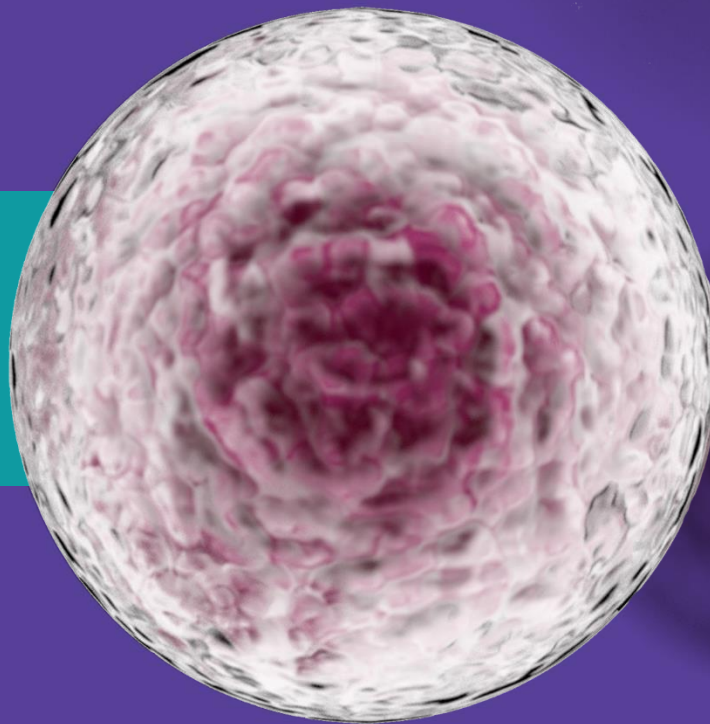




celularity



THE NEXT EVOLUTION IN CELLULAR MEDICINE

October 2021

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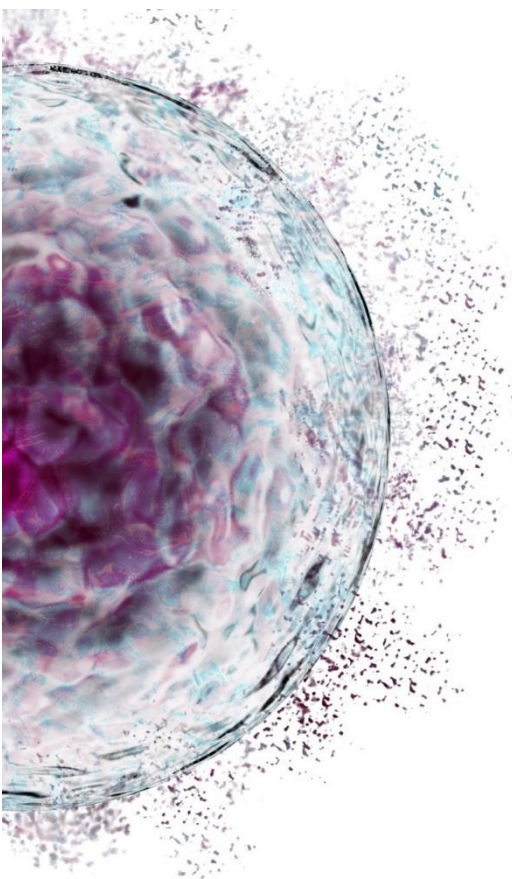
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CELULARITY'S VISION



To deliver innovative off-the-shelf allogeneic cellular medicines for patients with high unmet need at unparalleled scale, quality and cost.



Lead the evolution in placental-derived therapeutics:

advance the discovery of the placenta as a limitless, renewable source of neonatal cells, which are biologically preferred to cells from adult bone marrow or peripheral blood.

Target large markets with high unmet need:

broad therapeutic application including cancer, infectious, and degenerative diseases.

Develop safe and effective therapies:

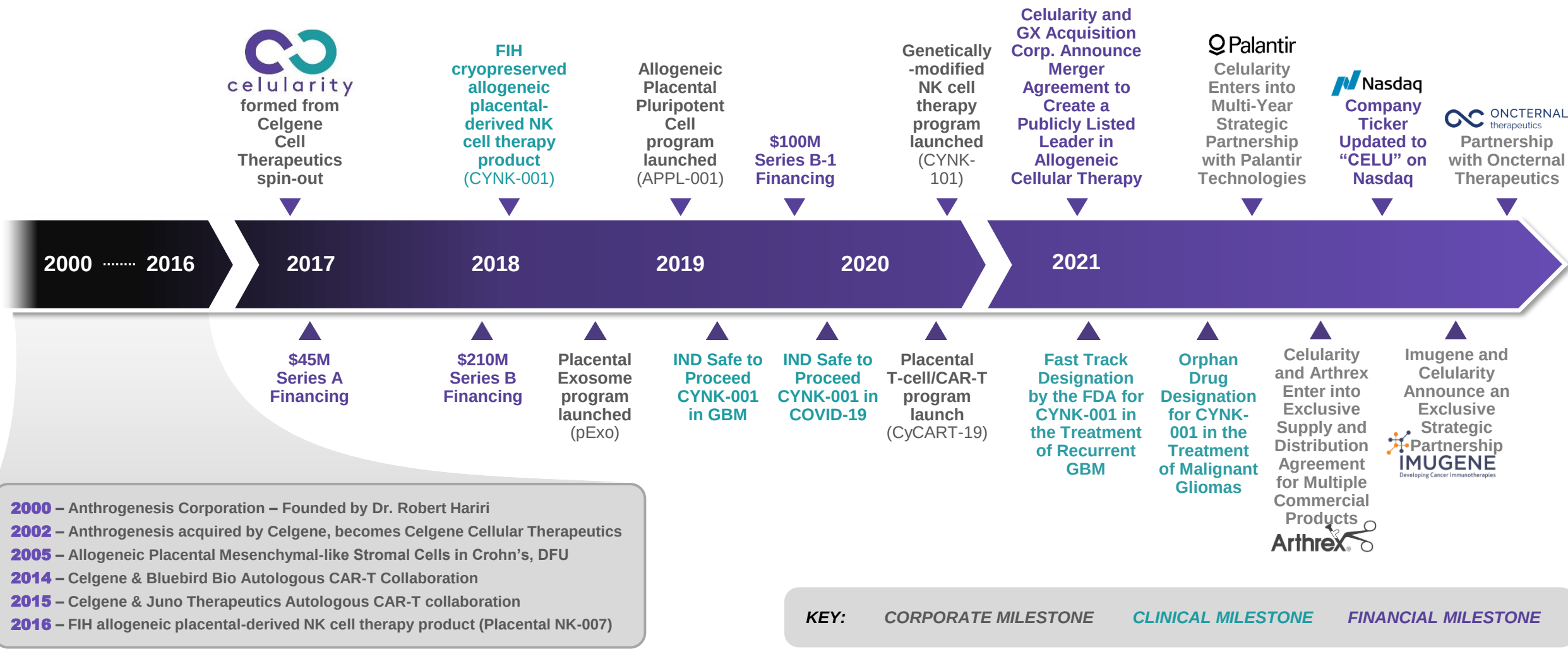
leverage inherent advantages of placental-derived cells to produce uniform, scalable and optimized cellular medicines.

