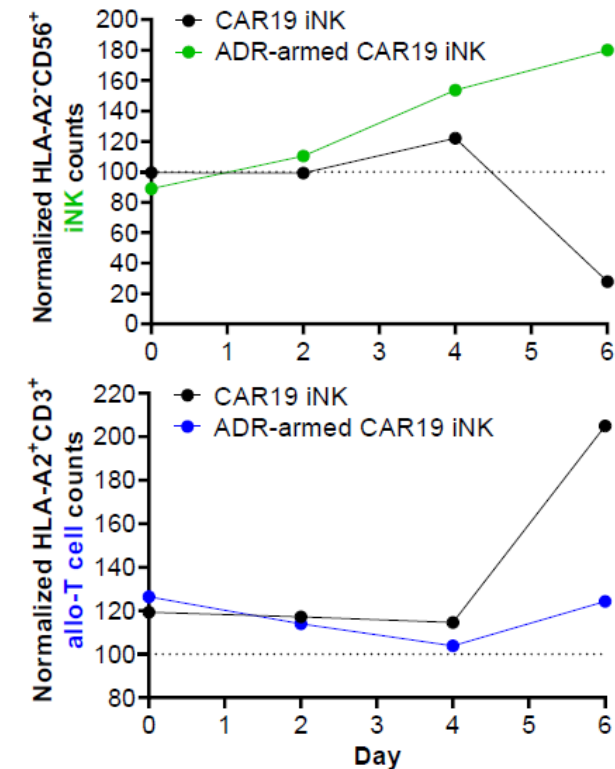
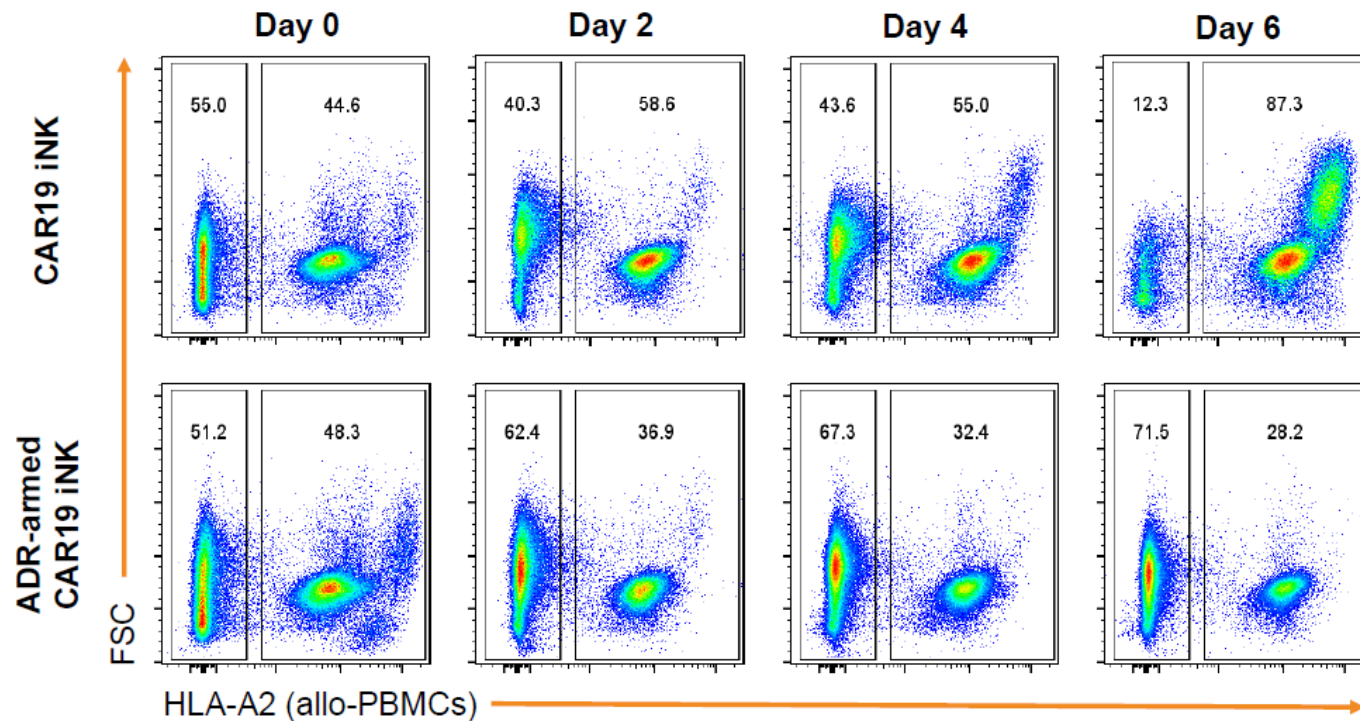
*Synthetic ADR Receptor to Increase NK Cell Potency and Reduce Patient Conditioning*



***ADR-armed, iPSC-derived CAR NK cells selectively deplete  
alloreactive immune cells expressing 4-1BB***

# FT522: Multi-antigen Targeted CAR NK Cell Product Candidate

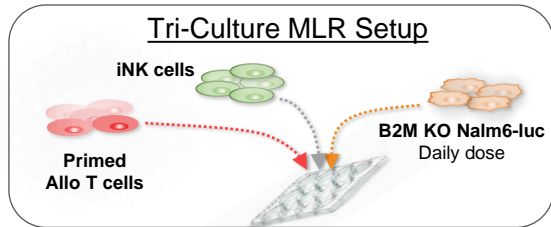
*Synthetic ADR Receptor to Increase NK Cell Potency and Reduce Patient Conditioning*



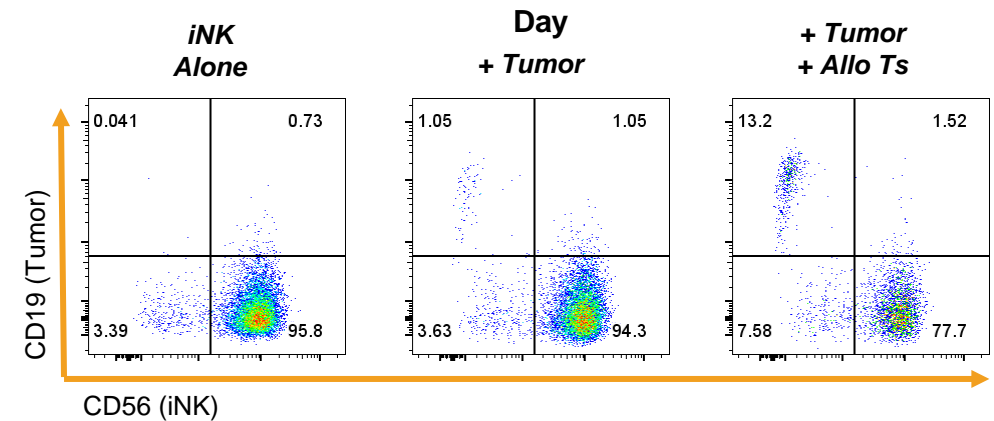
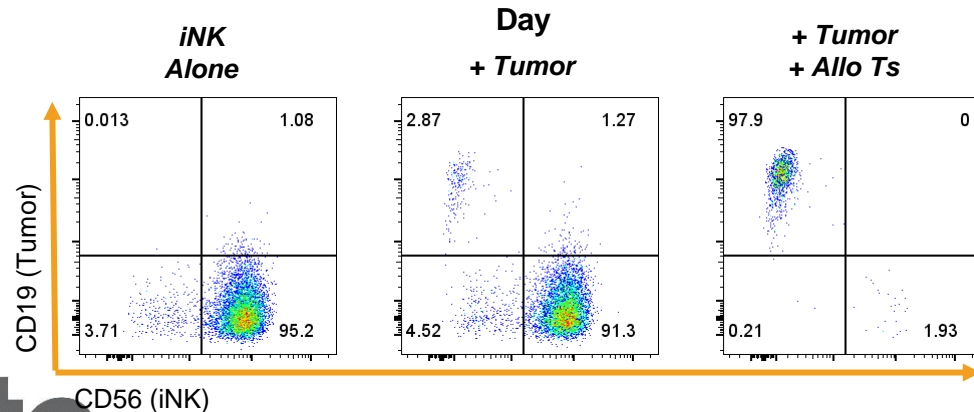
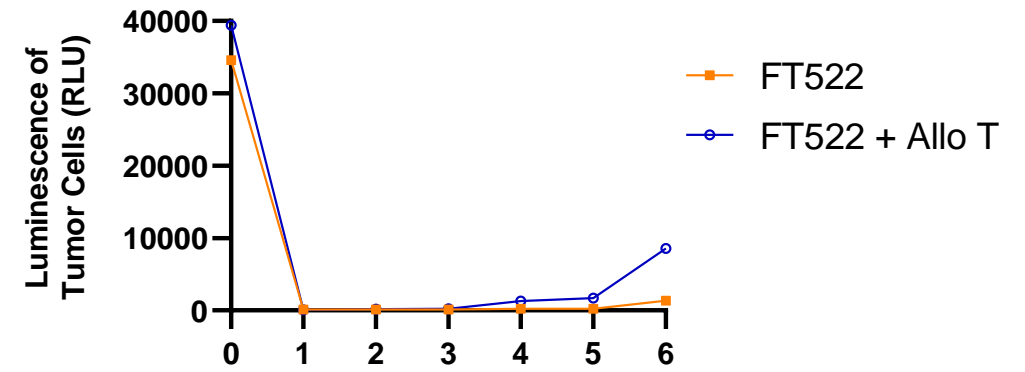
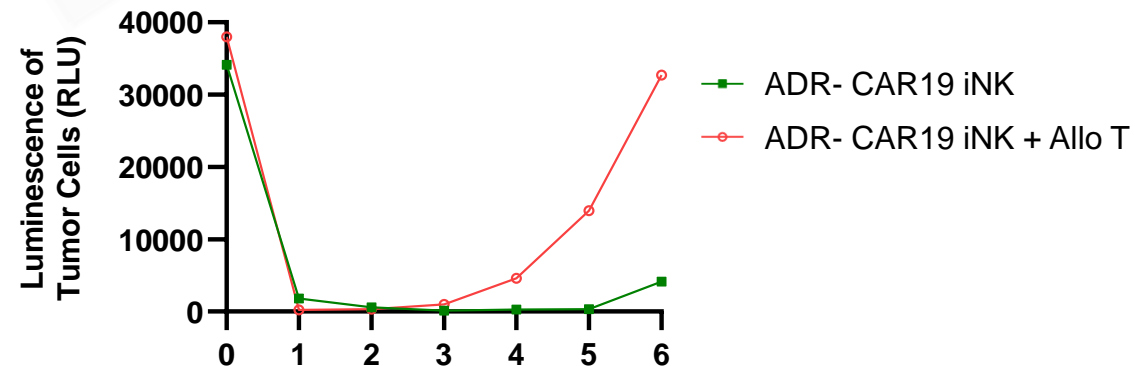
*While alloreactive immune cells expressing 4-1BB are selectively depleted, ADR-armed, iPSC-derived CAR NK cells are potentiated and expand*

