Fate THERAPEUTICS

Better Cells For Better Therapies™

Programmed Cellular Immunotherapies

Leading Off-the-Shelf Development of Cell Therapy Products using Clonal Master iPSC Lines

November 2020

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 Company's research and development activities and its progress, plans and timelines for its manufacture, preclinical development and clinical investigation of its product candidates, the timing for the Company's receipt of data from its clinical trials and preclinical studies, the Company's clinical development and regulatory strategy, and the therapeutic and market potential of the Company's product candidates. 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 prior studies of its product candidates will not be 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, 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.

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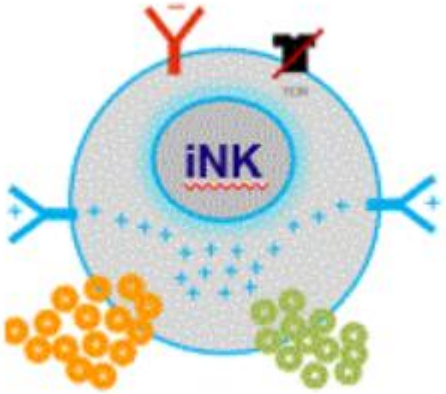
A Remarkable 2-Year Journey of Firsts

Building the Leading Off-the-Shelf NK Cell Cancer Immunotherapy Company

Best-in-Class Lymphoma | Best-in-Class Myeloma | Solid Tumors

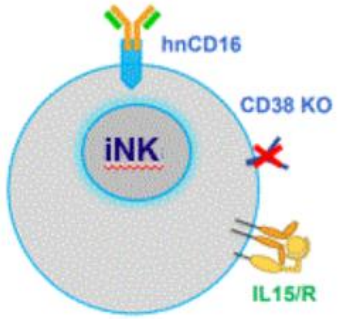
FT500



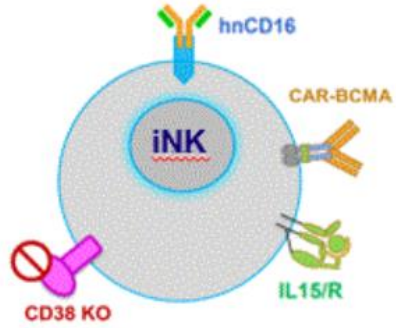
FT516

FT596

FT538



FT576



- FT516 + mAbs
- FT538 + mAbs
- CAR MICA/B
- ONO Product 2
- Janssen Targets

July 2018 → Sept 2020

1st IND submission
87 employees
$78M in cash

ONO

janssen PHARMACEUTICAL COMPANIES OF Johnson & Johnson

9 Cleared INDs
250+ employees
$500M+ in cash

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Off-the-Shelf, iPSC-derived NK Cell Cancer Immunotherapy Franchise

Significant Clinical Progress

- **7** INDs approved for iPSC-derived NK cells*
- **5** ongoing studies across hematologic and solid tumors
  - FT500: Dose expansion in solid tumors resistant to checkpoint inhibitor therapy
  - FT516: Dose escalation in AML and in combination with CD20-directed mAb for B-cell lymphoma
  - FT516: Dose escalation in combination with PDL1-directed mAb for solid tumors
  - FT596: Dose escalation ± CD20-directed mAb for non-Hodgkin lymphoma and for CLL
  - FT538: Dose escalation in AML and in combination with CD38-directed mAb for multiple myeloma
- **2** additional studies projected to begin enrollment by YE20
  - FT516: Dose escalation in recurrent ovarian cancer (UMN IIT)
  - FT596: Dose escalation for relapse prevention post-HSCT in B-cell lymphoma (UMN IIT)

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** Excludes FT516 IIT with UMN for treatment of hospitalized patients with COVID-19 at high-risk for life-threatening illness.*

Off-the-Shelf, iPSC-derived NK Cell Cancer Immunotherapy Franchise

Initial Clinical Observations

Early clinical observations support the transformative potential of iPSC Product Platform

- **Multi-dosing**
  - 35+ patients dosed with 150+ doses of iPSC-derived NK cells (FT500, FT516, FT596, FT538)
  - Demonstrated ability to administer up to 6 doses safely in an outpatient setting
  - No evidence of anti-product T- or B-cell mediated immunogenicity
- **Safety**
  - No DLTs, CRS, ICANS or GvHD at dose levels ≤ 300M cells / dose
- **Activity**
  - Evidence of anti-tumor activity at initial (low) doses
  - Observed across multiple assets / indications in patients with relapsed / refractory disease

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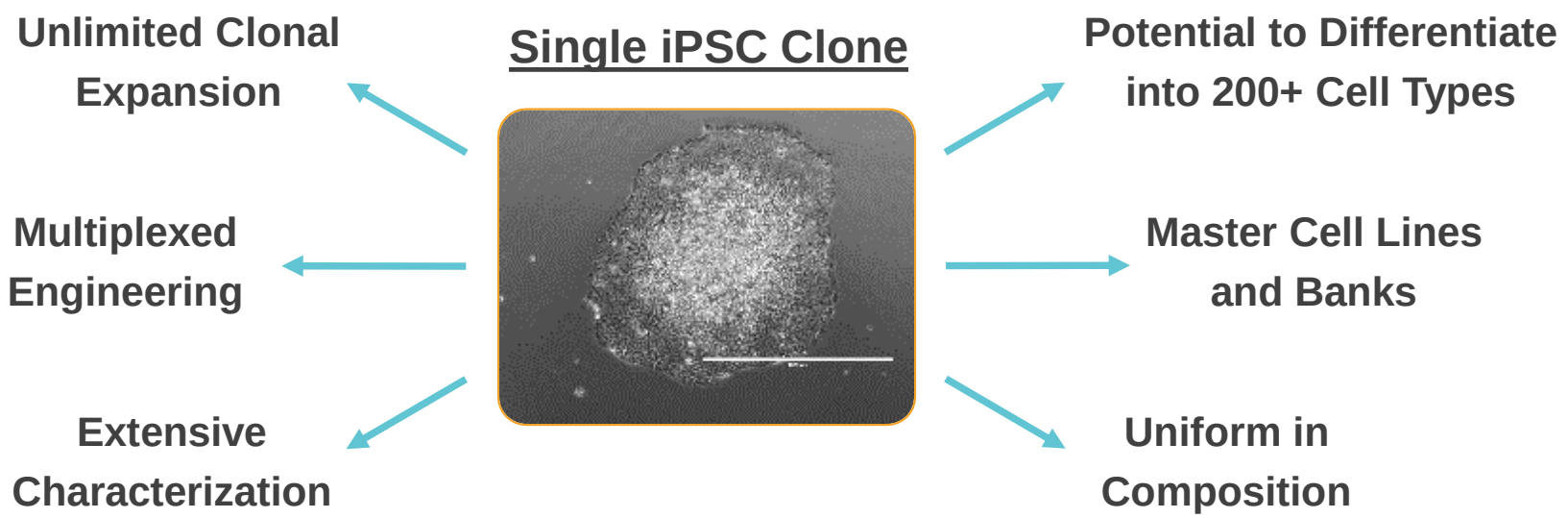
Unique Advantages of Human iPSCs

Single-cell Isolation, Characterization & Selection

A Single Human Induced Pluripotent Stem Cell (iPSC)

A renewable source for making cell products



Fate Therapeutics' iPSC product platform is supported by an IP portfolio of 300+ issued patents and 150+ pending patent applications

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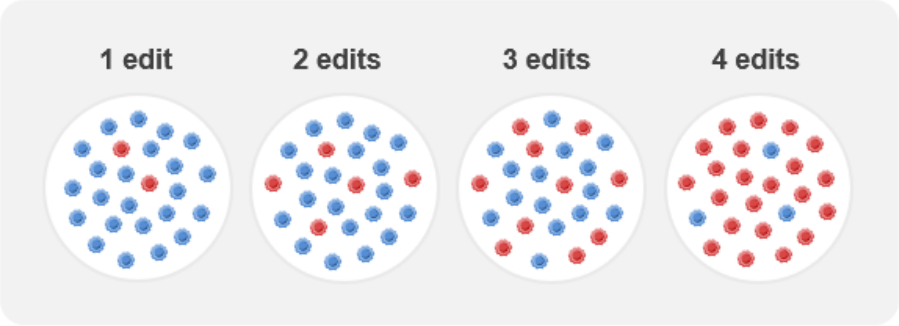
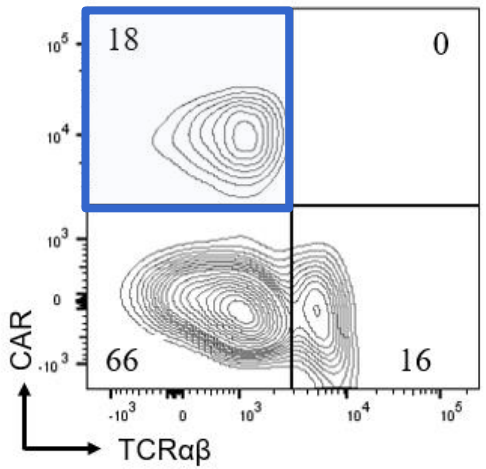
Unique Advantages of Human iPSCs

Creating a Clonal Master Engineered iPSC Line

Cell Population Engineering

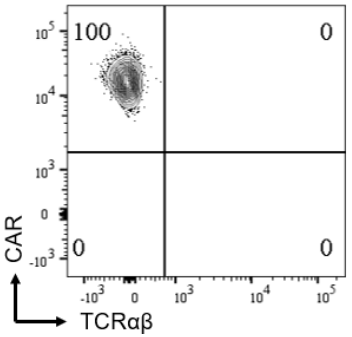


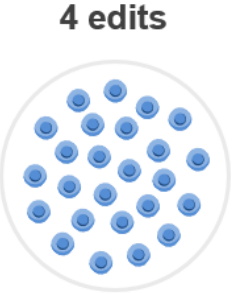


Single-cell iPSC Isolation, Characterization and Selection

- ✓ *Determination of copy number*
- ✓ *Confirmation of genomic stability*
- ✓ *Confirmation of transgene integration site*
- ✓ *Confirmation of pluripotency and propensity to differentiate*
- ✓ *Confirmation of highly functioning cells*
- ✓ *Confirmation of uniform transgene expression and enhanced function*
- ✓ *A myriad of additional safety and efficacy analyses*