Deliver off-the-shelf, affordable therapies:

cryopreserved allogeneic cellular medicines and biomaterial products that clinicians can access on demand and off-the-shelf, enabling repeat dosing/multiple cycles as required in an outpatient setting.

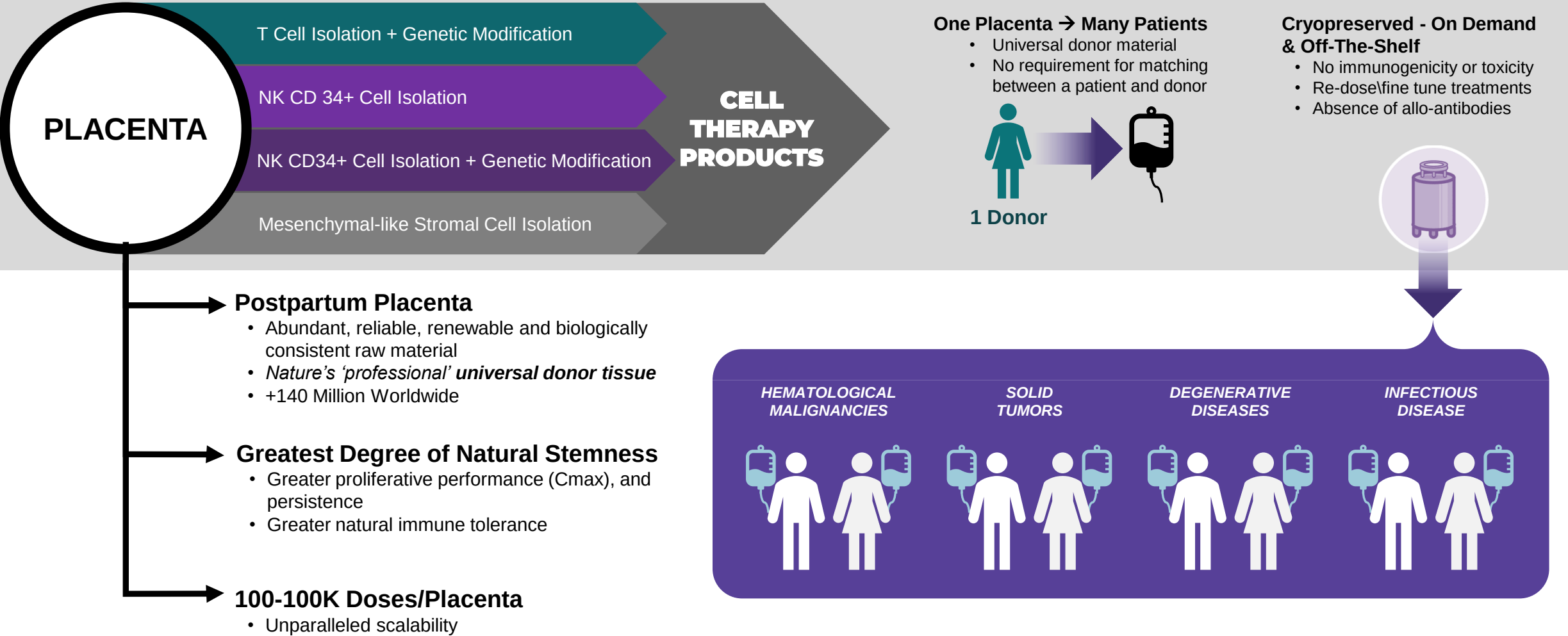
CELULARITY: COMPANY HISTORY

Celgene Spin-out (2017) Leveraging 20+ Years of Cellular Therapeutics Innovation



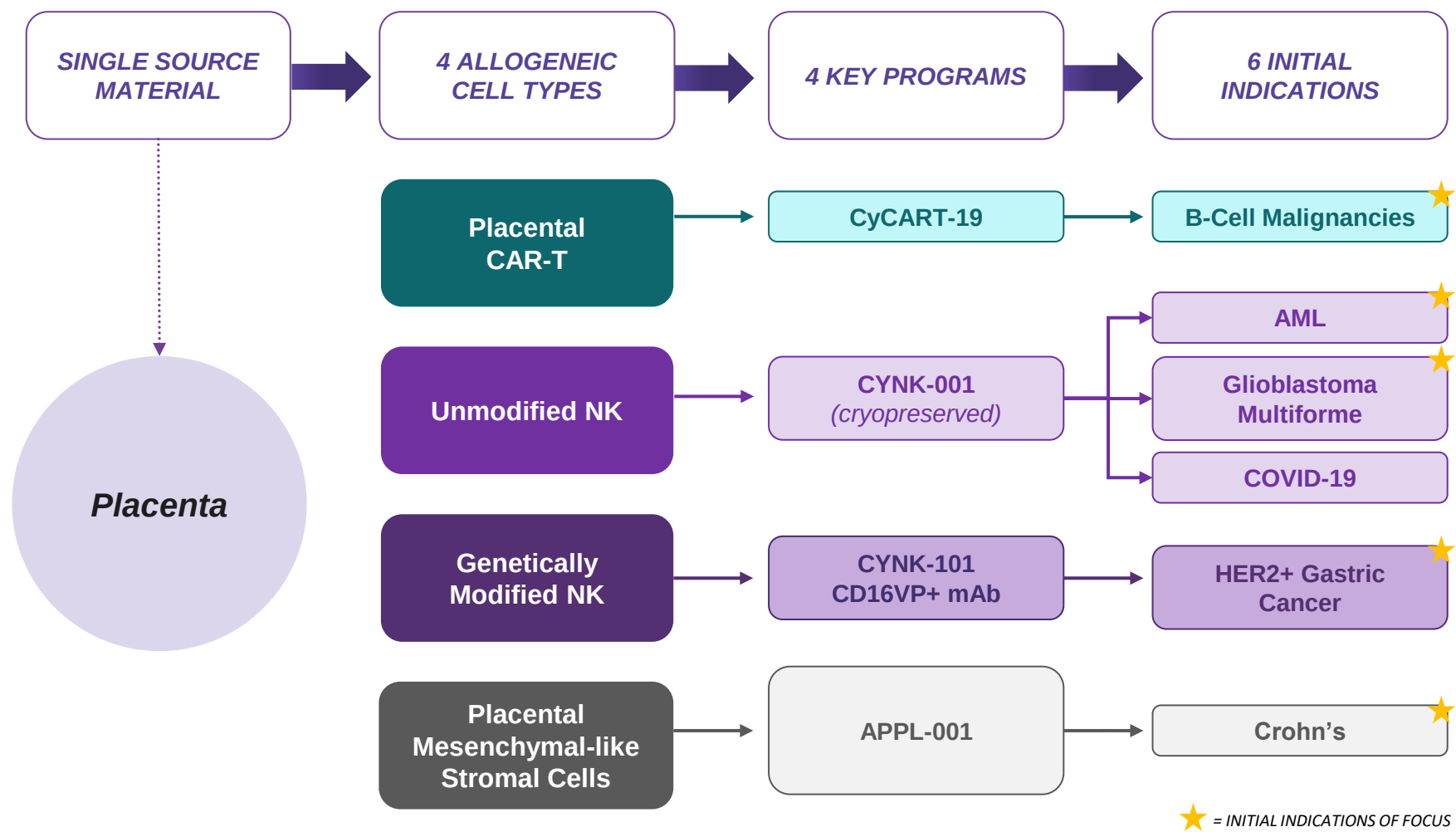
CELULARITY PLACENTAL-DERIVED PRODUCT PLATFORM

Capitalizing on the Benefits of Placental-Derived Cells to Target Multiple Diseases



SINGLE-SOURCE, PLACENTA-BASED PLATFORM DRIVING BROAD PIPELINE

4 Key Cell Types Driving 6 Clinical Indications and Potential for Broad Expansion



MANUFACTURING >> Purpose-built, fully integrated manufacturing facility; rapidly scalable, end-to-end supply chain

FUTURE OPPORTUNITIES AND INDICATIONS

Potential Future CAR Constructs for Oncological Indications

CD22	CD123	BCMA
GD2	Her2	

Myelodysplastic Syndrome (MDS)	Infectious Disease (ID)
--------------------------------	-------------------------

Potential Future Monoclonal Antibodies for Combination Oncology Therapies

Erbix	Rituxan
Daratumumab	Durvalumab

ARDS	Pulmonary Sarcoidosis
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MANUFACTURING OVERVIEW

Fully Integrated, Purpose-Built Commercial Scale Manufacturing Site Including Translational Research & Biorepository



PURPOSE BUILT FACILITY FOR COMMERCIAL-SCALE CELLULAR THERAPEUTIC MANUFACTURING

- \$80M investment in cGMP/cGTP manufacturing
- Enables greater control, efficiency and optimization than is achievable by outsourcing to contract manufacturing organizations (CMOs) alone

STAFFED BY OVER 100 HIGHLY SPECIALIZED SCIENTISTS, ENGINEERS & TECHNICIANS.

- Optimized, product-specific CMC, QA/QC and manufacturing processes accelerate product development, production and commercialization
- Over 2 decades of experience with source material procurement

COMMERCIAL SCALE, GMP-READY

- 9 Grade C/ISO 7 suites
- 6 Grade D/ISO 8 labs
- Dedicated translational research labs

Celularity benefits from Celgene's 20 year+ investment in developing the technologies and capabilities required to manufacture cellular products at scale with consistent and reliable quality