# FT522: Multi-antigen Targeted CAR NK Cell Product Candidate

*Maintains Potent CAR Activity In Vitro in Allogeneic Background*

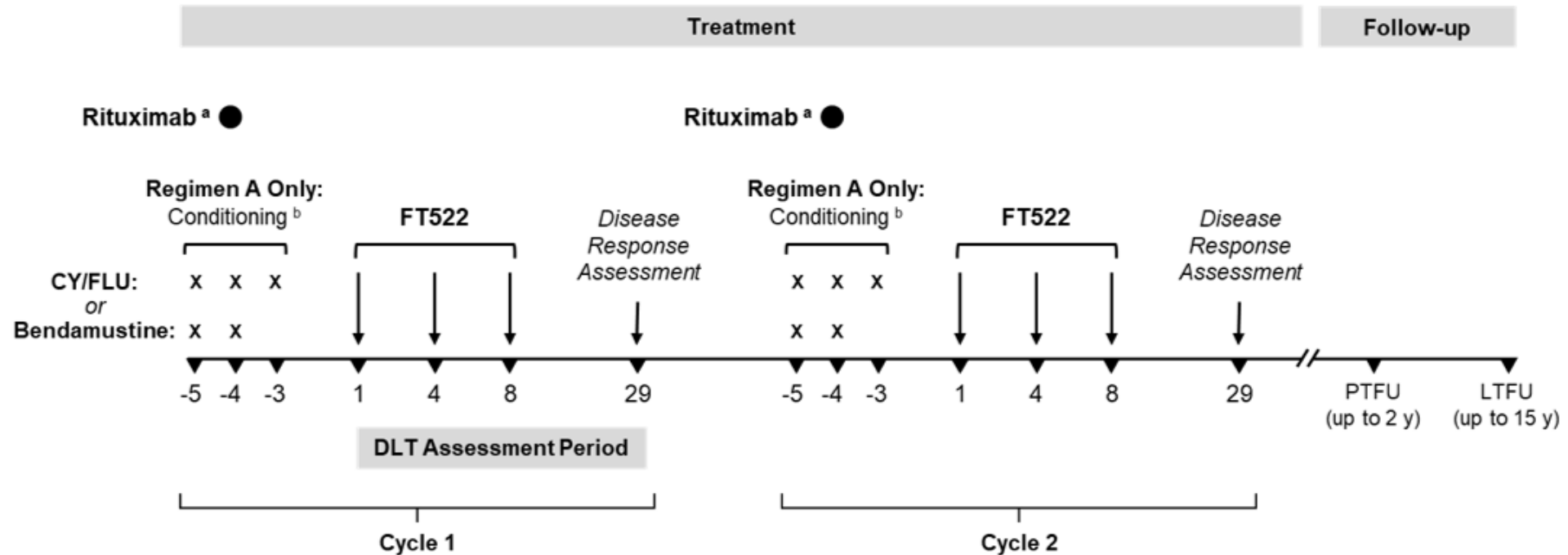


*In a tumor cell restimulation assay, FT522 maintains potent CAR activity alone and during allogeneic T-cell attack*



# FT522: Multi-antigen Targeted CAR NK Cell Product Candidate

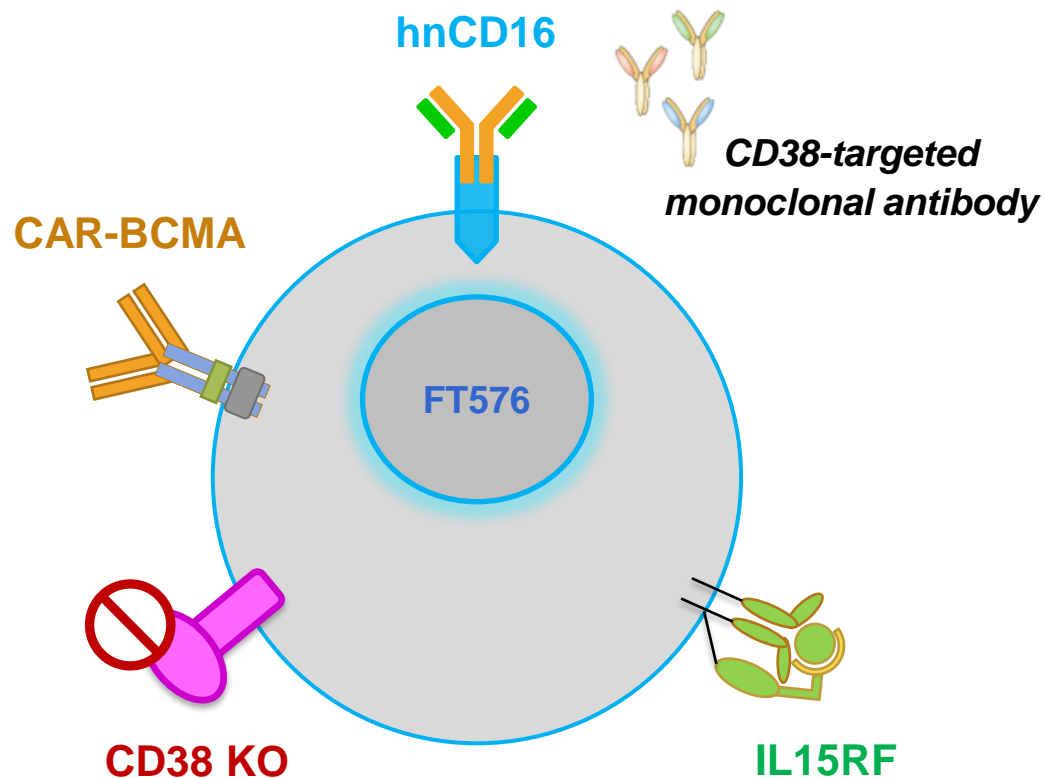
*IND Cleared; Targeting Dosing of First Patient in 4Q23 for r/r B-cell Lymphoma*



- Eligibility: r/r disease following at least 1 prior systemic regimen containing an anti-CD20 monoclonal antibody (mAb)
- FT522 + rituximab ± Cy / Flu or bendamustine conditioning chemotherapy
- Dosing schedule (D1, D4, D8 of each cycle); up to 2 cycles
- FT522 DL1 = 3 x 300 million cells / dose
- Rituximab Dosing: single dose at 375 mg/m<sup>2</sup>

# FT576: Multi-antigen Targeted CAR NK Cell Product Candidate

Targeting BCMA and CD38 for Multiple Myeloma



*hnCD16* = high affinity, non-cleavable CD16 Fc receptor

*IL15-RF* = IL15 receptor fusion

*CD38-KO* = CD38 knock-out

*CAR-BCMA* = chimeric antigen receptor

## Multi-antigen targeting

- **BCMA:** CAR construct with novel binding domain targeting BCMA; designed to trigger target cell lysis at low expression levels
- **CD38:** proprietary hnCD16 receptor designed to augment antibody-dependent cellular cytotoxicity in combination with CD38-targeted mAb

## Mitigate rejection with CD38-targeted mAb combination

- **hnCD16 + CD38KO + CD38-targeted mAb:** novel configuration intended to: 1) selectively deplete host NK and T cells to mitigate rejection; 2) prevent fratricide; 3) enhance metabolic fitness; and 4) potentiate cell activation through CD3-zeta signaling