Clonal Master Engineered iPSC Line





A Renewable Cell Source for Mass Production of Engineered Immune Cells

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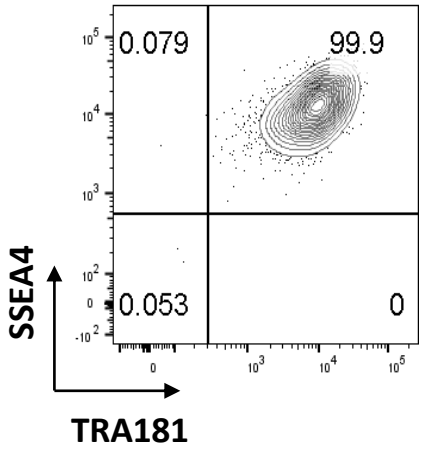
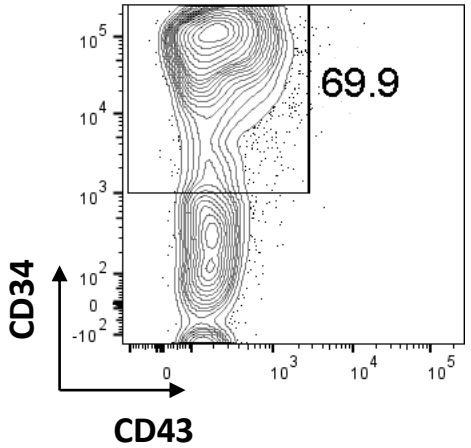
The Making of Bona Fide NK Cells from a Clonal Master Engineered iPSC Bank

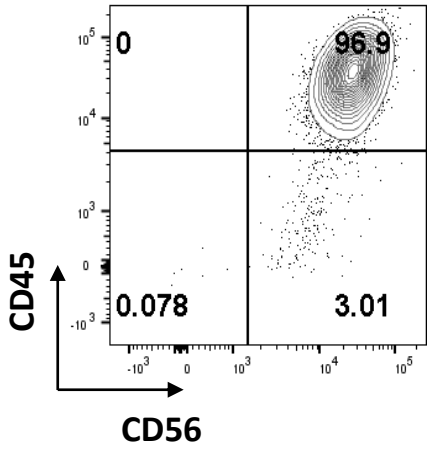
Robust cGMP Process

iPSCs → **iCD34s** → **iNKs**

Day 0 ***Day 10*** ***Day 44***







> 1 million-fold expansion

10^6 iPSCs

> 10^{12} iNKs

- *Homogeneous cell product*
- *100s-1,000s doses per campaign*
- *Low-cost per dose cGMP production*
- *Cryopreserved*
- *High post-thaw viability*

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Changing the Game in Cell Therapy

Universal, Off-the-Shelf Cell Products Derived from Renewable Master Cell Lines

Key Features	Cell Therapy 1.0 and 2.0	Cell Therapy 3.0
Cell Source	Patient and Donor Cells	Renewable Master Cell Line
Genetic Engineering	Random & Variable	Uniform & Complete
Characterization	Imprecise	Well-defined
Product Identity	Heterogeneous	Homogeneous
Manufacturing	Limited Dose Availability	Off-the-Shelf Availability
Cost-per-Dose	High	Low
Dosing	Single Dose	Multiple Doses / Multiple Cycles
Overall Paradigm	**Process-centric**	**Product-centric**

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Off-the-Shelf, iPSC-derived NK Cell Cancer Immunotherapy Franchise

Systematic Build of Industry-Leading iPSC-derived NK Cell Product Pipeline

Universal, Off-the-Shelf NK Cell Cancer Immunotherapy Pipeline

Clonal Master iPSC Line	Synthetic Biology	FT500	FT516	FT596	FT538	FT576	FT536
Multi-faceted Innate Immunity		✓	✓	✓	✓	✓	✓
+ High-Affinity, Non-cleavable CD16	*Augment mAb therapy*		✓	✓	✓	✓	✓
+ IL-15 Receptor Fusion	*Enhance NK cell function*			✓	✓	✓	✓
+ CAR Insertion	*Target tumor-associated antigen*			CD19		BCMA	MICA/B
+ CD38 Knock-out	*Resist CD38-mediated fratricide*				✓	✓	✓
	Total # of Synthetic Elements	**0**	**1**	**3**	**3**	**4**	**4**

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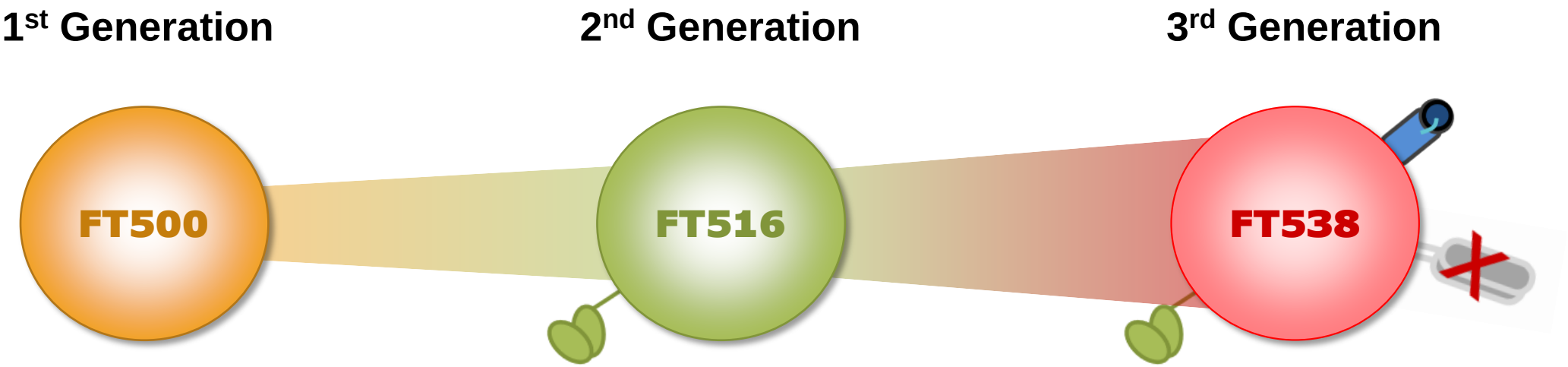
Off-the-Shelf, iPSC-derived NK Cell Cancer Immunotherapy Franchise

Integrating Additional Functional Components to Enhance Innate Immunity



High-affinity 158V, non-cleavable CD16 Fc receptor to augment ADCC

Interleukin-15 receptor fusion to promote NK cell activity

CD38 knock-out to eliminate NK cell fratricide and improve metabolic signaling

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FT500: First iPSC-derived (non-engineered) NK Cell Product Candidate

Clinical Objectives

Assessment of Safety & Tolerability as Monotherapy and in Combination with Checkpoint Inhibitor

Assess Novel Paradigm

- First-ever U.S. clinical study of iPSC-derived cell
- Universal starting material (e.g., no patient matching)
- Multi-dose, multi-cycle treatment strategy
- One-time, outpatient lympho-conditioning
- No exogenous cytokine support

Key Clinical Read-outs

- FT500 safety and tolerability (DLTs, AEs)
- Immune-mediated toxicities (GvHD, CRS)

Key Molecular Read-outs

- Immune cell recovery
- Endogenous cytokine response (GvHD, CRS)
- Anti-product immunogenicity

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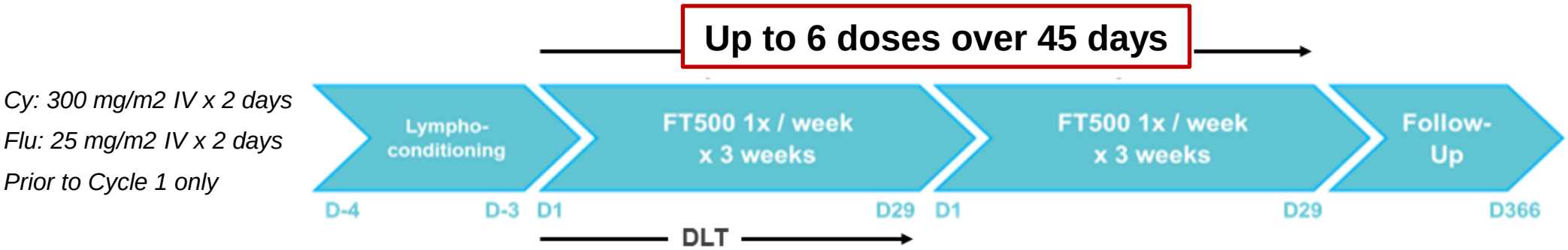
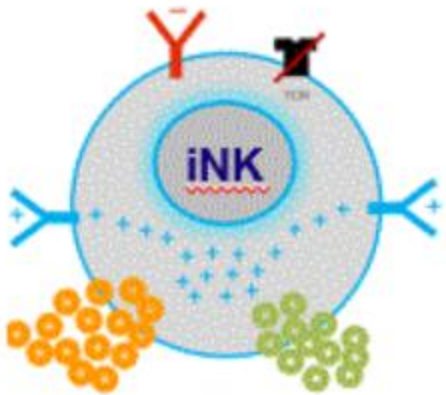
FT500: First-ever U.S. Clinical Study of iPSC-derived Cell Product

Phase 1 Dose Escalation in Advanced Solid Tumors



FT500



- **Regimen A**: Monotherapy (n=9)
  - Salvage setting with patients having progressed or failed all FDA-approved therapies
- **Regimen B**: Combination with immune checkpoint inhibitor (ICI) therapy (n=6)
  - Tumor types where ICIs are approved
  - Salvage setting with patients having progressed or failed ICIs
- **Two dose levels**
  - 100M cells / dose and 300M cells / dose x up to 6 doses

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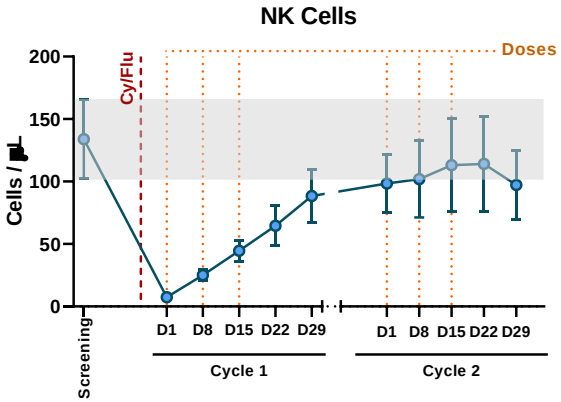
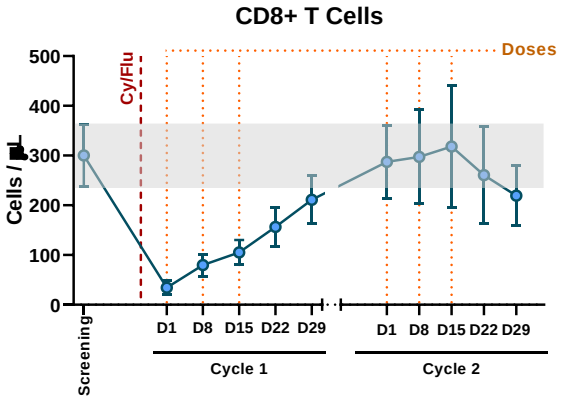
FT500: Dose Escalation Clinical Results