OUR EXPERIENCED LEADERSHIP TEAM

With Deep Expertise in Cell Therapy



Executive Leadership Team



Robert J. Hariri, MD, PhD
Founder, Chairman
& CEO



Andrew Pecora, MD, FACP, CPE
President



John Haines
Chief Operating Officer



David Beers
Chief Financial Officer



Bradley Glover, PhD
Chief Technology Officer



Anne Jones, PhD
Chief Business Officer



Beloo Mirakhur, MD, PhD
EVP, Clinical Development



Dr. Stephen Brigido
President, Degenerative Diseases

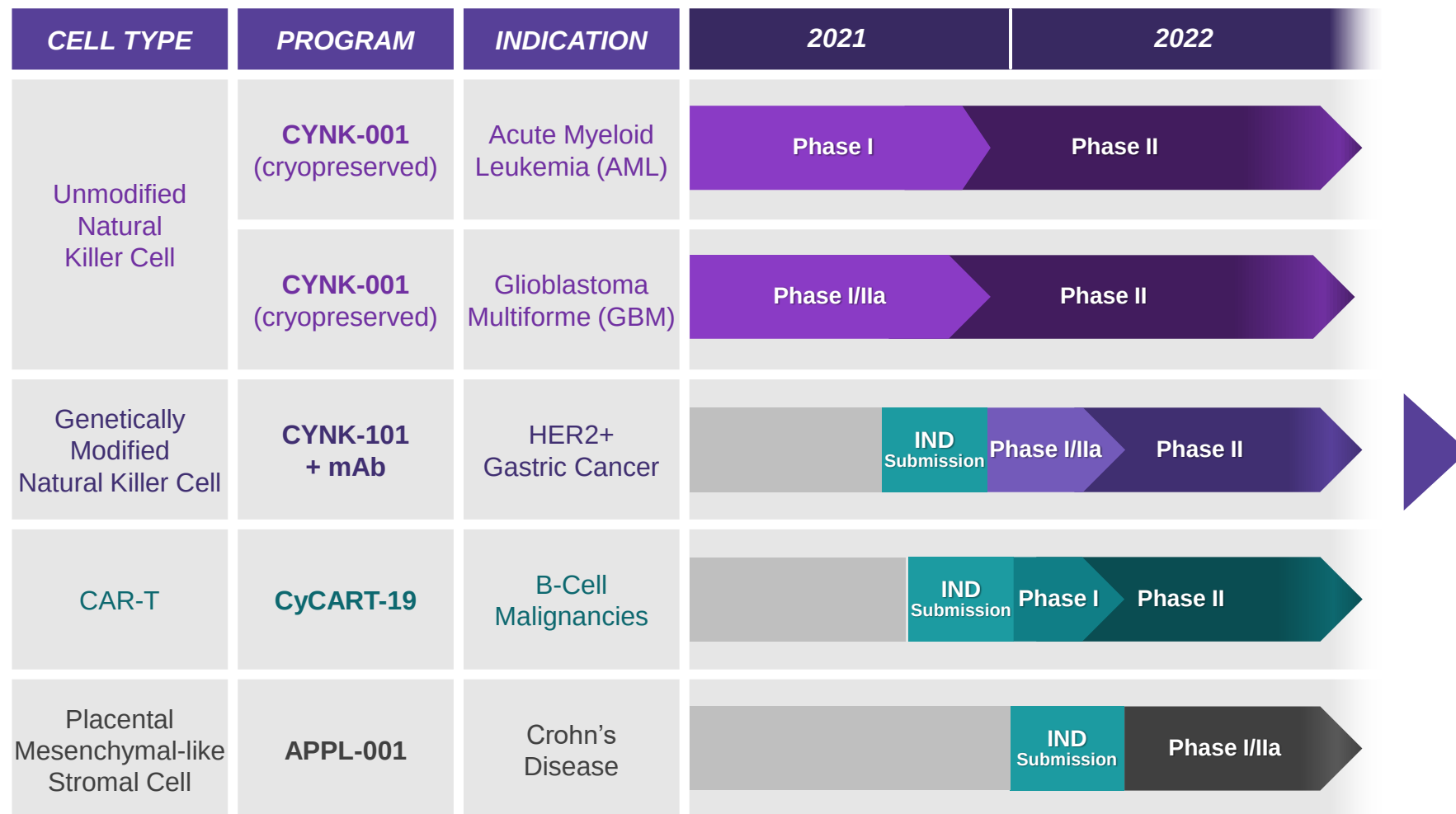


Keary Dunn, Esq.
EVP & General Counsel



PIPELINE

Overview



2 Upcoming IND Submissions (2021E) & 5 Clinical Trials by end of 2021

Program Milestones

CYNK-001

- 2H21: Dose Selection & Initiation of Expansion Cohorts (AML)
- 2H21: Establish Phase II Dose (GBM)

CYNK-101

- 2H21: IND Submission
- 2H21: Phase I/IIa Study Start

CyCART-19

- 2H21: IND Submission Expected
- 1H22: Phase I Study Start

APPL-001

- 1H22: Phase I/IIa Study Start

STEMNESS: The Placental Advantage

At the core of Celularity's approach is the innate stemness of its starting material



Greatest Proliferative Potential and Sustained Activity:

Placenta-derived pluripotent stem cells have the highest natural ability to replicate while maintaining their activity, which could overcome the challenge of cell exhaustion.