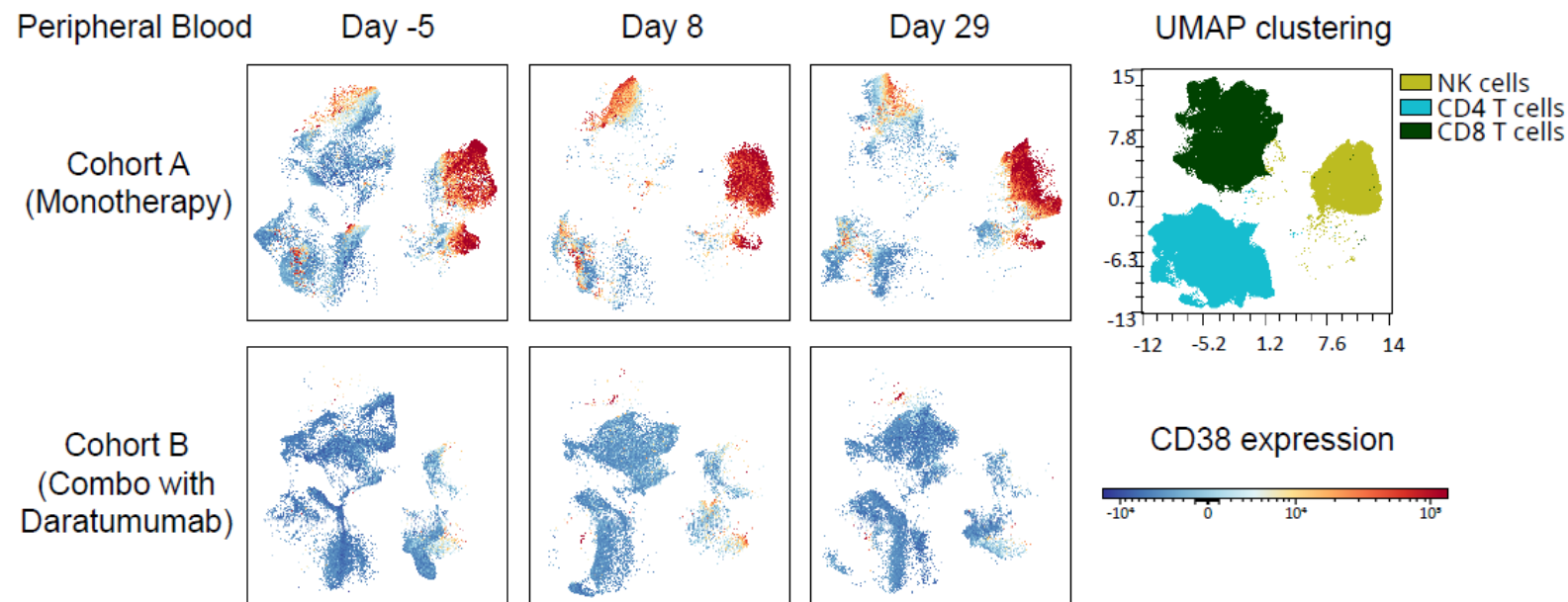
## Functional persistence

- **IL15RF:** promotes cell survival and proliferation to extend functional persistence

# FT576: Multi-antigen Targeted CAR NK Cell Product Candidate

## *CD38-targeted mAb Combination to Mitigate Allo-rejection and Promote Functional Persistence*

- FT576 combination with CD38-targeted mAb therapy is designed to confer multiple therapeutic advantages, including mitigating allo-rejection through selective depletion of activated host immune cells and promoting functional persistence



**Monotherapy vs. Combination**

**Selective depletion of CD38+ host immune cells through Day 29**

# FT576: Multi-antigen Targeted CAR NK Cell Product Candidate

## Single, Low-dose Administration Shows Early Evidence of Anti-Myeloma Activity



**Table 2. Patient Safety, Response, and Disposition**

| Oct 7, 2022<br>data cutoff | Patient<br># | FT576<br>(Millions of<br>Cells/Dose) | Safety |     |       |                         |                 | Best<br>Overall<br>Response | Follow-up<br>Time<br>(Days) <sup>a</sup> |
|----------------------------|--------------|--------------------------------------|--------|-----|-------|-------------------------|-----------------|-----------------------------|--|
|                            |              |                                      | DLTs   | CRS | ICANS | Related<br>Grade ≥3 AEs | Related<br>SAEs |                             |  |
| Monotherapy                | 1            | 100                                  | N      | N   | N     | Y                       | N               | PD                          | 29                                       |
|                            | 2            | 100                                  | N      | N   | N     | Y                       | N               | PD                          | 159                                      |
|                            | 3            | 100                                  | N      | N   | N     | N                       | N               | SD                          | 130                                      |
|                            | 4            | 300                                  | N      | N   | N     | N                       | N               | SD                          | 200+                                     |
|                            | 5            | 300                                  | N      | N   | N     | N                       | N               | VGPR                        | 88                                       |
|                            | 6            | 300                                  | N      | N   | N     | N                       | N               | SD                          | 29                                       |
| Combination<br>with mAb    | 7            | 100                                  | N      | N   | N     | N                       | N               | MR                          | 101                                      |
|                            | 8            | 100                                  | N      | N   | N     | N                       | N               | PR                          | 151+                                     |
|                            | 9            | 100                                  | N      | N   | N     | N                       | N               | SD                          | 89                                       |

<sup>a</sup> For subjects who have progressed, died, or started subsequent anti-systemic cancer therapy, the follow-up is from Day 1 to the earliest date of progression, death, or start of subsequent anti-systemic cancer therapy, whichever occurs first. For subjects who are ongoing, the follow-up is from Day 1 to the last on study assessment date. The "+" indicates that patients are continuing in active follow-up.

AE = Adverse event; CRS = Cytokine release syndrome; DLT = Dose limiting toxicity; ICANS = Immune cell associated neurotoxicity syndrome; MR = Minimal response; N = None; PD = Progressive disease; PR = Partial response; SAE = Serious adverse event; SD = Stable disease; VGPR = Very good partial response

### Safety

- No DLTs, and no events of any grade of CRS, ICANS, or GvHD were observed.
- 2 patients had Gr ≥3 TEAEs related to FT576:
  - 1 Grade 3 diarrhea
  - 1 patient experienced 2 episodes of Gr 3 through 4 neutropenia and 3 episodes of Gr 3 anemia
  - All episodes of Gr ≥3 TEAEs related to FT576 resolved; there were no serious AEs related to FT576
- Gr ≥3 TEAEs not related to FT576 in ≥2 patients included: anemia, neutropenia, and white blood cell decreased.

### Tolerability

- There were no study discontinuations or deaths due to treatment-emergent AEs.

### Anti-tumor Activity

- Of 9 efficacy evaluable patients, 3 had a decrease in their myeloma disease burden (38%-97% decrease), with 2 confirmed objective responses.
- 1 patient, who had been treated with 5 prior lines of therapy and was triple refractory to an IMiD, PI, and anti-CD38 mAb, was treated with FT576 as monotherapy in the second dose cohort (300M cells) and achieved a VGPR.

Dhakal et al.  
2022 ASH Annual Conference

# FT576: Phase 1 Dose Escalation Schema

*Single- and Multi-dose Schedule as Monotherapy and in Combination with CD38-targeted mAb*

## FT576 Monotherapy and FT576 + CD38-targeted mAb Combination

### Single-dose Cycle

100M Cells

300M Cells

### Two-dose Cycle

300M Cells

### Three-dose Cycles

*Ongoing Dose Escalation*

1B Cells

*Potential Dose Escalation*

Up to 3B Cells



- Patient Conditioning: 300 mg/m<sup>2</sup> Cy x 3 days + 30 mg/m<sup>2</sup> Flu x 3 days
- 30-day treatment cycle
- Additional treatment cycles permitted subject to FDA consent



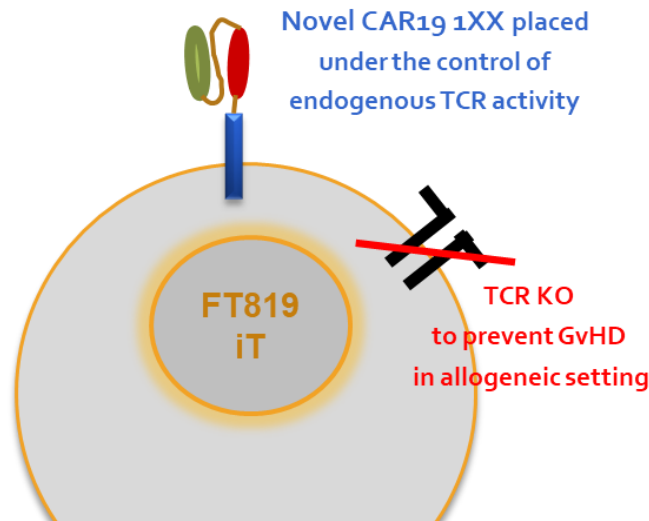
# iPSC-derived CAR T-cell Programs for Cancer

# FT819: Off-the-Shelf CAR19 T-Cell Product Candidate

*Collaboration with Memorial Sloan Kettering Cancer Center*



## First-of-Kind Off-the-Shelf CAR T-cell Therapy Derived from Renewable Master iPSC Line Engineered to Uniformly Express Novel 1XX CAR19 and Knock-out TCR



nature  
biomedical engineering

van der Stegen, et al.  
<https://doi.org/10.1038/s41551-022-00915-0>

Generation of T-cell-receptor-negative CD8 $\alpha\beta$ -positive CAR T cells from T-cell-derived induced pluripotent stem cells