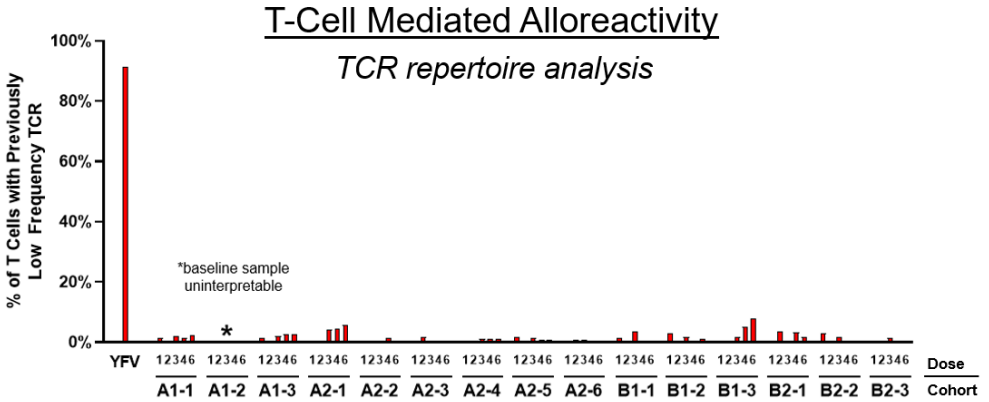
Phase 1 Dose Escalation in Advanced Solid Tumors

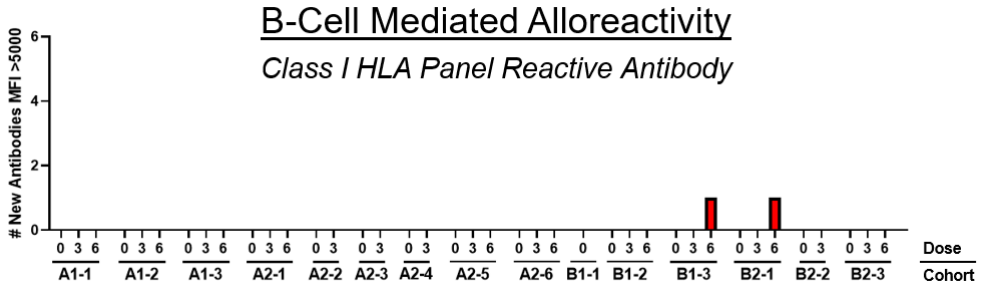
Multi-dosing

- All 15 patients completed Cycle 1 (3 doses)
- 13 patients advanced to Cycle 2, with 11 of 13 patients completing Cycle 2 (3 additional doses)
- In all cases, dose discontinuation was due to disease progression
- 81 total doses of FT500 were administered to patients in the outpatient setting
- No B-cell or T-cell mediated anti-product responses observed despite post-conditioning immune recovery









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FT500: Dose Escalation Clinical Results

Phase 1 Dose Escalation in Advanced Solid Tumors

Safety

- No dose-limiting toxicities, and no SAEs or Grade ≥ 3 AEs considered related to FT500, were observed
- No cases of cytokine release syndrome, immune effector cell-associated neurotoxicity syndrome, or graft-versus-host disease were observed
- No treatment-related discontinuations or deaths were observed

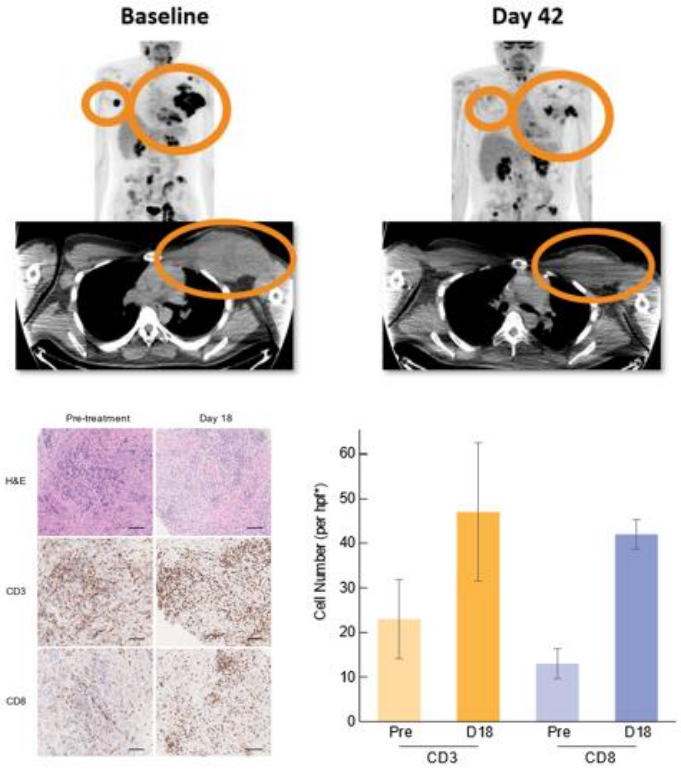
Efficacy

- Among 15 heavily pre-treated patients (10 who were refractory to prior therapy), 11 had a best overall response of SD

Patient Case Study - r/r cHL Resistant to anti-PD1 Therapy

- 29 y/o male with relapsed / refractory classical Hodgkin lymphoma (cHL)
- 14 prior therapies including multiple lines of FDA-approved ICI therapies
- 84% reduction in size of a lymphonodal mass and a 58% reduction in size of all target lesions following three doses of FT500 plus anti-PD-1 therapy, however, new bone lesion was observed

Patient Case Study
(300M FT500 cells combined with ICI)



IHC staining of the lymphonodal mass demonstrated post-treatment increases in the number of CD3+ and CD8+ cells and in the ratio of CD3+ and CD8+ cells to tumor cells, indicative of T-cell trafficking to the responding tumor bed.

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FT500: Phase 1 Dose Expansion Ongoing

Overcoming Resistance to Checkpoint Inhibitor Therapy in Advanced Solid Tumors

Patient who progressed on prior ICI

FT500 + ICI

KEYTRUDA® (pembrolizumab) Injection 100 mg

OPDIVO® (nivolumab)

TECENTRIQ® atezolizumab

FT500 mediates both direct tumor lysis and T-cell recruitment / activation to re-sensitize ICI-resistant tumors

Dose Expansion Strategy	Rationale
Tumor Enrichment • NSCLC • cHL	• High % of tumor mutations leading to low / null MHC Class I expression • NSCLC: NK cell trafficking • cHL: POC in dose-escalation phase • Accessible tumor biopsies
Add IL-2 Support	• IL-2 known to enhance NK cell function and persistence

FT500 Dosing: Up to six doses; three once-weekly doses at 300M cells / dose x 2 cycles

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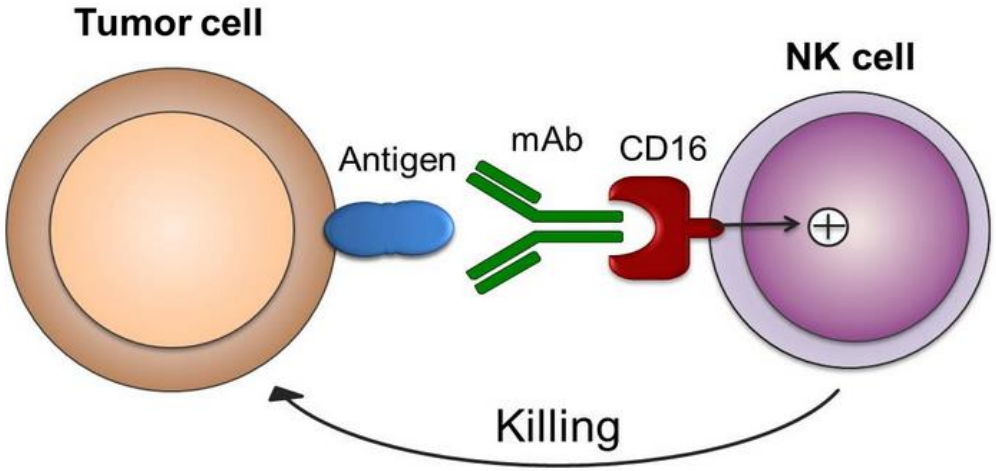
FT516: hnCD16 NK Cell Product Candidate

CD16 Fc Receptor Mediates Antibody-Dependent Cellular Cytotoxicity (ADCC)

- **CD16 is an activating receptor expressed on NK cells**
  - Mediates antibody-dependent cellular cytotoxicity (ADCC), a potent anti-tumor mechanism by which NK cells recognize, bind and kill antibody-coated cancer cells
- **CD16 occurs in two variants: high (158V) or low (158F) affinity for the Fc domain of IgG1 antibodies**
  - Only ~15% of patients are homozygous for 158V
  - Numerous clinical studies with FDA-approved tumor-targeting antibodies have demonstrated that patients homozygous for 158V have improved clinical outcomes
- **CD16 shedding in the tumor microenvironment can significantly limit NK cell anti-tumor activity**



Rituxan Rituximab

GAZYVA obinutuzumab

DARZALEX (daratumumab)

Herceptin trastuzumab Precision • Power • Promise

ERBITUX Cetuximab

BAVENCIO avelumab Injection

How to bring the 158V CD16 NK cell experience to all patients?