Extended Persistence:

As nature's universal donor tissues, placental-derived pluripotent stem cells can be administered off-the-shelf with little or no modification and potentially persist longer in patients through their ability to avoid immune detection.

Flexible Engineering:

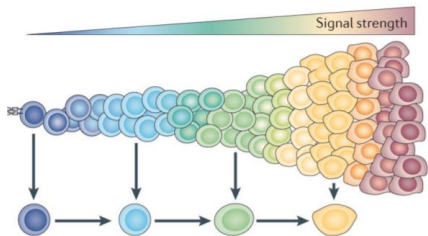
By starting with cells with high levels of innate stemness, Celularity has the opportunity for extensive genetic modifications focused on improving and directing the activity of its cellular therapies.

Superior Scalability and Economics:

Ethically sourced and screened, a single placenta can produce up to 100,000 doses of therapies through a manufacturing process that is highly efficient, modular and reproducible.

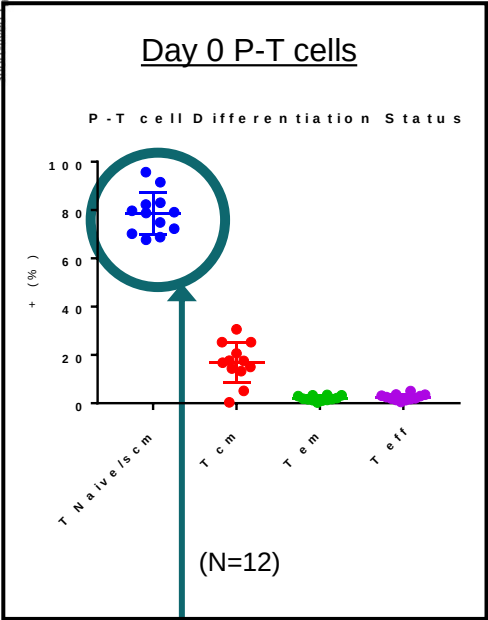


Stem Cell Memory = Greatest Proliferative Potential, Persistence and Survival Benefit

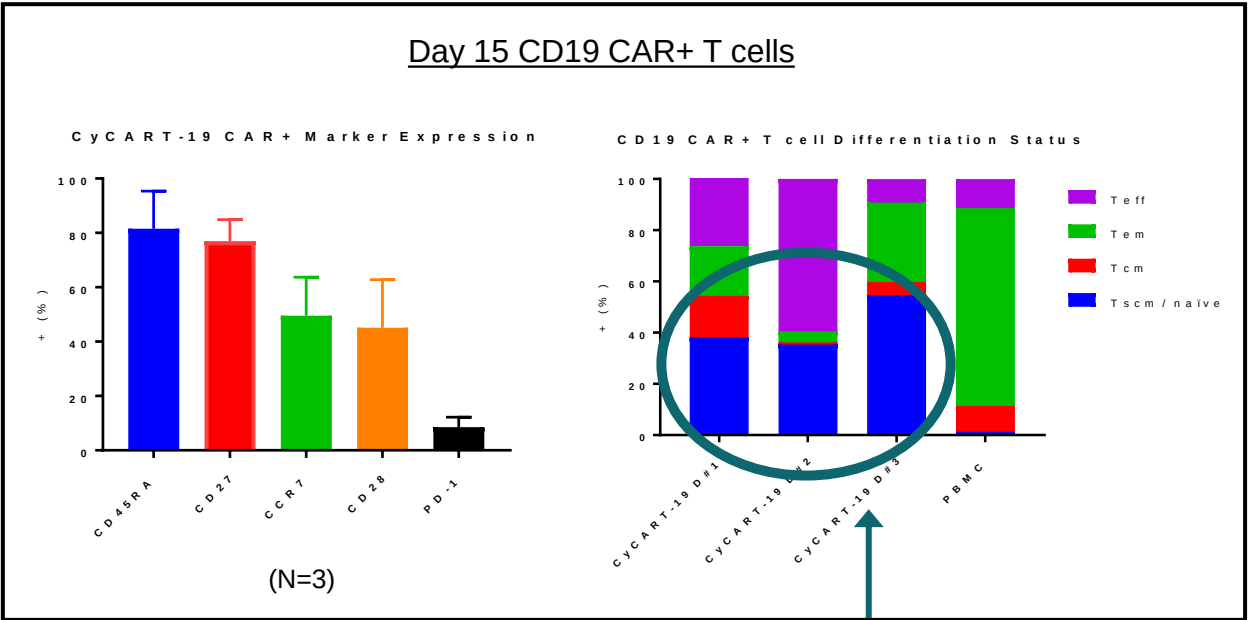


	Marker	Naïve	Stem Cell Memory	Central Memory	Effector Memory
Phenotype	CD45RA	+	+	-	+/-
	CD27	+++	+++	++	+/-
	CCR7	+++	+++	++	-
	CD28	++	+++	+++	+/-
Function	Telomere	+++	+++	++	+
	Self-renewal	+	+++	++	+
	IFN-γ	-	+	++	+++
	IL-2	-	++	+++	+/-
	Cytotoxicity	-	+/-	+	+++