**1XX CAR19:** Novel chimeric antigen receptor consisting of CD28 costimulatory domain and modified CD3z signaling domain for optimal effector cell persistence and anti-tumor potency

**TRAC targeted CAR:** Chimeric antigen receptor integrated into the T Cell Receptor Alpha Constant region to be regulated by endogenous control of TCR expression for optimal CAR performance

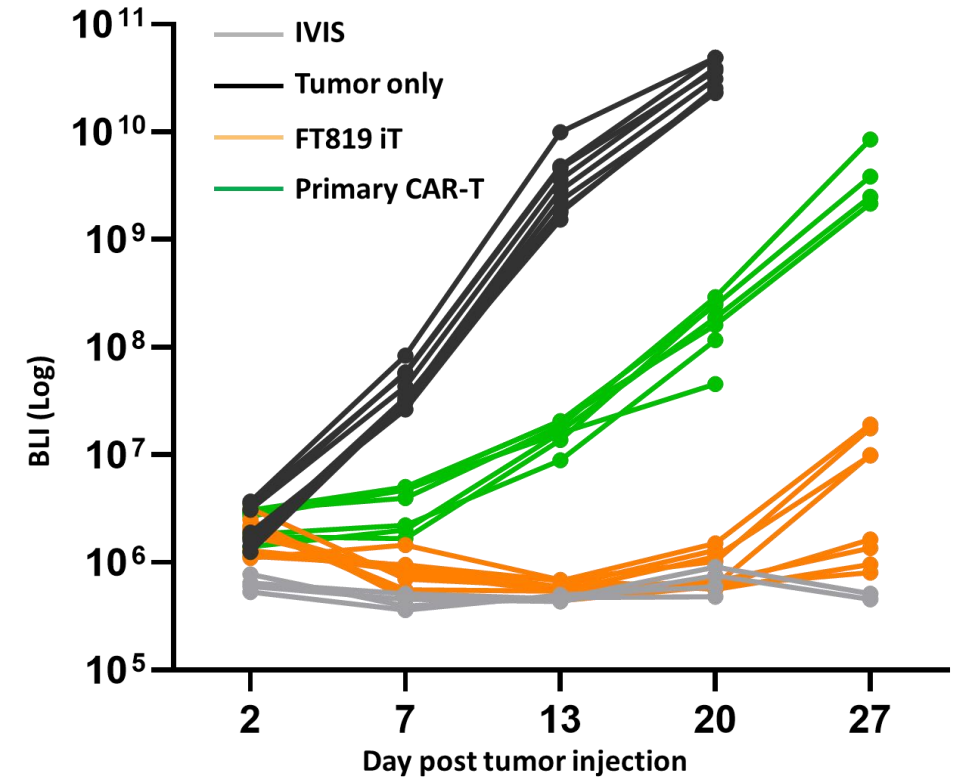
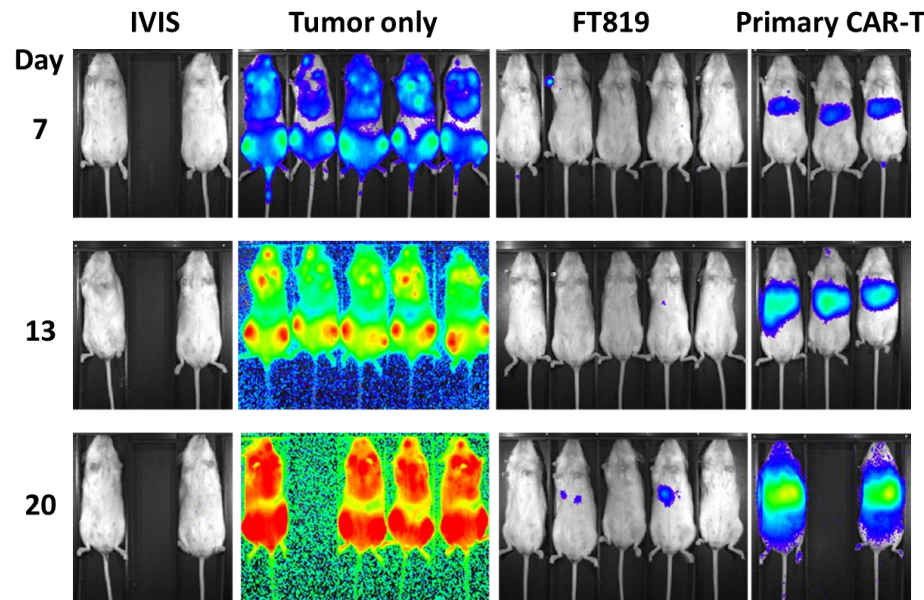
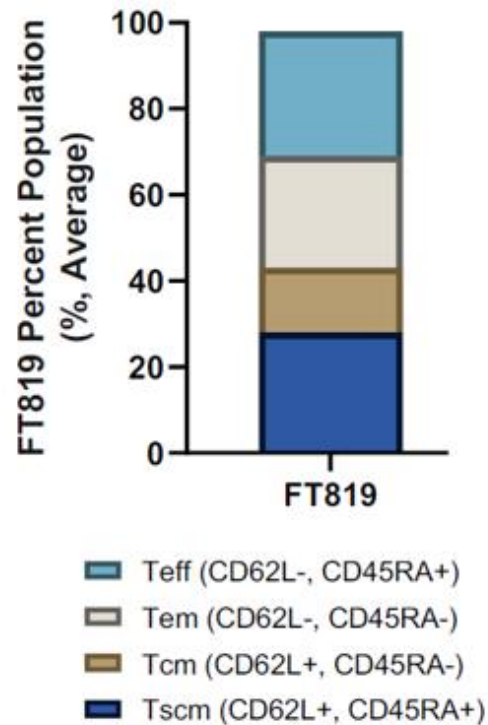
**TCR null:** Bi-allelic disruption of TRAC at the clonal level for complete removal of TCR expression and the elimination for the possibility of GvHD in allogeneic setting

# FT819: Enhanced Tumor Control vs. Primary CAR T Cells

*Disseminated Xenograft Model of Lymphoblastic Leukemia*



*FT819 Consists of Memory Phenotype and Outcompetes Primary CAR T Cells In Vivo*



# FT819: Off-the-Shelf CAR19 T-Cell Product Candidate

## Clinical Responses in a Difficult to Treat Aggressive B-cell Lymphoma Population



Table 2. Patient Safety, Response, and Disposition

| Table 2. Patient Safety, Response, and Disposition              |                                |        |      |       |                      |              |                       |                                    |
|---|--------------------------------|--------|------|-------|----------------------|--------------|-----------------------|------------------------------------|
| Patient #   | FT819 (Millions of Cells/Dose) | Safety |      |       |                      |              | Best Overall Response | Follow-Up Time (Days) <sup>a</sup> |
|   |                                | DLTs   | CRS  | ICANS | Related Grade ≥3 AEs | Related SAEs |                       |                                    |
| Regimen A: Single-Dose Day 1                                    |                                |        |      |       |                      |              |                       |                                    |
| Aggressive Lymphoma (DLBCL and HGBCL), CAR T-Cell Therapy Naïve |                                |        |      |       |                      |              |                       |                                    |
| 4   | 90                             | N      | N    | N     | N                    | N            | SD                    | 72                                 |
| 11  | 360                            | N      | N    | N     | N                    | N            | CR                    | 25+                                |
| Aggressive Lymphoma (DLBCL and HGBCL), Prior CAR T-Cell Therapy |                                |        |      |       |                      |              |                       |                                    |
| 2   | 90                             | N      | N    | N     | N                    | N            | PD                    | 29                                 |
| 3   | 90                             | N      | N    | N     | N                    | N            | CR                    | 113                                |
| 5   | 90                             | N      | N    | N     | N                    | N            | PR                    | 163+                               |
| 6   | 90                             | N      | N    | N     | N                    | N            | SD                    | 136                                |
| 9   | 180                            | N      | Gr 2 | N     | N                    | Gr 2 (CRS)   | PD                    | 28                                 |
| 10  | 360                            | N      | N    | N     | N                    | N            | PD                    | 22                                 |
| Other (Grade 3A FL, Richter Transformation)                     |                                |        |      |       |                      |              |                       |                                    |
| 1   | 90                             | N      | Gr 2 | N     | N                    | N            | PD                    | 29                                 |
| 7   | 180                            | N      | N    | N     | N                    | N            | PD                    | 28                                 |
| 8   | 180                            | N      | N    | N     | N                    | N            | CR                    | 121                                |

As of the September 8, 2022 data cutoff

### Baseline Characteristics

- Patients were heavily pre-treated with median of 5 prior lines of therapy (range 3-8)
- 7 patients (5 with DLBCL, 1 with HGBCL, and 1 with Grade 3A FL) relapsed or progressed on prior CAR T-cell therapy

### Safety

- No dose-limiting toxicities (DLTs) and no events of immune effector-cell associated neurotoxicity syndrome (ICANS) or GvHD were observed
- No Grade ≥3 treatment-emergent adverse events (AEs) related to FT819
- No patients experienced Grade ≥3 cytokine release syndrome (CRS)

### Anti-tumor Activity

- Naïve to CAR T-cell therapy (n=2): 1/2 achieved an objective response, which was a CR in a patient with DLBCL previously treated with 5 prior lines of therapy
- Previously treated with CAR T-cell therapy (n=6): 2/6 achieved an objective response, which included a CR in a patient with DLBCL previously treated with 7 prior lines of therapy who did not respond to autologous CD19-targeted CAR T-cell therapy.