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FT516: hnCD16 NK Cell Product Candidate

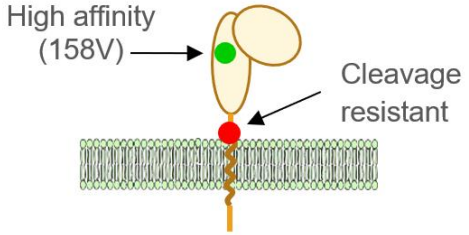
High-Affinity 158V, Non-Cleavable CD16 Fc Receptor for Enhanced ADCC

FT516

blood® 6 FEBRUARY 2020

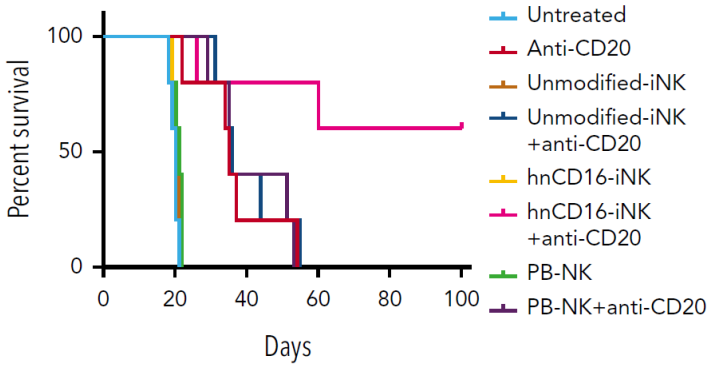
Pluripotent stem cell–derived NK cells with high-affinity noncleavable CD16a mediate improved antitumor activity

Huang Zhu,[1] Robert H. Blum,[1] Ryan Bjordahl,[2] Svetlana Gaidarova,[2] Paul Rogers,[2] Tom Tong Lee,[2] Ramzey Abujarour,[2] Gregory B. Bonello,[2] Jianming Wu,[3] Pei-Fang Tsai,[2] Jeffrey S. Miller,[4] Bruce Walcheck,[3] Bahram Valamehr,[2] and Dan S. Kaufman[1]



Engineered CD16a high-affinity antibody-binding receptor resists shedding upon activation

ADCC activity in in vivo systemic tumor model (Raji-Luc tumor cells)



3 of 5 mice in hnCD16 iNK cell + anti-CD20 mAb group maintained complete remission at Day 100

Phase 1 Study	Regimen	Dosing (M cells)	Schedule	Status
AML	Monotherapy	90, 300, 900	3 once-weekly x 2	Dose escalation ongoing
B-cell Lymphoma	+ Rituximab	30, 90, 300, 900	3 once-weekly x 2	Dose escalation ongoing
Solid Tumors	+ Avelumab	90, 300, 900	3 once-weekly x 2	Dose escalation ongoing
Recurrent Ovarian Cancer (ITT)	Monotherapy	90, 300, 900	3 once-weekly x 1	Open to enrollment

Conditioning Regimen: Cyclophosphamide: 500 mg/m2 IV x 3 days; Fludarabine: 30 mg/m2 IV x 3 days

IL-2: 6M units sc with each FT516 dose

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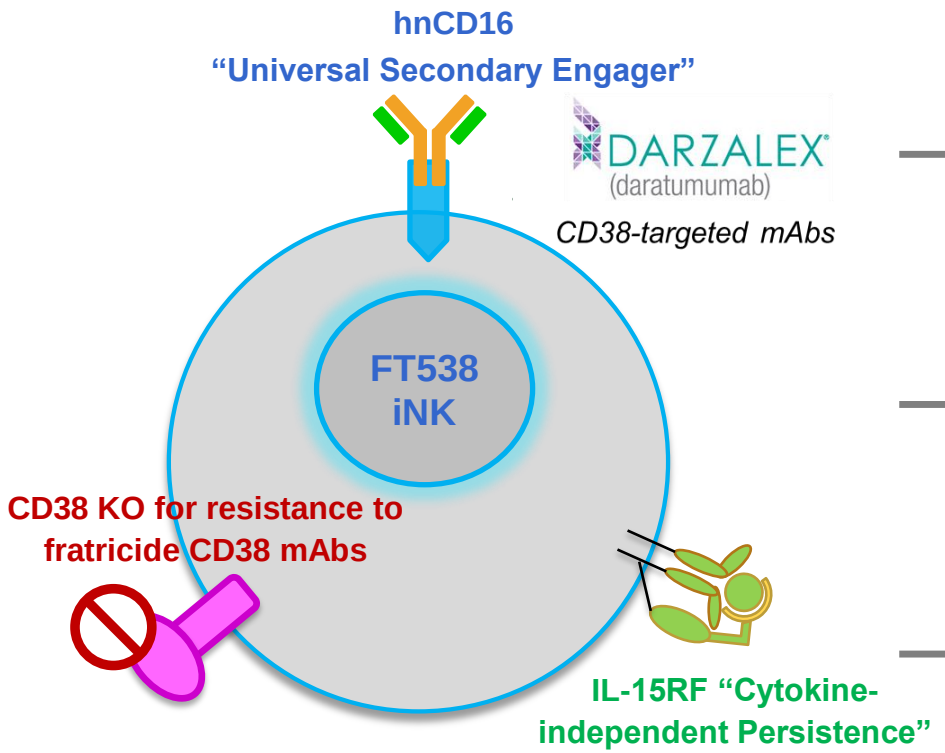
FT538: hnCD16 + IL-15RF + CD38KO NK Cell Product Candidate

First-ever CRISPR-edited iPSC-derived Cell Therapy

Engineered with Three Components to Enhance Multiple Mechanisms of Innate Immunity



hnCD16: High-affinity 158V, non-cleavable CD16 Fc receptor that has been modified to augment antibody-dependent cellular cytotoxicity by preventing CD16 down-regulation and enhancing CD16 binding to tumor-targeting antibodies

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CD38KO: Deletion of CD38 to eliminate anti-CD38 antibody mediated NK cell fratricide. Also shown to improve NK cell biology and potency through optimization of metabolic signaling

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IL-15RF: Interleukin-15 receptor fusion, a potent cytokine complex that promotes survival, proliferation and trans-activation of NK cells and CD8 T cells

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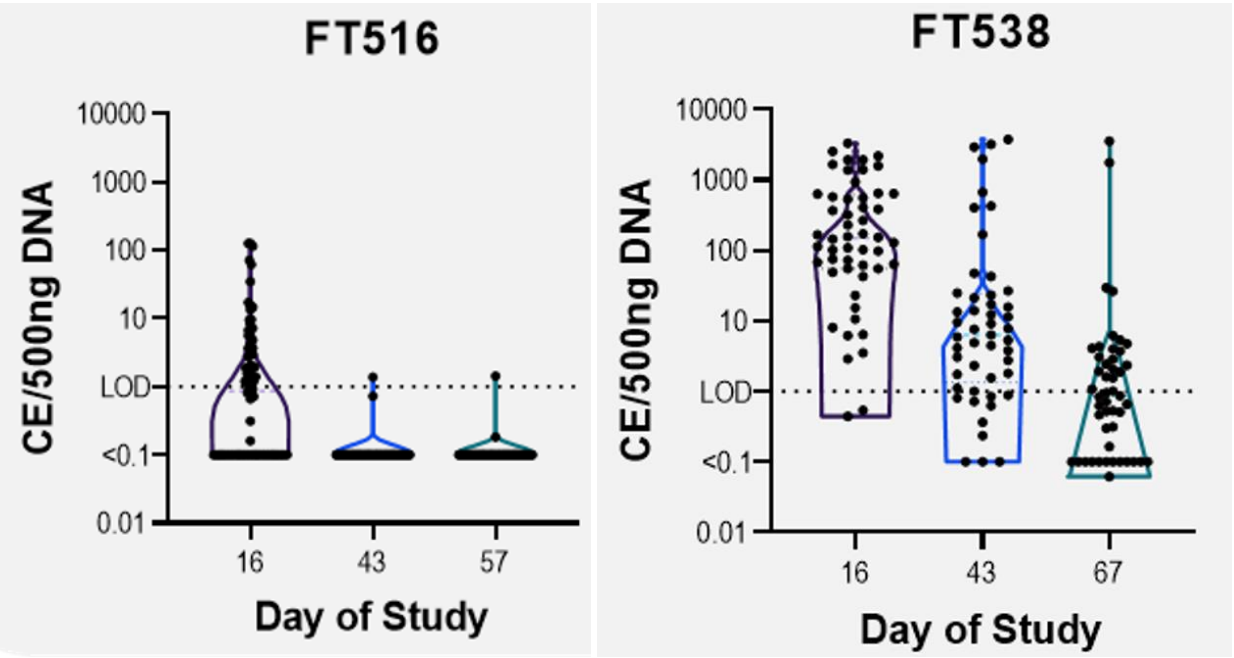
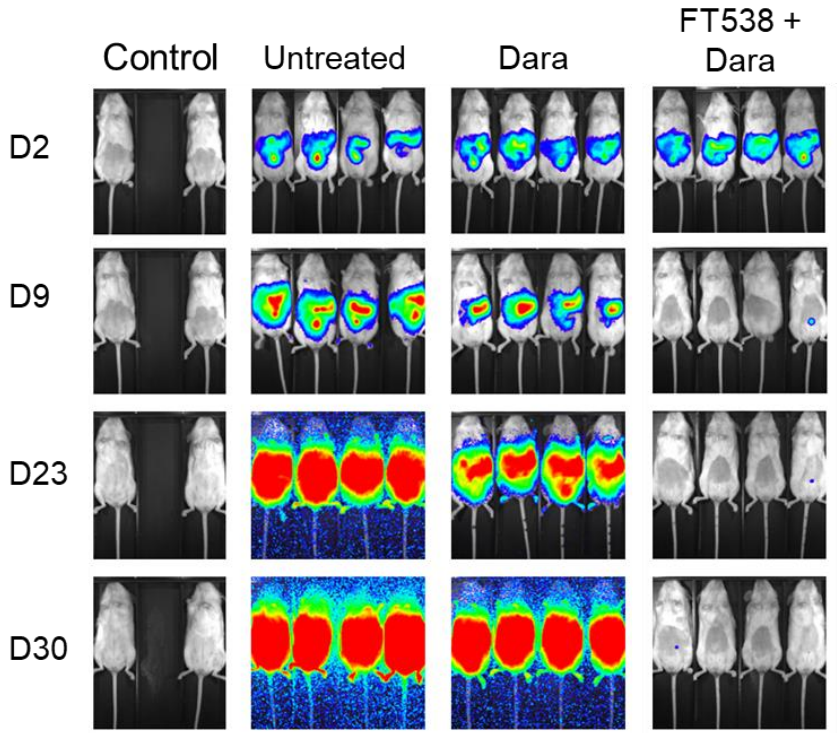
FT538: Off-the-Shelf hnCD16 CD38- NK Cell Product Candidate

Enhancing Multiple Mechanisms of Innate Immunity

Enhanced NK Cell Persistence & Metabolic Fitness



Enhanced NK Cell ADCC



First patient dosed following IND Approval for AML as Monotherapy and in Combination with daratumumab for MM