Adopted from Gattinoni *et al.* Nature Reviews Cancer 2012

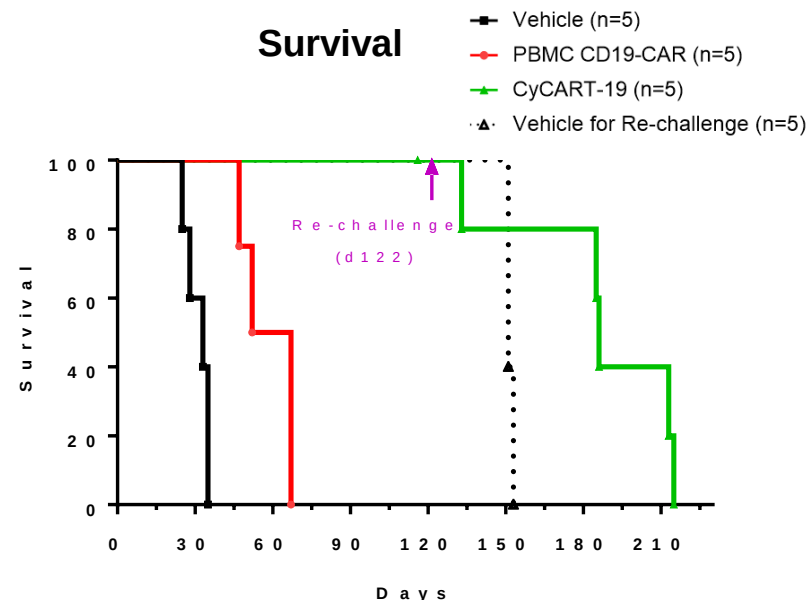
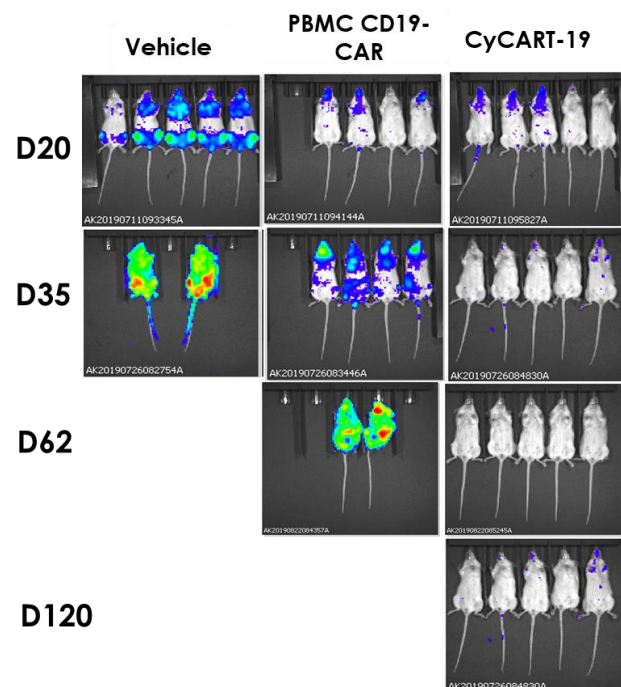


Placental T cells consist mostly of T stem cell memory (Tscm) cells (stemness)

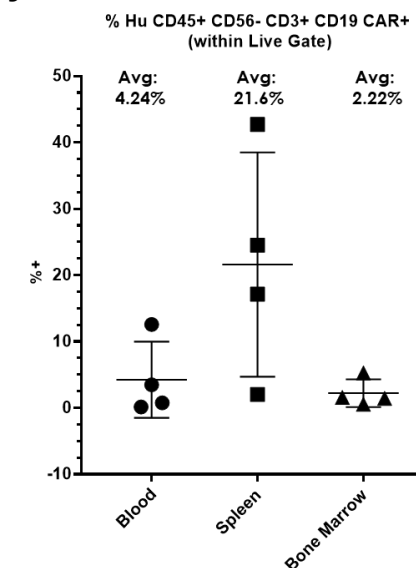


High proportion Tscm cells remain in CyCART-19 post expansion

Enhanced Efficacy & Persistence, Prolonged Immune Attack upon Tumor Rechallenge



CyCART: Durable Persistence

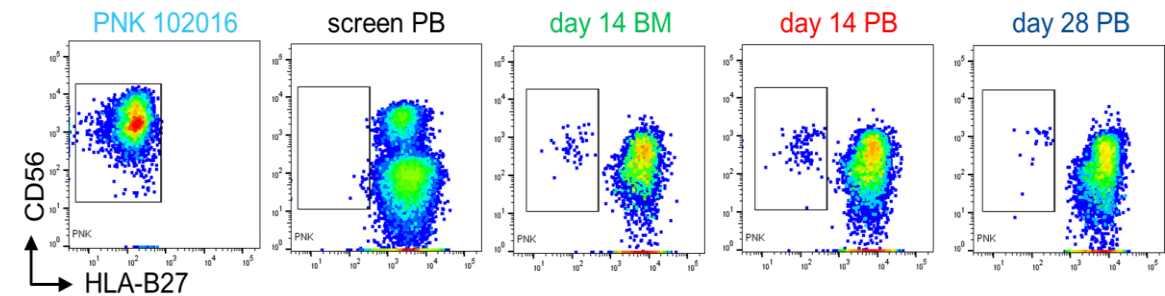


- CyCART-19 demonstrates **significantly reduced tumor burden and survival benefit** compared to adult blood-derived CD19 CAR-T cells
- CyCART-19 **eliminated tumor** and resulted in **100% survival** out to 120 days
- CyCART-19 “**memory**” characteristics demonstrated via:
 - **Extended survival out to 215 days** upon tumor re-challenge on Day 122
 - **Differentiated persistence** at end of study to elicit **prolonged antitumor** activities