# FT819: Off-the-Shelf CAR19 T-Cell Product Candidate

Phase 1 Study in Aggressive B-cell Lymphoma and Chronic Lymphocytic Leukemia



## FT819 Monotherapy: *Single-dose Cycle*

**Aggressive B-cell  
Lymphoma**

90M Cells

180M Cells

360M Cells

540M Cells

Up to 1B Cells

*Dose escalation ongoing at 540M cells* ----->

**Chronic Lymphocytic  
Leukemia**

90M Cells

180M Cells

360M Cells

540M Cells

Up to 1B Cells

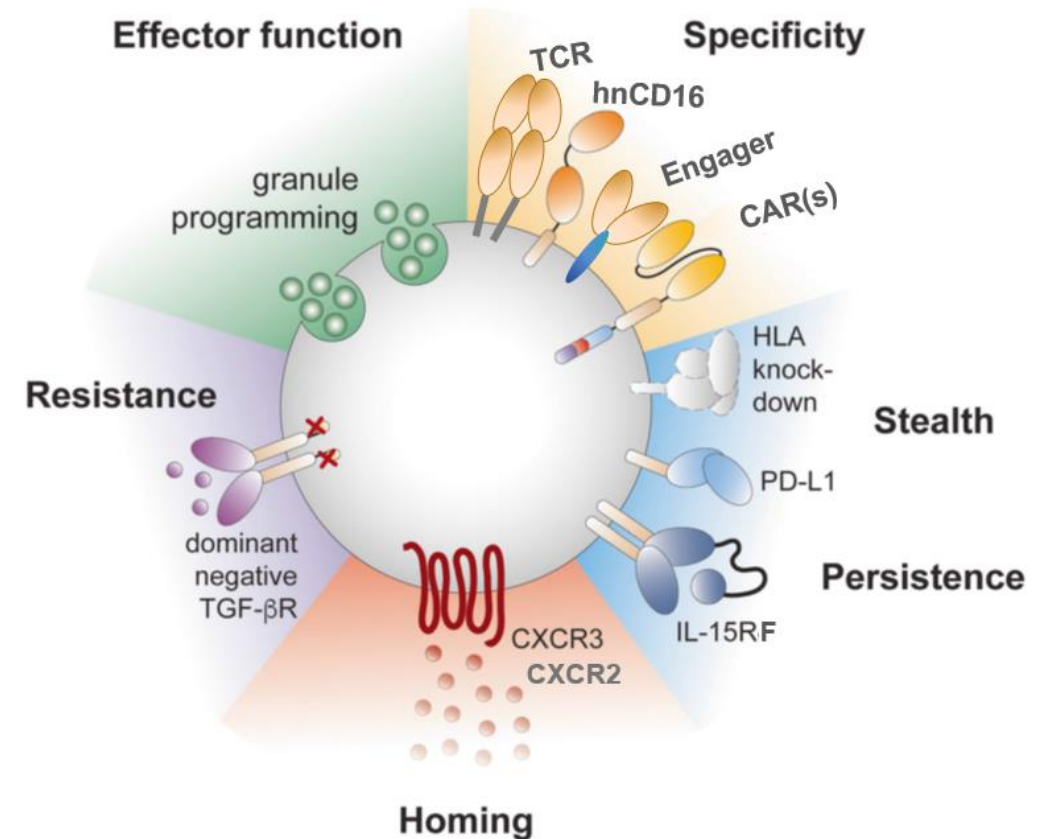
*Dose escalation ongoing at 360M cells* ----->

- Patient Conditioning: 500 mg/m<sup>2</sup> Cy x 3 days + 30 mg/m<sup>2</sup> Flu x 3 days
- 30-day treatment cycle
- Additional treatment cycles permitted subject to FDA consent

# Off-the-shelf Cell-based Cancer Immunotherapies for Solid Tumors

## *Developing Multiplexed-engineered, iPSC-derived Synthetic Killer Cells for Solid Tumors*

- Developing next-generation cancer immunotherapies must address numerous challenges that limit the effectiveness of today's agents in treating solid tumors.
  - Depleted / dysfunctional immune cells
  - Immuno-suppressive microenvironment
  - Tumor heterogeneity and escape
- Cell-based cancer immunotherapies have the unique potential to bring rejuvenated immune cells to the fight against cancer.
  - Address deficiencies in patients' endogenous immune system, mount multi-pronged attack, and synergize with complementary agents
- Fate Therapeutics has built a robust pipeline of off-the-shelf, multiplexed-engineered cell therapies for solid tumors.
  - Incorporate synthetic features specifically designed to exploit novel MOAs, synergize with approved agents, and overcome mechanisms of resistance



Modified after Saetersmoen et al. *Seminars in Immunopathology* 2019

# ONO Pharmaceutical - Cancer Immunotherapy Collaboration

*Off-the-shelf, iPSC-derived CAR NK Cell and CAR T-Cell Collaboration for Solid Tumors*



ONO PHARMACEUTICAL CO.,LTD.

## Established September 2018 and expanded June 2022



### Innovation for Solid Tumors (two targets)

- Proprietary antigen binding domains contributed by Ono
- Multiplexed-engineered, CAR-targeted product candidates
- Multiple mechanisms to overcome tumor microenvironment



### Strategic Collaboration

- FATE leads preclinical development to pre-IND milestone
- Ono has options to WW development & commercialization
- FATE opt-in rights to 50-50 co-dev, co-commercial in US, Europe



### Financial Terms

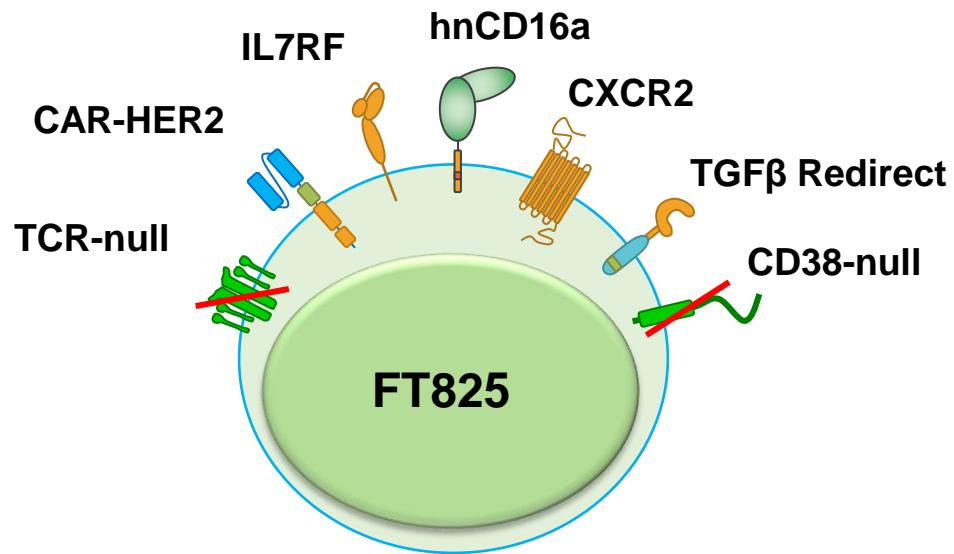
- \$10m upfront
- 50-50 cost sharing to pre-IND milestone
- Up to \$840m in milestones, mid-single to low-double-digit royalties

## Status

- ✓ \$10m R&D milestone (2020)
- ✓ \$12.5m Ono option exercise for FT825 (2022)
- ✓ Fate opt-in to US & EU co-co for FT825 (2022)
- ✓ FT825 IND clearance (2023)
- ✓ Committed R&D funding for FT825 and Target 2 product candidates

# FT825/ONO-8250: iPSC-derived CAR T-cell for Solid Tumors

*Incorporates Seven Novel Synthetic Controls of Cell Function*



*HER2-targeted CAR T-cell designed to overcome tumor heterogeneity, improve cell trafficking, and resist suppression in the tumor microenvironment*

*IND Cleared in 3Q23*

**CAR-HER2:** Novel 1XX CAR targeting HER2; controlled by TRAC locus

**TCR KO:** Complete loss of TCR surface expression to eliminate potential of GvHD in allogeneic setting

**hnCD16:** High-affinity 158V, non-cleavable CD16 Fc receptor to maximize ADCC

**IL-7RF:** Interleukin-7 receptor fusion to support stemness properties and increase persistence

**CD38 KO:** Resistance to anti-CD38 mAb-mediated fratricide opens new opportunities in conditioning; enhanced effector cell metabolic fitness and persistence.