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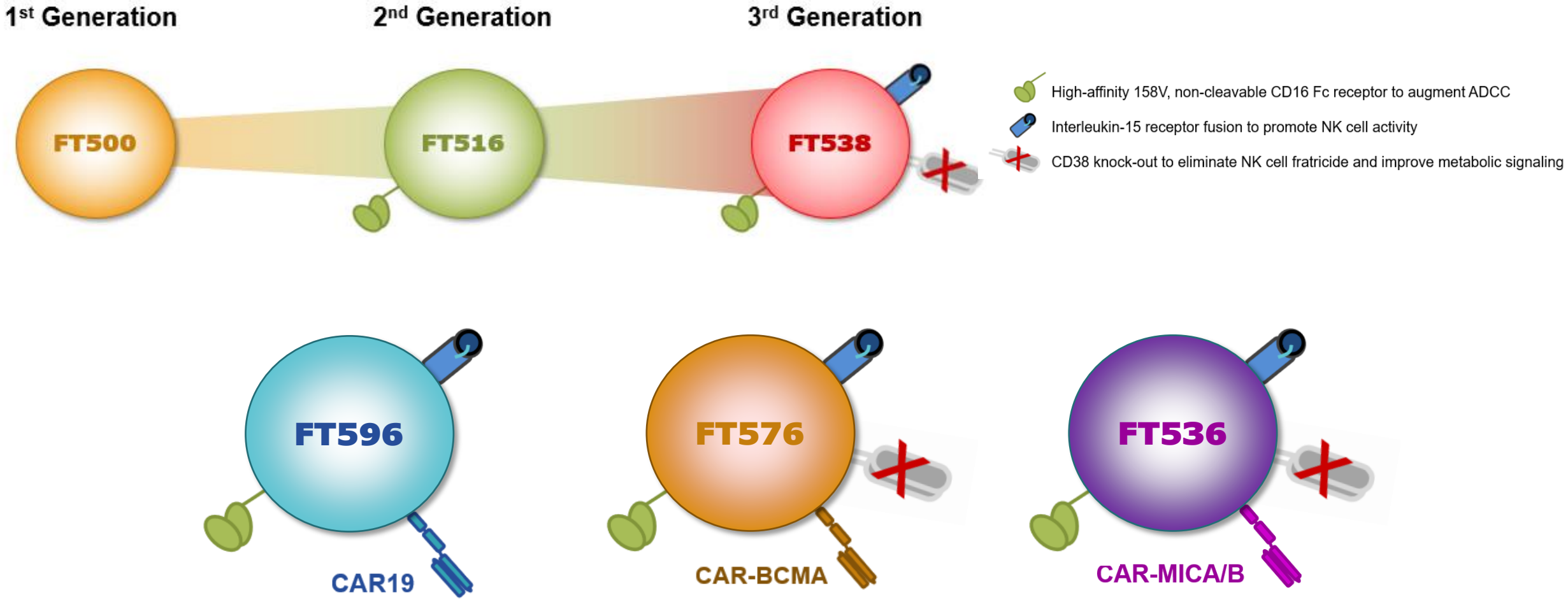
Off-the-Shelf, iPSC-derived NK Cell Cancer Immunotherapy Franchise

Multi-antigen Targeting: CAR + Enhanced Innate Immunity



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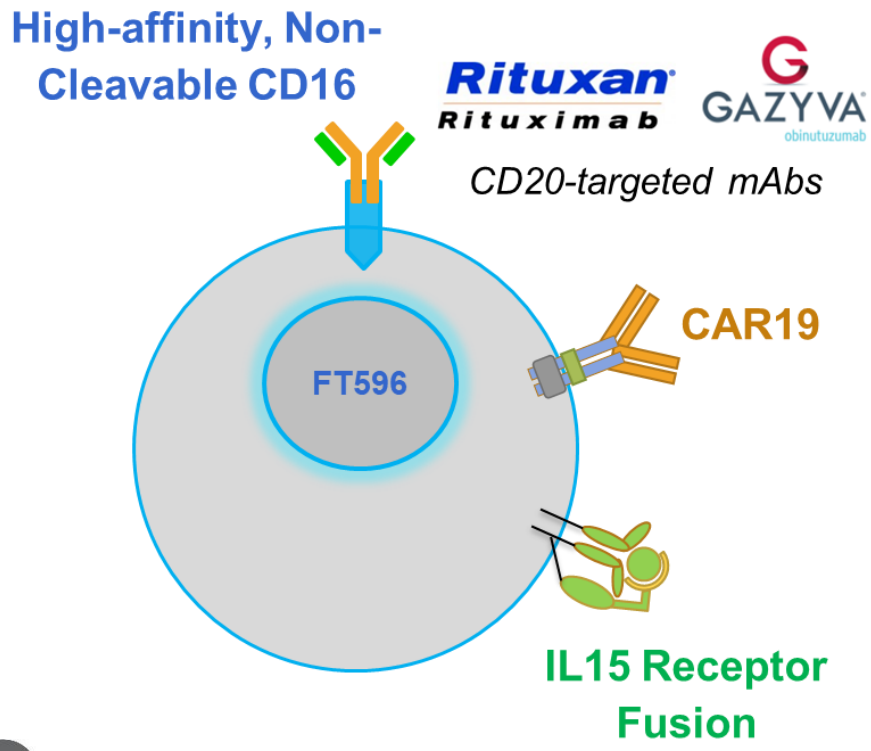
FT596: Multi-antigen Targeted CAR19 NK Cell Product Candidate

Potential Best-in-Class Cell-based Cancer Immunotherapy for B-cell Malignancies

First-ever Cell Therapy Engineered with Three Active Anti-tumor Modalities Cleared for U.S. Clinical Investigation



hnCD16: High-affinity 158V, non-cleavable CD16 Fc receptor that has been modified to augment antibody-dependent cellular cytotoxicity by preventing CD16 down-regulation and enhancing CD16 binding to tumor-targeting antibodies

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CAR19: Chimeric antigen receptor optimized for NK cell biology, which contains a NKG2D transmembrane domain, a 2B4 co-stimulatory domain and a CD3-zeta signaling domain, that targets B-cell antigen CD19

IL-15RF: Interleukin-15 receptor fusion, a potent cytokine complex that promotes survival, proliferation and trans-activation of NK cells and CD8 T cells

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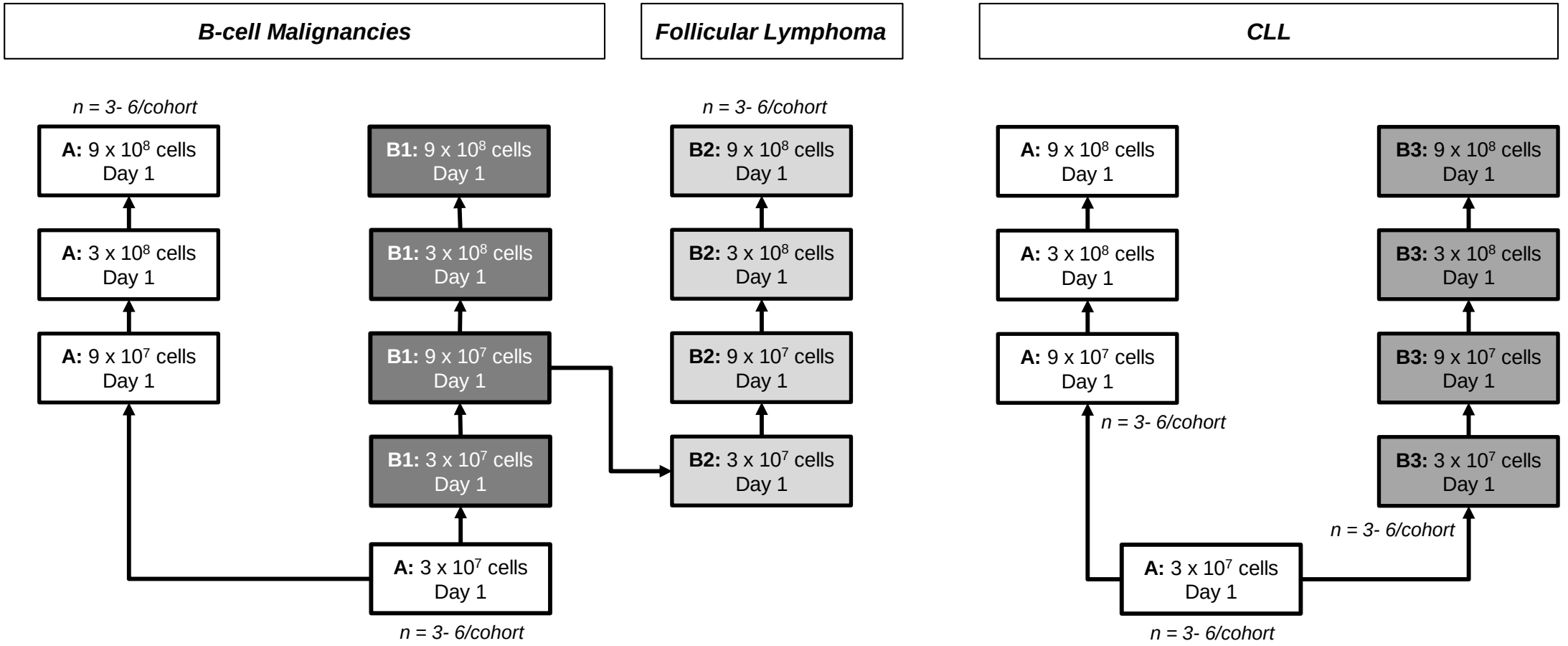
FT596: Phase 1 Dose Escalation Schema

Parallel Escalation of Single-dose Mono and mAb Combo in BCL and CLL



Regimen A: FT596 Mono

Regimen B1: FT596 + Rituximab

Regimen B2: FT596 + Obinutuzumab (BCL)

Regimen B3: FT596 + Obinutuzumab (CLL)

Fate THERAPEUTICS

FT596: First Clinical Observations

Phase 1 Monotherapy in Relapsed / Refractory DLBCL

Patient 1 (single-dose of 30M FT596 cells as a monotherapy)

- Treated with 4+ lines of therapy for relapsed / refractory diffuse large B-cell lymphoma (DLBCL)
- Most recently had disease progression following CD19-targeting CAR T-cell therapy (Yescarta)
- Day 29 protocol-defined response assessment = Progressive Disease (PD)

Patient 2 (single-dose of 30M FT596 cells as a monotherapy)