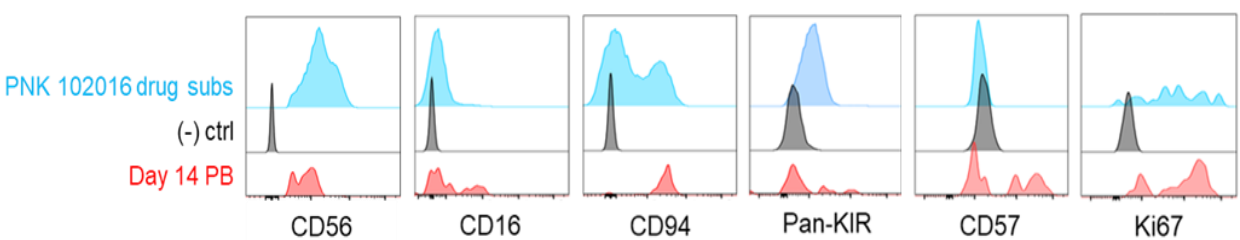
Persistence, Maturation and Proliferation with Absence of Allo-HLA Antibodies



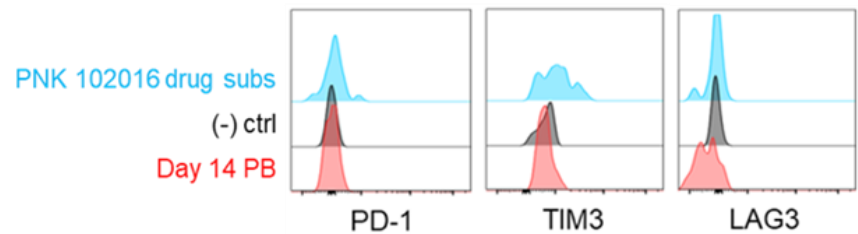
PNK-007 demonstrated **persistence up to 28 days** (mean=11days)



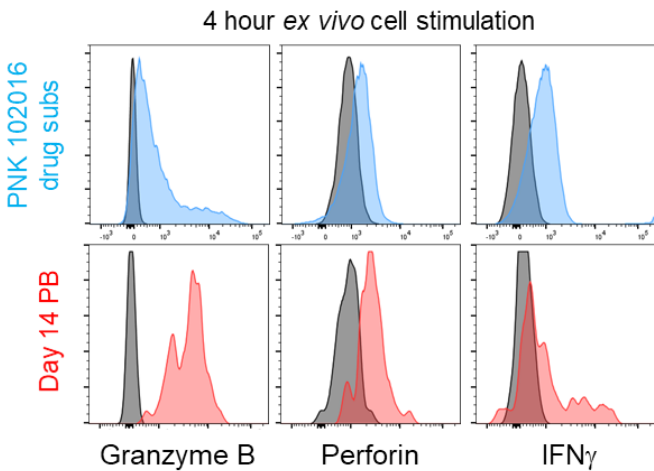
Persistent PNK-007 cells **matured and proliferated**



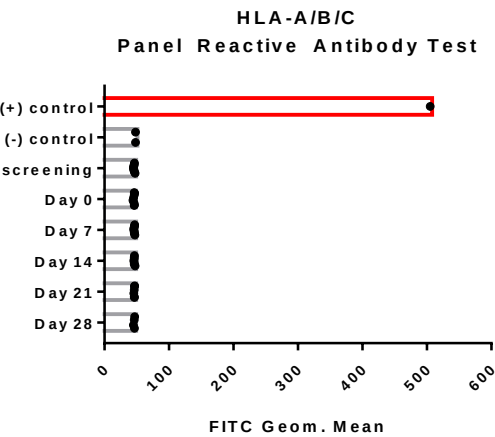
No detectable exhaustion on PNK-007 cells



PNK-007 demonstrated **effector function** post infusion



Absence of allo-HLA antibodies in all subjects



CYNK-001

AML & GBM



CYNK-001(unmodified NK cellular therapy)

Overview

RATIONALE

- NK cells are natural immune cells that eradicate both cancer and virus-infected cells
 - Key mediators of antibody-dependent cellular cytotoxicity (ADCC)
- Placental-derived NK cells exhibit:
 - distinct, maturation and activation states
 - an immature phenotype
 - longer telomere length in comparison to PB NK cells, which suggests **high in-vivo proliferation and persistence**

KEY HIGHLIGHTS

CYNK-001 (unmodified NK cellular therapy)

- Preclinical data support anticancer activity against a range of hematological malignancies and solid tumors.
- Phase 1 study in R/R AML showed early signs of clinical benefit and a positive safety profile

CLINICAL PLAN

- Dose Selection & Initiation of Expansion Cohorts (AML) in 2H 2021
- Phase 1 study in adults with Recurrent Glioblastoma Multiforme
- Establish Phase II Dose (GBM) in 2H 2021

MANUFACTURING COMPLEXITY	NK CELL THERAPIES		
	Cell Therapy Technology Scorecard	ADULT DONOR DERIVED	CELULARITY CYNK-001 & CYNK-101
	Source Procurement Non-invasive Collection / Reliable Procurement	✓	✓
	Lower COGs Standardized, Scalable Manufacturing	✓	✓
	Starting Material Consistent Quality and Phenotype	✓	✓+
	Ability to Readily Expand While Maintaining a Less Differentiated Phenotype	✗	✓
	“Off-the-Shelf” Treatment	✓	✓+
	Ability to Re-dose Patients (if Necessary)	✗	✓+

PNK-007-AML-001 FIRST-IN-HUMAN STUDY

Phase I Study in Relapsed / Refractory Acute Myeloid Leukemia Showed Early Signs of Clinical Benefit