**TGFβ Redirect:** Redirect receptor with the unique ability to overcome TME suppression mediated by TGFb signaling

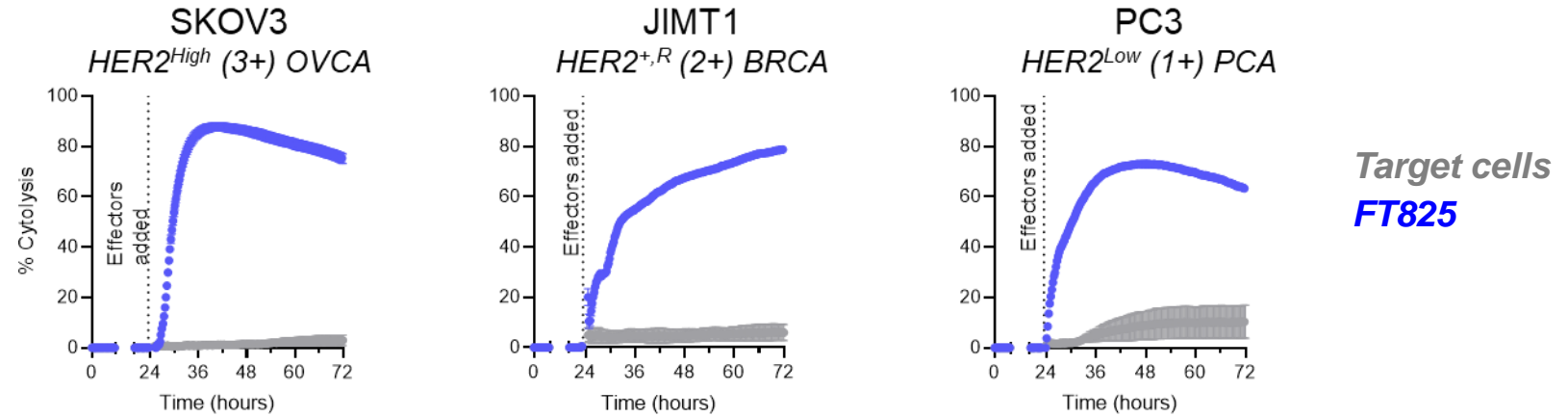
**CXCR2:** Expression of synthetic chemokine receptor to promote chemotaxis to sites of inflammation and tumor

# FT825/ONO-8250: iPSC-derived CAR T-cell for Solid Tumors

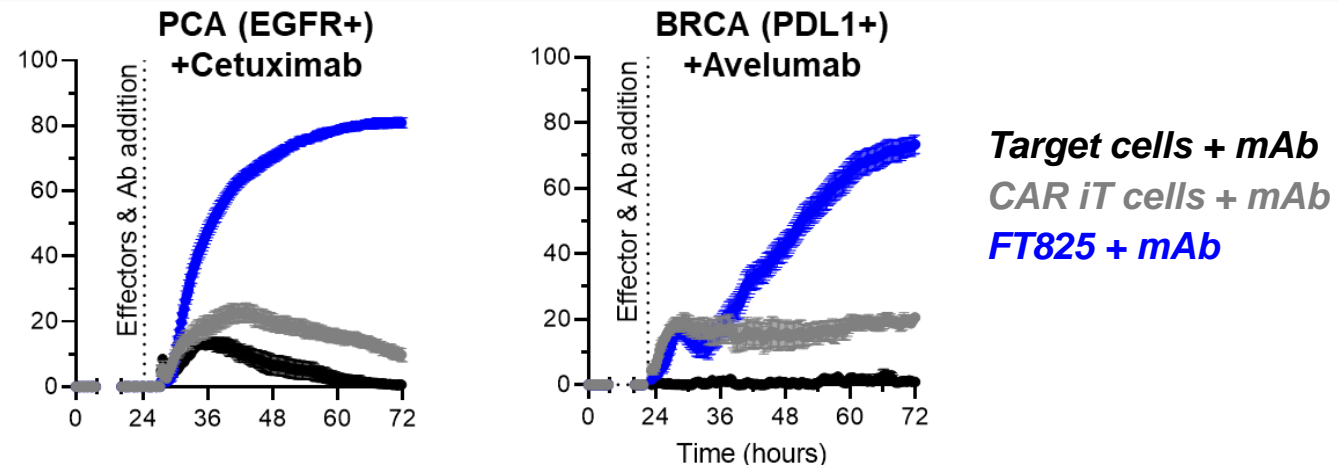
## Differentiated Tumor-Targeting Activity



### Robust HER2 Targeting Across a Wide Range of Antigen Expression Density



### hnCD16 Synthetic Control Enables Potential for Multi-antigen Targeting

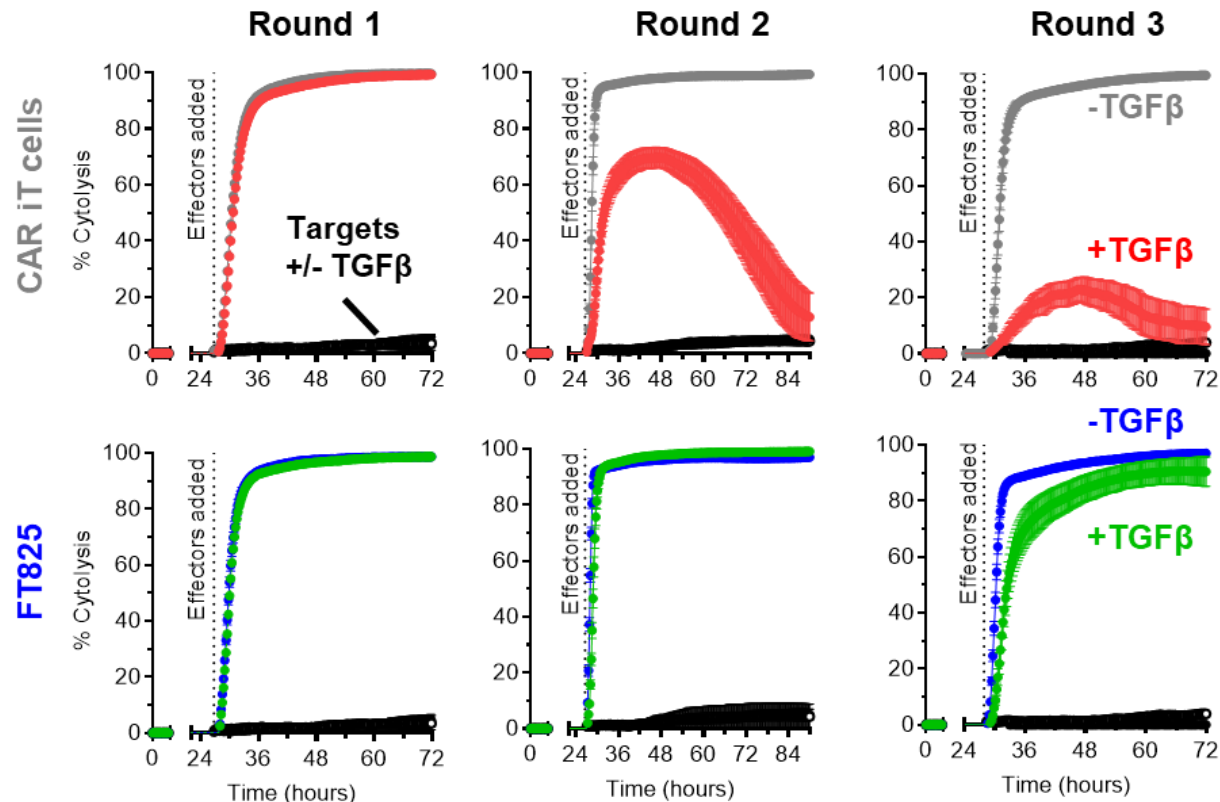


# FT825/ONO-8250: iPSC-derived CAR T-cell for Solid Tumors

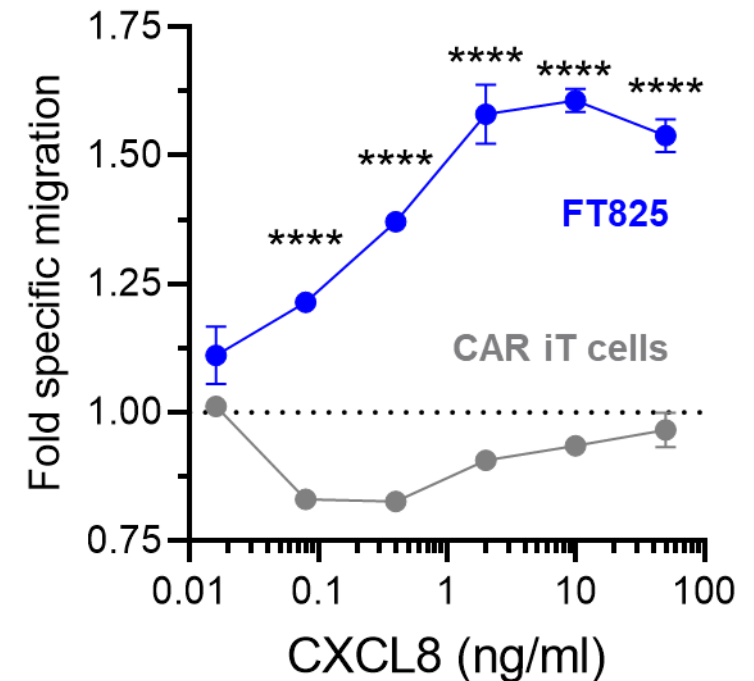
*Novel Synthetic Controls to Promote Trafficking and Resistance to TME Suppression*