- Treated with 7+ lines of therapy for relapsed / refractory diffuse large B-cell lymphoma (DLBCL)
- Most recently refractory to experimental combo therapy comprised of expanded allogeneic NK cells, IL-2, and rituximab
- Day 29 protocol-defined response assessment = Partial Response (PR)
  - 73% reduction standardized uptake value (SUV) and a 52% reduction in tumor size by PET-CT
  - Peak FT596 cell expansion detected at Day 8 (~1800 transgene copies / µg DNA)
  - Potential to re-treat with FDA consent
- Administered a second cycle of lympho-conditioning followed by single dose of 30M cells

No events of cytokine release syndrome, neurotoxicity, or graft-versus-host disease were reported by investigators in either patient

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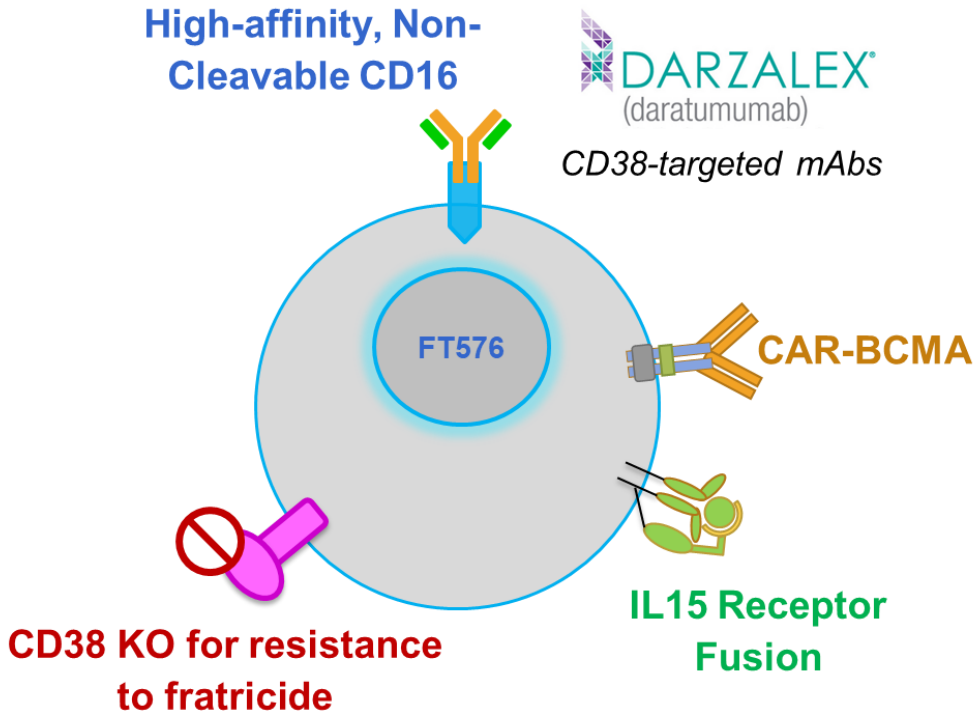
FT576: Multi-Targeted CAR-BCMA NK Cell Product Candidate

Potential Best-in-Class Cell-based Cancer Immunotherapy for Multiple Myeloma

Engineered with Four Anti-tumor Modalities for Multiple Myeloma



hnCD16: High-affinity 158V, non-cleavable CD16 Fc receptor that has been modified to augment antibody-dependent cellular cytotoxicity by preventing CD16 down-regulation and enhancing CD16 binding to tumor-targeting antibodies

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CAR-BCMA: Chimeric antigen receptor optimized for NK cell biology, which contains a NKG2D transmembrane domain, a 2B4 co-stimulatory domain and a CD3-zeta signaling domain, that targets B-cell maturation antigen

---

IL-15RF: Interleukin-15 receptor fusion, a potent cytokine complex that promotes survival, proliferation and trans-activation of NK cells and CD8 T cells

---

CD38 KO: Deletion of CD38 to eliminate anti-CD38 antibody mediated NK cell fratricide. Also shown to improve NK cell biology and potency through optimization of metabolic signaling

IND filing anticipated by YE 2020

Fate THERAPEUTICS

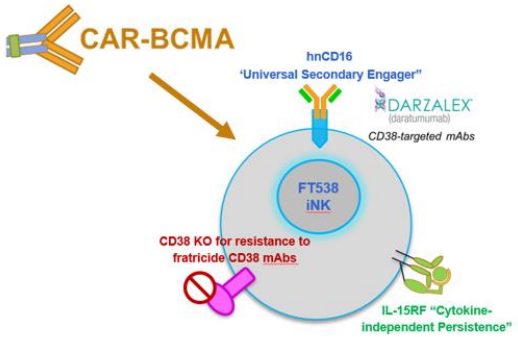
FT576: Multi-Targeted CAR-BCMA NK Cell Product Candidate

BCMA Binding Domain with Differentiated Activation Threshold

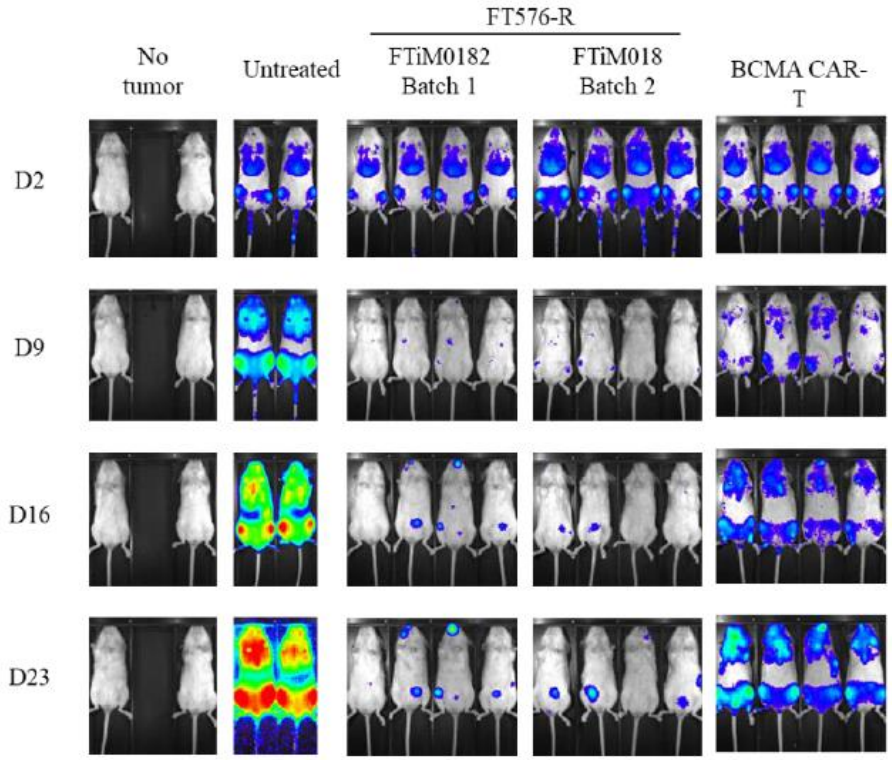
Molecular Therapy
Original Article

CAR T Cells with Enhanced Sensitivity to B Cell Maturation Antigen for the Targeting of B Cell Non-Hodgkin's Lymphoma and Multiple Myeloma

Julia Bluhm,[1] Elisa Kieback,[1] Stephen F. Marino,[2] Felix Oden,[1] Jörg Westermann,[3] Markus Chmielewski,[4] Hinrich Abken,[4] Wolfgang Uckert,[1] Uta E. Höpken,[1] and Armin Rehm[1]



- ✓ Validated CAR BCMA in diffuse large B cell lymphoma, follicular lymphoma, mantle cell lymphoma, and chronic lymphocytic leukemia
- ✓ BCMA CAR T cells triggered target cell lysis with an activation threshold in the range of 100 BCMA molecules, which allowed for an efficient eradication of B-NHL cells in vitro and in vivo
- ✓ Potential novel therapeutic option for patients where BCMA is expressed at low abundance or where anti-CD19 immunotherapies have failed due to antigen loss

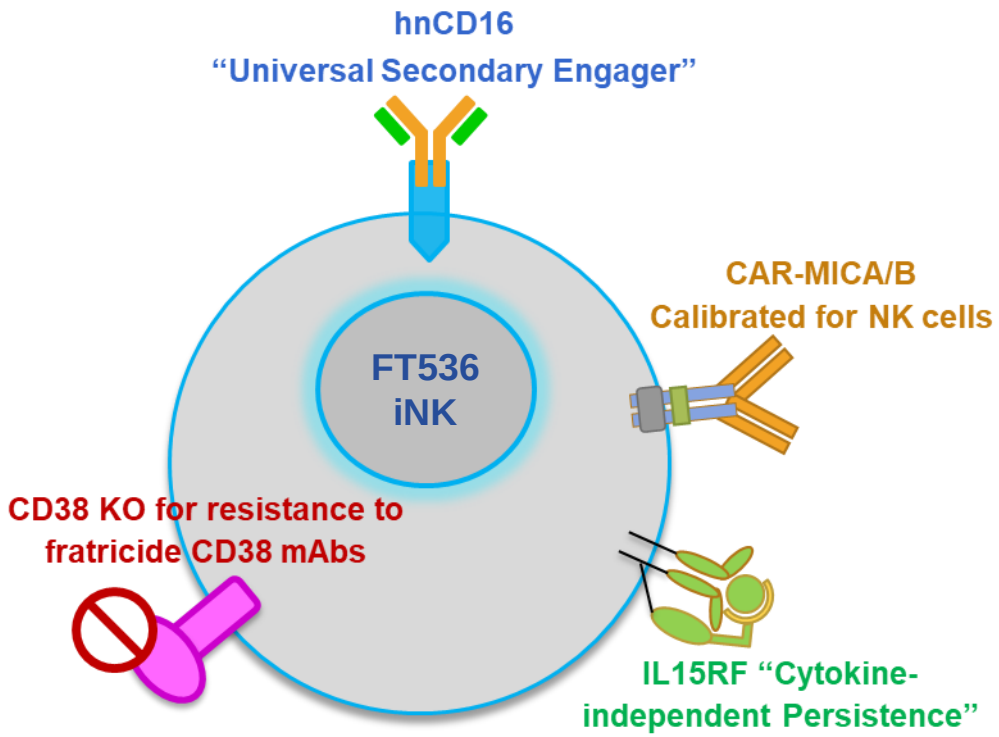


MM.1S-Luc cells

FT536: Multi-Targeted CAR-MICA/B NK Cell Product Candidate

Pan-tumor Targeting Strategy for Solid Tumors

Engineered with Four Anti-tumor Modalities for Solid Tumors



hnCD16: High-affinity 158V, non-cleavable CD16 Fc receptor that has been modified to augment antibody-dependent cellular cytotoxicity by preventing CD16 down-regulation and enhancing CD16 binding to tumor-targeting antibodies