PHASE I RESULTS

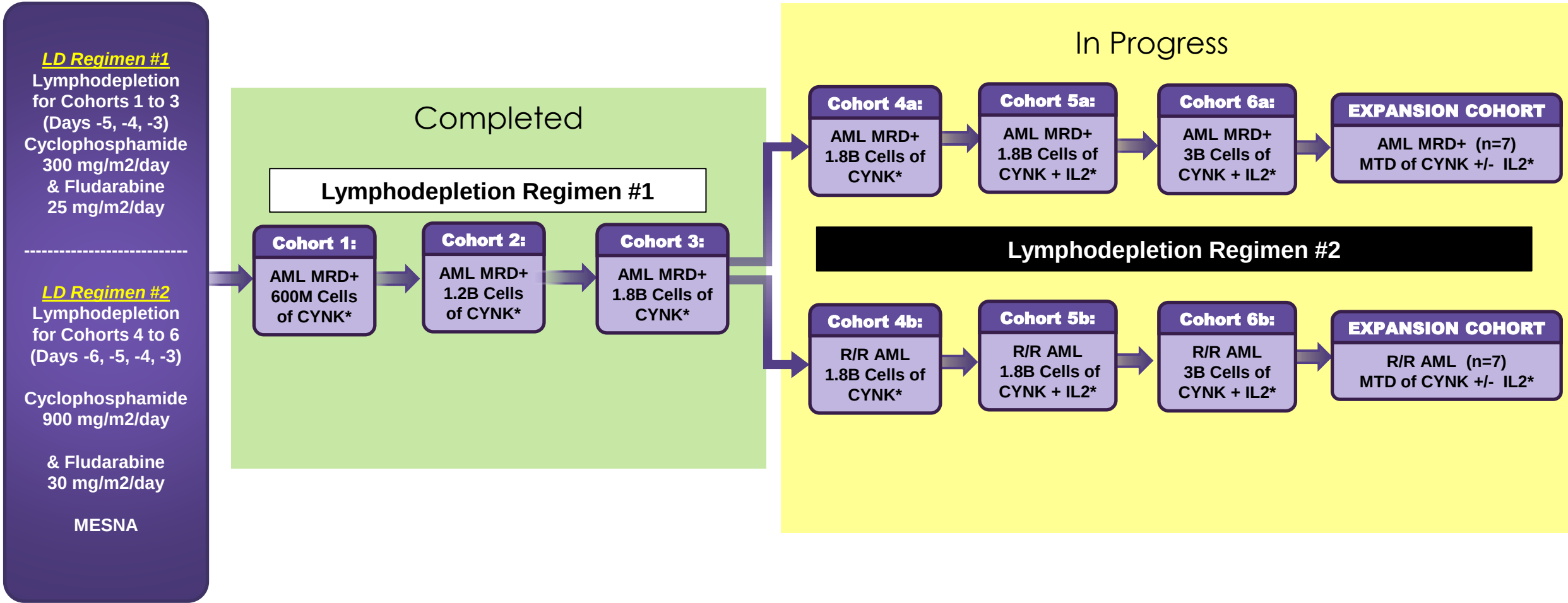
- PNK-007 well tolerated in a heavily pre-treated AML patient population
 - **11** r/r AML patients enrolled, **10** treated with single dose of PNK-007, **no DLTs¹, no GvHD, no detectable HLA allo-antibody**
 - **8** of **10** patients were efficacy evaluable; the other **2** patients were not due to inadequate bone marrow (BM) for evaluation
 - 2 patients, both treated at the highest dose, had evidence of clinical benefit
 - **CRp² at Day 21**
 - **MLFS³ at Day 14**

PHASE I DESIGN

- Dose escalation study
- Conditioning with cyclophosphamide and fludarabine
 - Fludarabine 25 mg/m² x 5 days start day -6
 - Cyclophosphamide 60 mg/kg x 2 days on day -5 and -4 (omit Day -4 if within 4 months of prior transplant)
- PNK-007 administered IV followed by up to 6 rhIL-2 injections
 - rhIL-2 at 6 million units subcutaneously beginning Day 0, every other day for 6 total doses

CYNK001-AML-001 (MRD+/RELAPSED REFRACTORY AML)

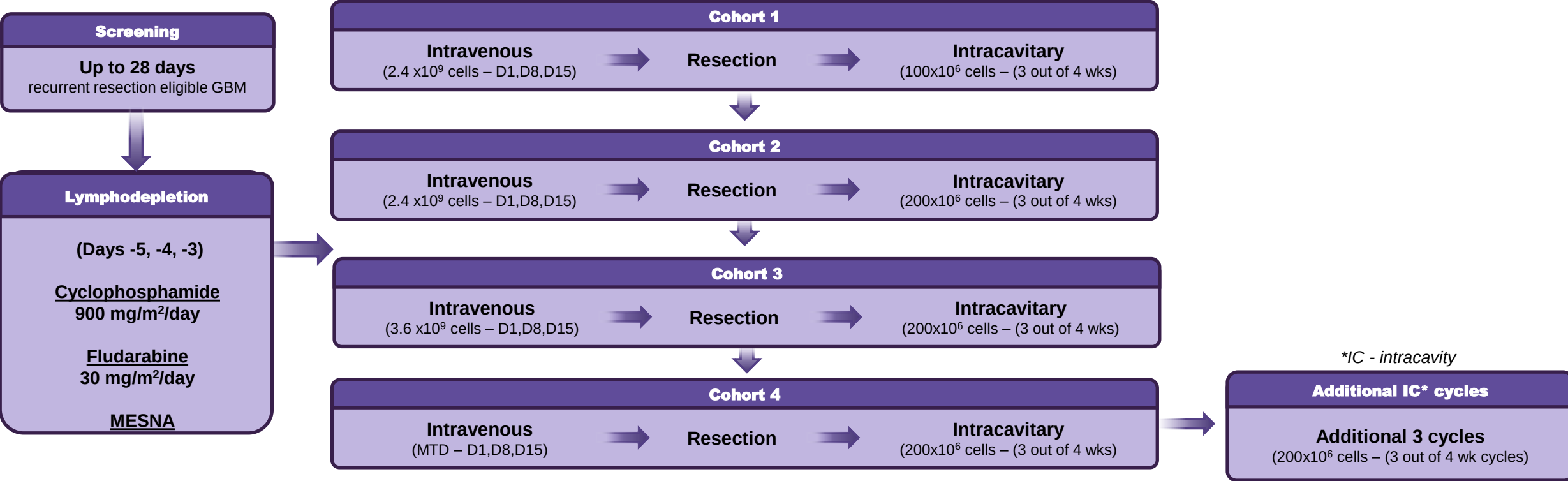
Phase 1 Study Schema – In Progress



* CYNK-given on Days 0, 7 &14
FOR Cohorts with IL-2 – Dose 6M IU on Days 0,2,4,7,9,11 & 14

CYNK001-GBM-002 (GLIOBLASTOMA PROGRAM)

Planned Phase 1 Dose Escalation / Phase 2 Proof of Concept



Phase 1 Dose Escalation

- N = ~ 21 patients
- North American sites (~5 sites)
- **Primary Endpoints:** Safety, Feasibility and Tolerability (42 Day DLT period)
- **Secondary Endpoints:** Progression Free Survival

Phase 2 Proof of Concept

- N = ~ 45 patients (80% Power - Target 35% 6-month PFS)
- North American sites (5 - 10 sites)
- **Primary Endpoints:** Overall Survival
- **Secondary Endpoints:** PFS, ORR post resection
- **Exploratory Endpoints:** NK cell persistence and trafficking