## Resistance to TGF $\beta$ Suppression over Multiple Rounds of Tumor Challenge



## CXCR2 Expression Enables Ligand-specific Migration

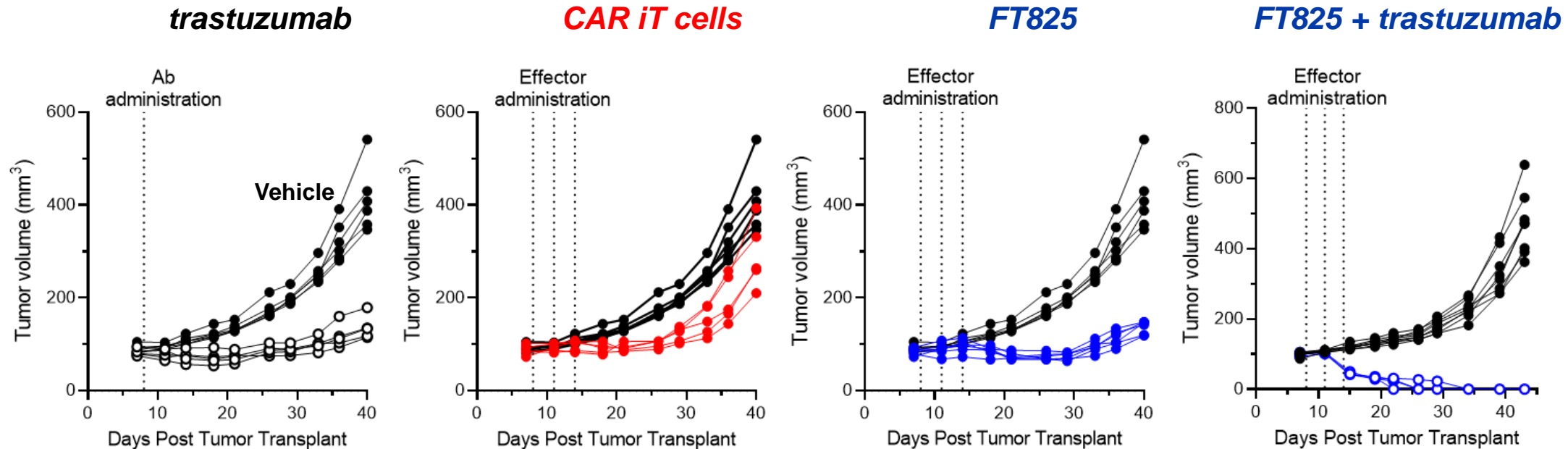


# FT825/ONO-8250: iPSC-derived CAR T-cell for Solid Tumors

*In Vivo Anti-Tumor Activity as Monotherapy and in Combination*

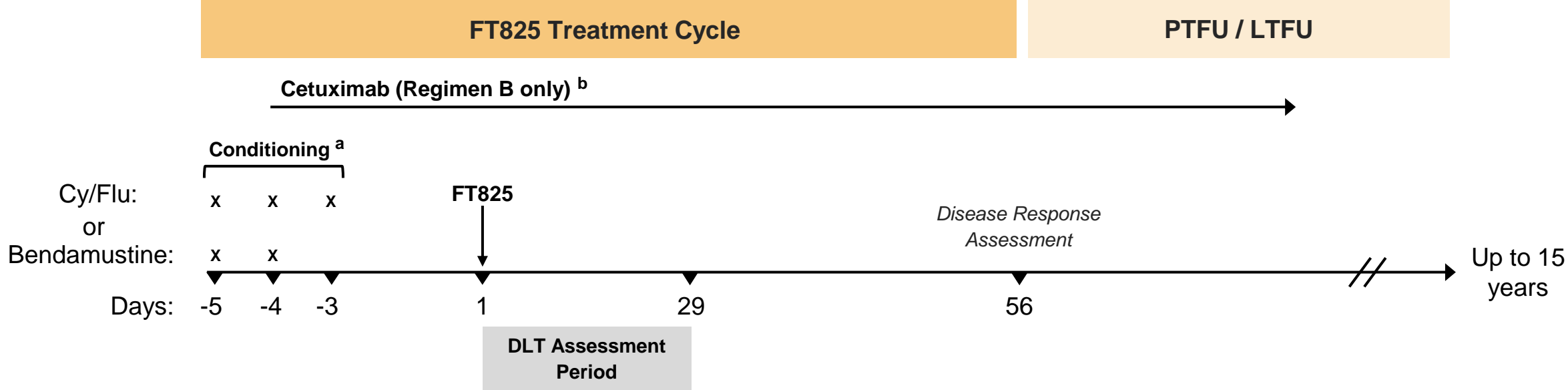


***In Vivo Anti-tumor Activity by CAR and by CAR+hnCD16***  
***Aggressive subcutaneous xenograft model of ovarian cancer***



# FT825/ONO-8250 Program for Solid Tumors

## Phase 1 Study Schema for Monotherapy and Combination Regimens



| Regimen A   | Regimen B   |
|---|---|
| <ul style="list-style-type: none"> <li>HER2-positive cancers (≥2+ by IHC)</li> <li>HER2-low (IHC 1+) may be enrolled with medical monitor approval</li> </ul> | <ul style="list-style-type: none"> <li>HER2 expression, amplification, or mutation; or</li> <li>Cancers for which there is approved EGFR-targeting therapy</li> </ul> |

- <sup>a</sup> Patient Conditioning: 500 mg/m<sup>2</sup> Cy and 30 mg/m<sup>2</sup> Flu on Days -5, -4 and -3; or 90 mg/m<sup>2</sup> Bendamustine on Days -5 and -4
- <sup>b</sup> Up to two years, unacceptable toxicity, or PD whichever occurs first
- DL1 = 100 million cells



# First-in-class Cell Products for Autoimmunity

# Cell-based Immunotherapies for Autoimmunity

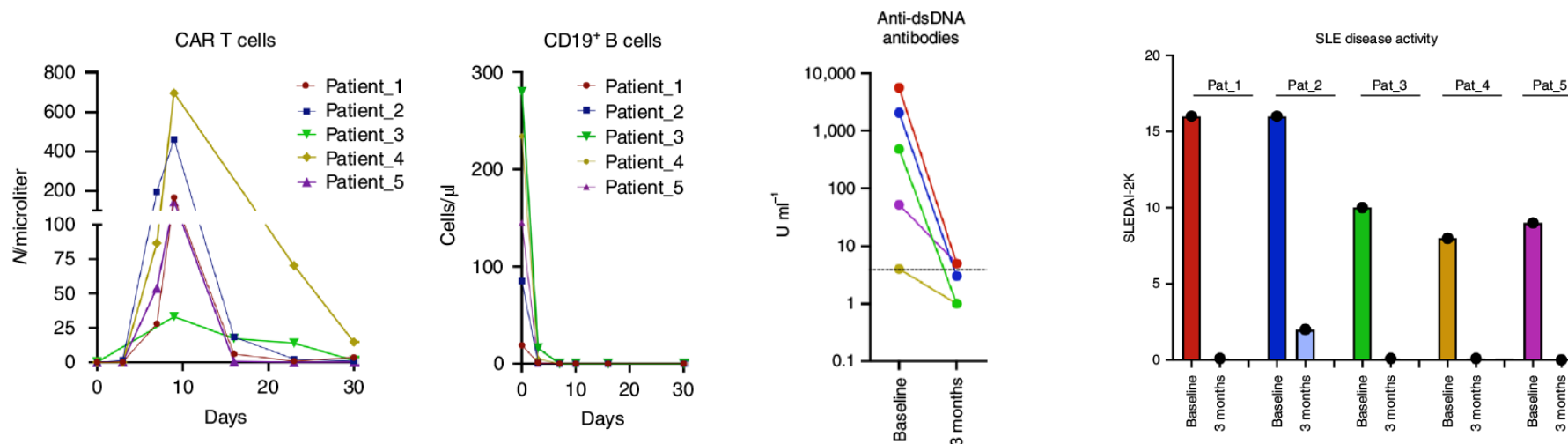
## Clinical Proof-of-Concept with Autologous CD19-targeted CAR T-cell Therapy

nature  
medicine

Schett et al., 28, 2124-2132 (2022)