---

CAR-MICA/B: Chimeric antigen receptor optimized for NK cell biology, which contains a NKG2D transmembrane domain, a 2B4 co-stimulatory domain and a CD3-zeta signaling domain, the conserved α3 domain of MICA/B

IL-15RF: Interleukin-15 receptor fusion, a potent cytokine complex that promotes survival, proliferation and trans-activation of NK cells and CD8 T cells

---

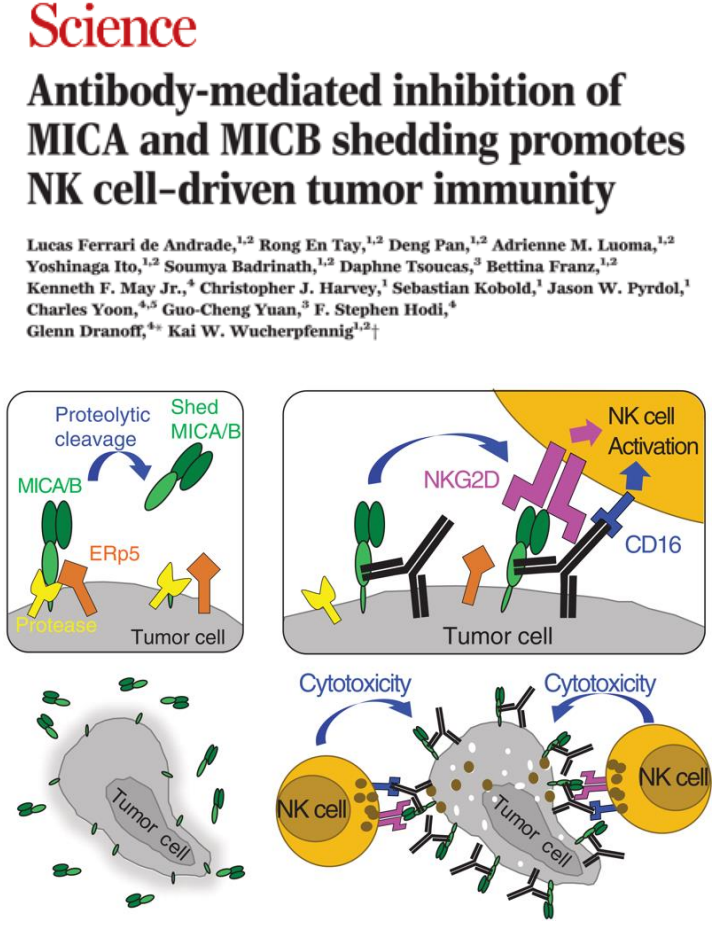
CD38 KO: Deletion of CD38 to eliminate anti-CD38 antibody mediated NK cell fratricide. Also shown to improve NK cell biology and potency through optimization of metabolic signaling

IND filing anticipated in 2021

Fate THERAPEUTICS

FT536: Multi-Targeted CAR-MICA/B NK Cell Product Candidate

Novel Pan-tumor Targeting Strategy for Solid Tumors



- ✓ MICA/B are induced by cellular stress and transformation, and their expression has been reported for many cancer types
- ✓ NKG2D, an activating receptor expressed on NK and T cells, targets the membrane-distal α1 and α2 domains of MICA/B, activating a potent cytotoxic response
- ✓ Advanced cancer cells frequently evade immune cell recognition by proteolytic shedding of the α1 and α2 domains of MICA/B, which can significantly reduce NKG2D function and the cytolytic activity
- ✓ Therapeutic antibodies targeting the membrane-proximal α3 domain inhibited MICA/B shedding, resulting in a substantial increase in the cell surface density of MICA/B and restoration of immune cell-mediated tumor immunity
- ✓ We have developed a novel CAR targeting the conserved α3 domain of MICA/B (CAR-MICA/B)
- ✓ By uniquely targeting the α3 domain, FT536 prevents shedding and directly targets one of the most highly-expressed stress ligands on a broad range of tumors

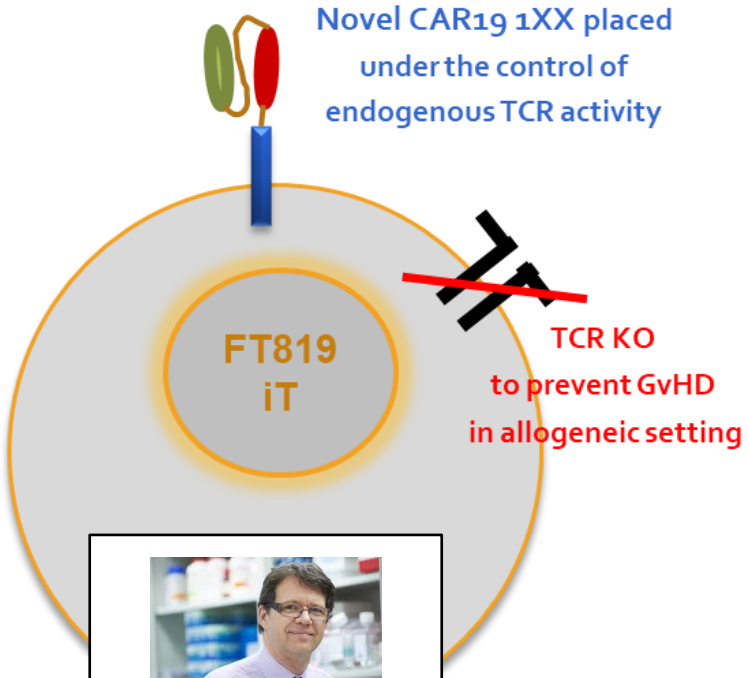
Fate THERAPEUTICS

Dana-Farber Cancer Institute

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



Dr. Michel Sadelain, MD, PhD
Director, Center for Cell Engineering
Memorial Sloan Kettering Cancer Center

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

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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

---

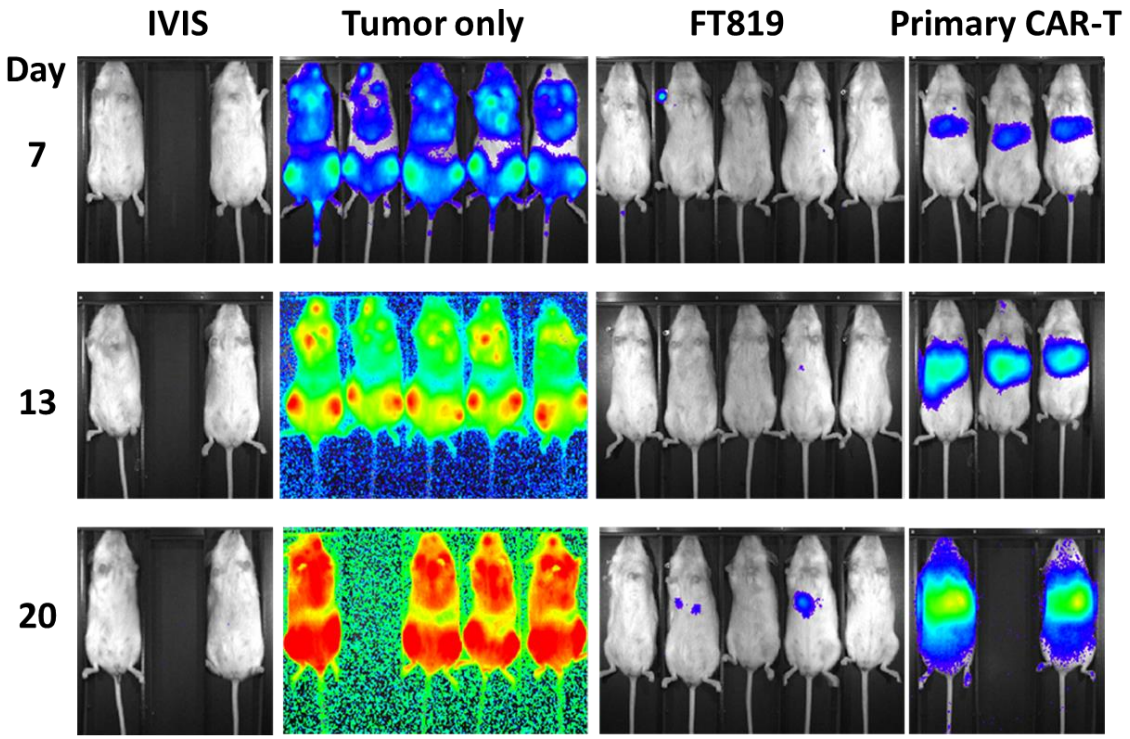
TCR null: Bi-allelic disruption of TRAC at the clonal level for complete removal of TCR expression and the elimination for the possibility of GvHD in allogeneic setting

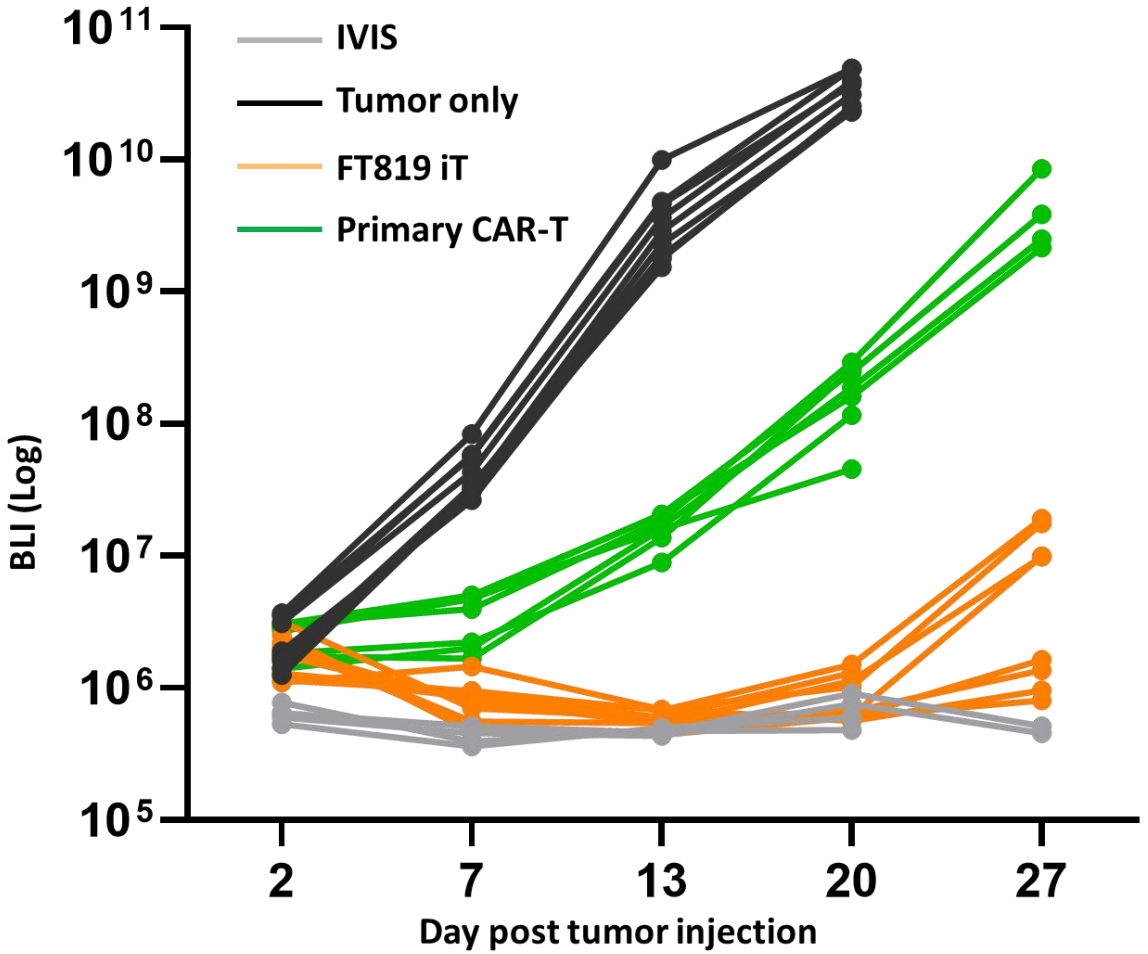
IND Allowed by FDA for BCL, CLL and pre-B ALL

Fate THERAPEUTICS

FT819: Enhanced Tumor Control vs. Primary CAR T Cells

Disseminated Xenograft Model of Lymphoblastic Leukemia





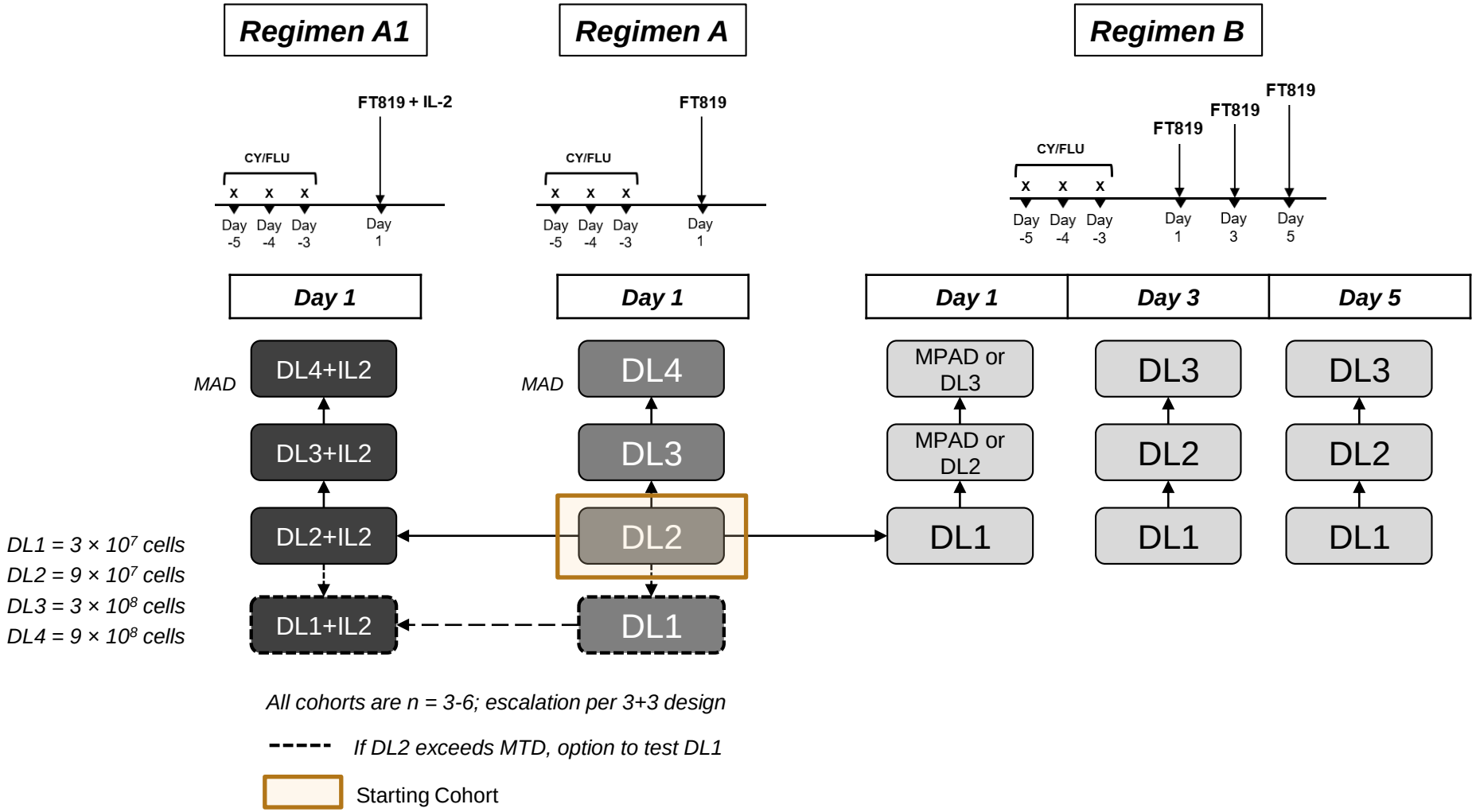
Fate THERAPEUTICS

Memorial Sloan Kettering Cancer Center

FT819: Phase I Dose Escalation Schema

Concurrent and Independent Dose Escalation in BCL, CLL and pre-B ALL

3 Indications x 3 Treatment Regimens



All cohorts are n = 3-6; escalation per 3+3 design

If DL2 exceeds MTD, option to test DL1

Starting Cohort

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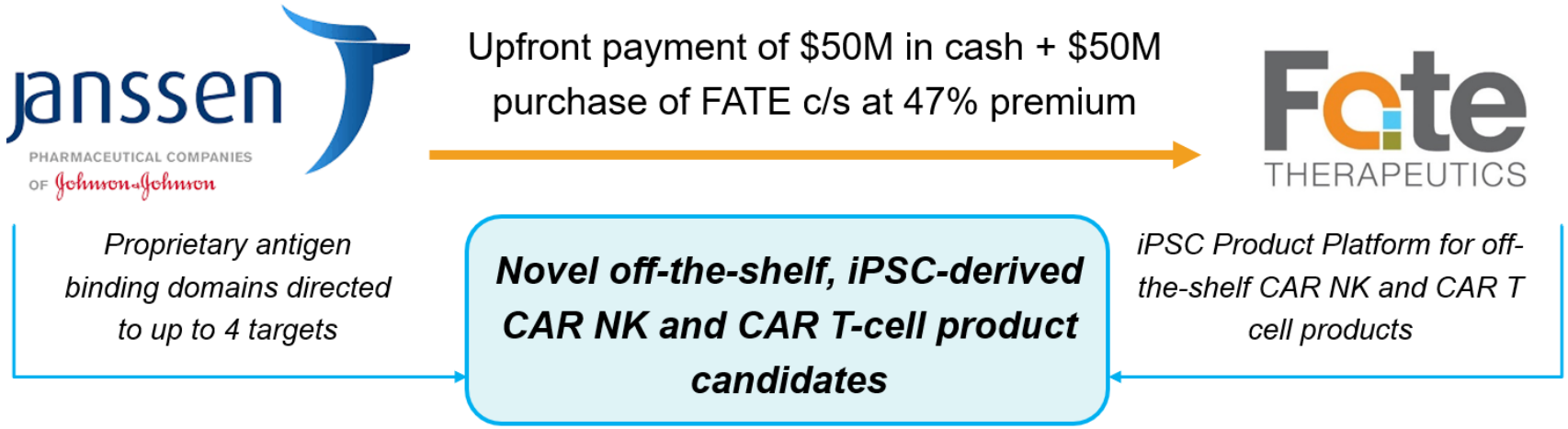
Janssen Cancer Immunotherapy Collaboration

Off-the-shelf, iPSC-derived CAR NK Cell and CAR T-Cell Collaboration



- FATE to incorporate Janssen proprietary antigen binding domains into iPSC-derived CAR NK- and CAR T-cells
  - Up to 4 antigen targets, including targets expressed on hematologic malignancies and solid tumors
- FATE to preclinically develop product candidates to IND submission
  - Janssen to pay for all collaboration costs
- Janssen to conduct global clinical development and commercialization
  - FATE retains a right to opt-in to 50-50 commercialization arrangement in U.S.
  - FATE primarily responsible for clinical and commercial manufacture
- FATE eligible to receive up to $3.0BN in milestones ($1.8BN in dev / reg; $1.2BN in commercial) plus double-digit royalties on commercial sales

Fate THERAPEUTICS

iPSC Product Platform

Industry-Leading Off-the-Shelf Cell-based Cancer Immunotherapy Pipeline

	Engineered Mechanisms	AML	NHL / CLL	MM	Solid Tumors
FT500	Innate				●
FT516	+ hnCD16	●	●		●
FT538	+ hnCD16 + IL15RF + CD38KO	●	●	●	●
FT596	+ hnCD16 + IL15RF **+ CAR19**		●		
FT576	+ hnCD16 + IL15RF + CD38KO **+ CAR-BCMA**			●	
FT536	+ hnCD16 + IL15RF + CD38KO **+ CAR-MICA/B**				●
FT819	Adaptive + CAR19		●		
Janssen	Innate and Adaptive CAR [1]		●		●
Ono	Adaptive CAR [2]		●		●

[1] Includes CAR NK and T-cells directed to up to 4 antigen targets.

[2] Includes CAR T-cells directed to up to 2 antigen targets.

Fate THERAPEUTICS

Financial Summary

As of September 30, 2020

Three Months Ended September 30, 2020	
Revenue	$7.6M
Operating Expense, Adjusted [1]	$31.2M
Cash & Cash Equivalents	$502M
Employees	250+
Total Shares Outstanding [2]	100.9M

[1] Excludes non-cash stock-based compensation expense of $7.8M.

[2] Includes 14.0M shares of common stock from conversion of non-voting preferred stock.

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Better Cells For Better Therapies™