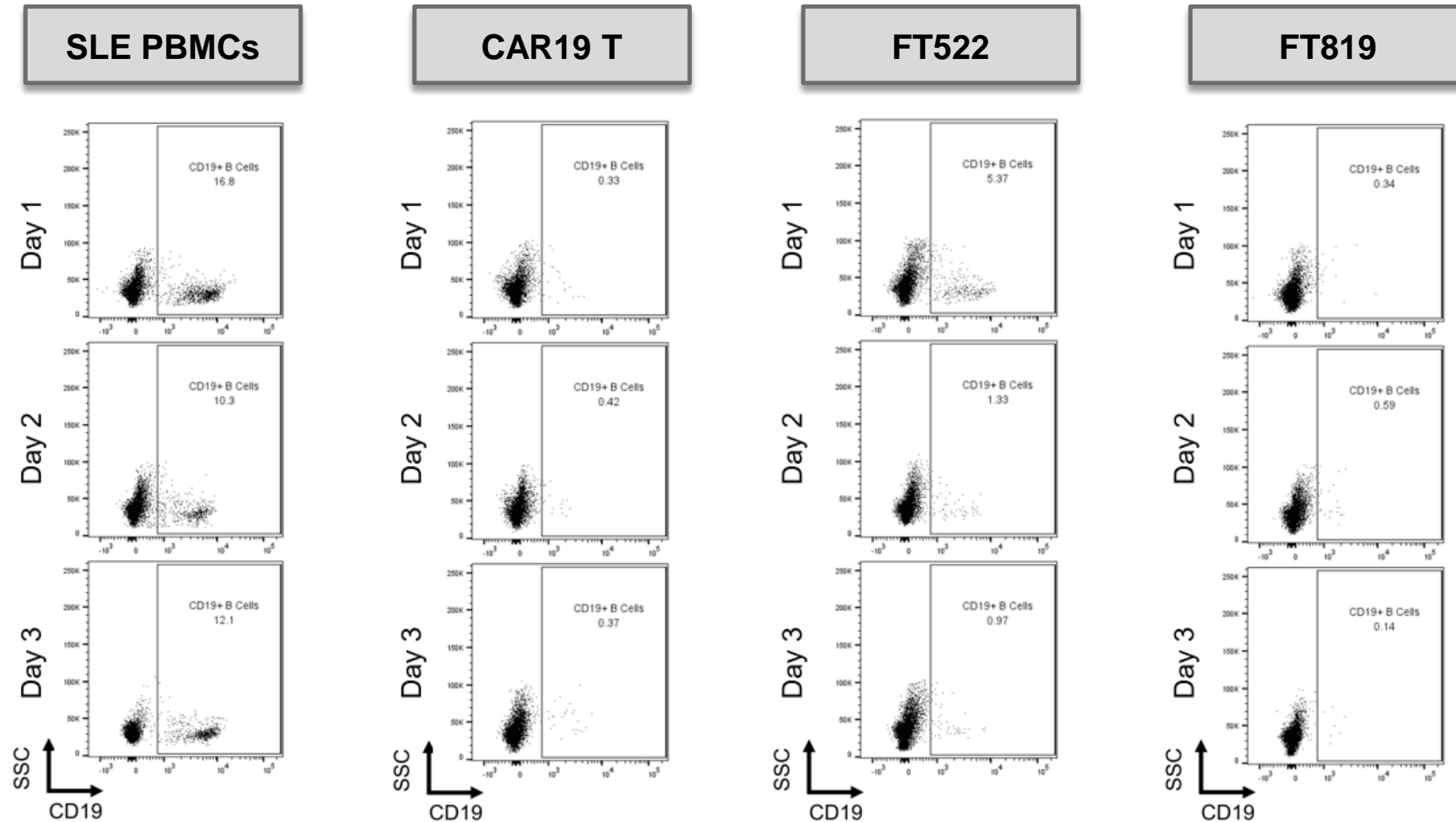
### Anti-CD19 CAR T cell therapy for refractory systemic lupus erythematosus

- Systemic lupus erythematosus (SLE) patients with moderate / severe disease refractory to immunosuppressive drug treatments (n=5)
- Rapid clinical and serologic responses achieved with autologous CD19-targeted CAR T-cell therapy
  - Deep depletion of B cells
  - Auto-antibodies against ds-DNA were undetectable
- Observed deep reset of the immune system by Day 100
  - Achieved drug-free remissions with reconstitution of healthy B cells



# Cell-based Immunotherapies for Autoimmunity

## *In Vitro B-cell Depletion in Systemic Lupus Erythematosus (SLE) PBMCs*



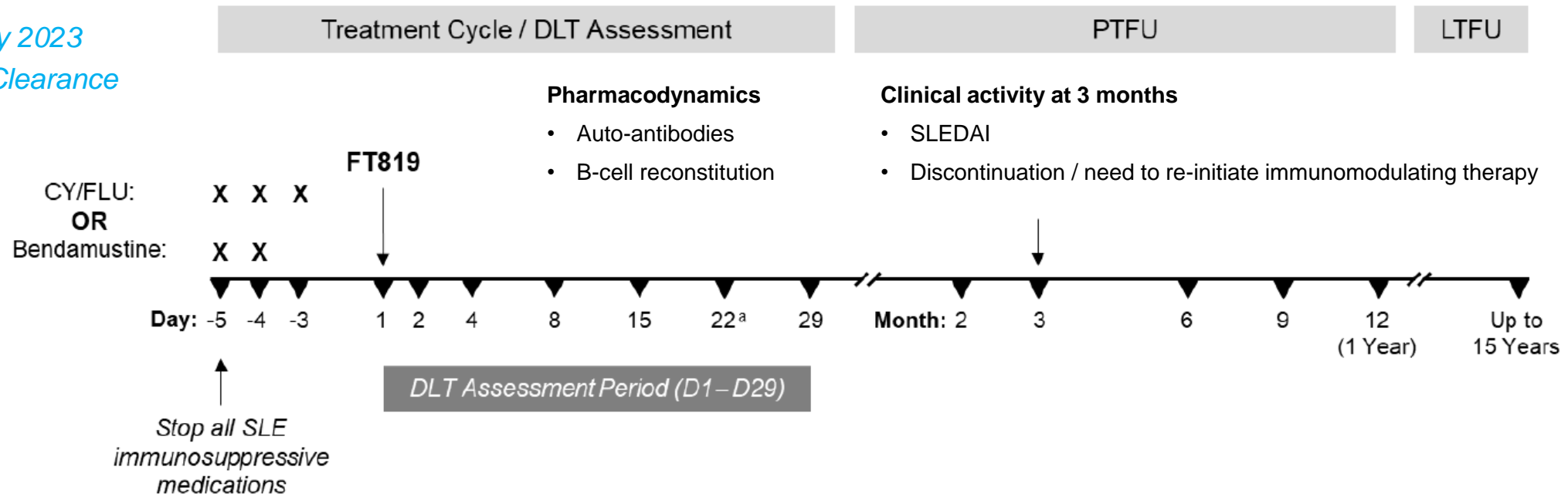
Unpublished data of Fate Therapeutics

# FT819: Off-the-Shelf CAR19 T-cell Product Candidate for Autoimmunity

## Phase 1 Study in Systemic Lupus Erythematosus

*Includes patients with active lupus nephritis or active SLE without renal involvement*

July 2023  
IND Clearance



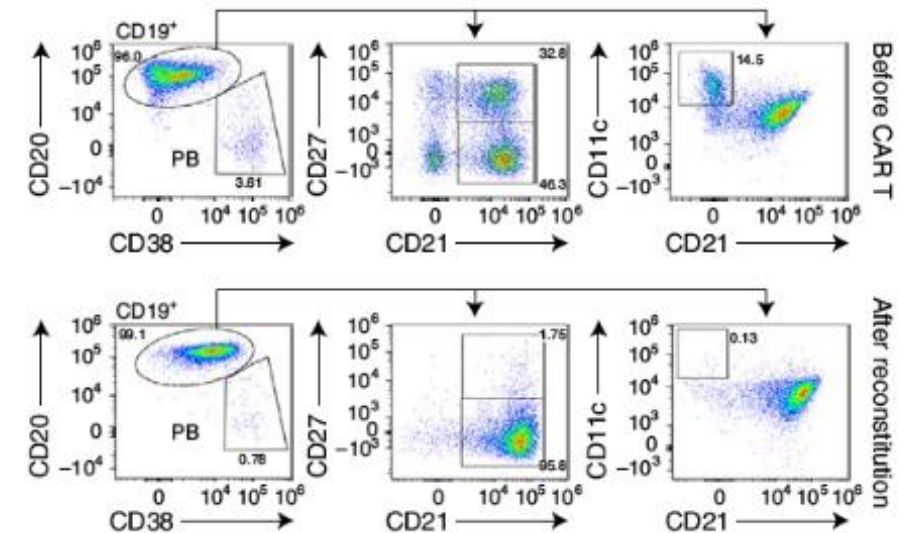
- Eligibility: relapse/refractory SLE per 2019 European League Against Rheumatism (EULAR) / American College of Rheumatology (ACR) classification criteria
- Patient Conditioning: 500 mg/m<sup>2</sup> Cy and 30 mg/m<sup>2</sup> Flu on Days -5, -4 and -3

# FT522: Multi-antigen Targeted CAR NK Cell Product Candidate

## Unique Product Configuration for Addressing Severe Autoimmune Diseases

- FT522 contains a series of unique targeting capabilities for the treatment of autoimmunity and inflammation
  - *NK cell*: has activating receptors known to target pathologic cells, including alloreactive immune cells
  - *CAR-targeted*: targets CD19 to eliminate pathologic B cells
  - *ADCC-competent*: potential to combine with mAb to target additional antigens
  - *CD38KO*: enables combination with anti-CD38 mAb, which is often found on autoimmune cells and pathologic hematological cells
  - *ADR*: targets 41BB, a selective antigen expressed on reactive immune cells and their memory counterparts

**SLE cells are CD19+ / CD20+ / CD38+ and their removal is curative**



Mackensen et al. 2022

**Combination with CD38-targeted mAb uniquely enables three-pronged attack against B cells, plasma cells, and activated T cells**



## Corporate Highlights

# Fate Therapeutics

*Changing the Game in Cell Therapy*



**>200 Patients**

*treated with iPSC-derived NK and T cells across hematologic malignancies and solid tumors*

**40,000<sub>sf</sub> GMP**

*in-house manufacturing facility designed to US and international commercial standards*

**400+ Patents**

*covering engineering, manufacture, and compositions of iPSC-derived cell therapies*

**~\$350 million**

*in cash, cash equivalents, and investments  
(as of September 30, 2023)*

## ***Established Leadership***

*Position for Off-the-shelf, Multiplexed-engineered, iPSC-derived Cellular Immunotherapy*