CYNK-101

HER2+ Advanced Esophageal /
Gastric Adenocarcinoma

CYNK-101 IN HER2+ GASTRIC CANCER

Overview

RATIONALE

- Engineering CYNK cells with high affinity and cleavage resistant (CD16VP) expected to improve affinity for IgG1 therapeutic antibodies, resist activation induced cleavage and improve overall ADCC potential

KEY HIGHLIGHTS

- CYNK-101 adds “punching power” to the CYNK-001 platform via genetic modification
- When combined with Trastuzumab demonstrates ADCC activity against HER2+ Gastric Cancer cells
 - Joint impact of modified NK cells + mAb shows improved immunologic response with added NK cell killing

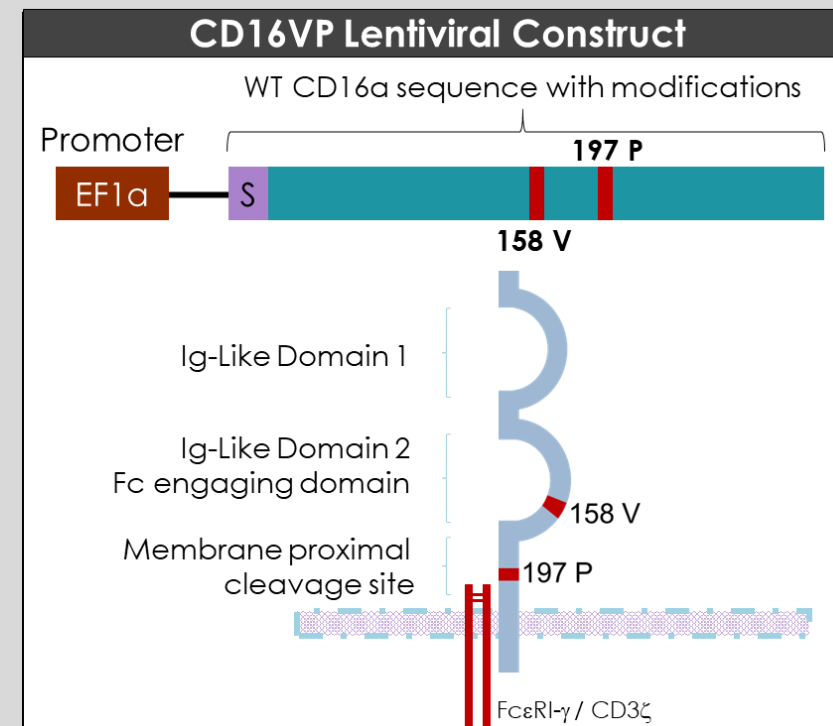
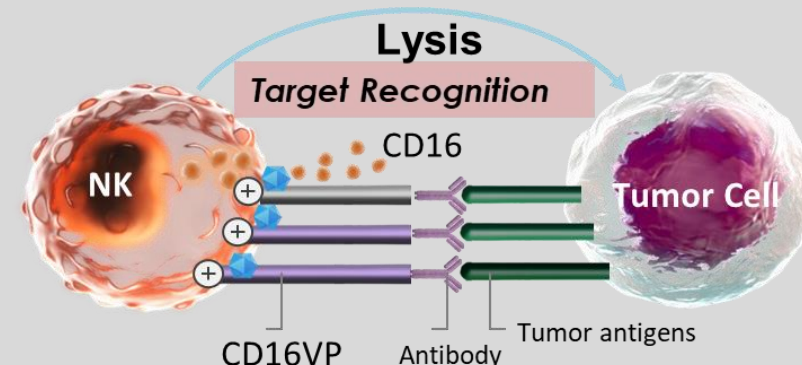
OPPORTUNITIES

- Enable combination therapy with ADCC mediating therapeutic mAb therapies
- Augment CYNK clinical program with added “punching power” of Genetic Modification

CLINICAL PLAN

- 2H21: IND Submission
- 2H21: Phase I/IIa Trial Start
- 1H22: Phase II Study Start

Antibody-Dependent Cellular Cytotoxicity



CYNK-101 DEMONSTRATES EFFECTIVE ANTITUMOR ACTIVITY

Against Gastric Cancer Cell Lines in Conjunction with Anti-HER2 Monoclonal Antibody

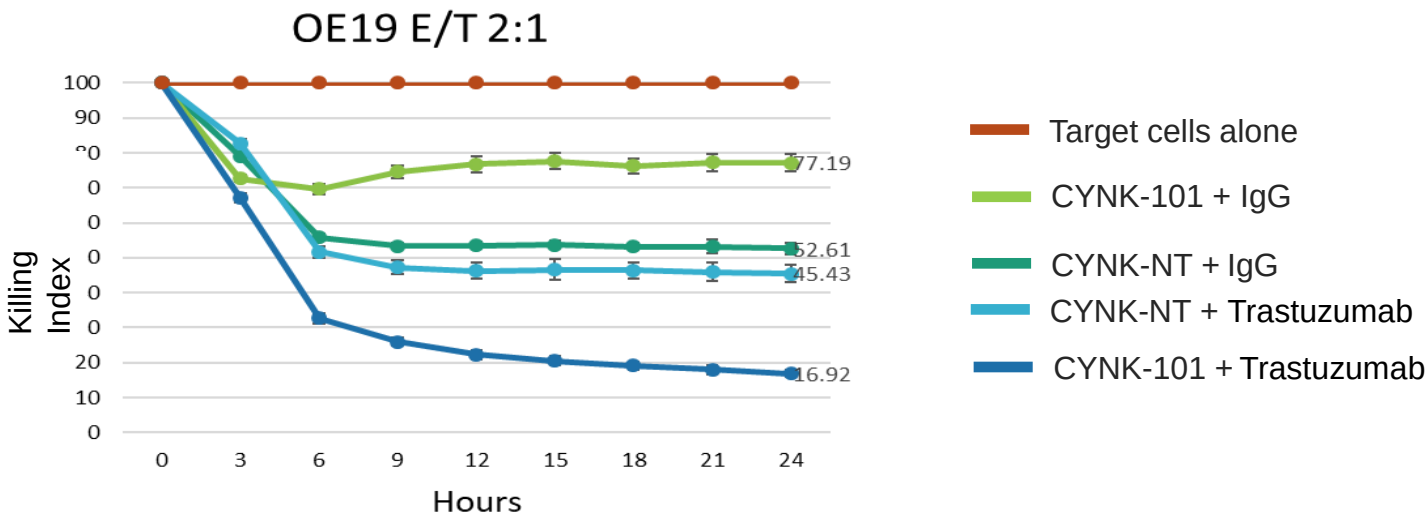
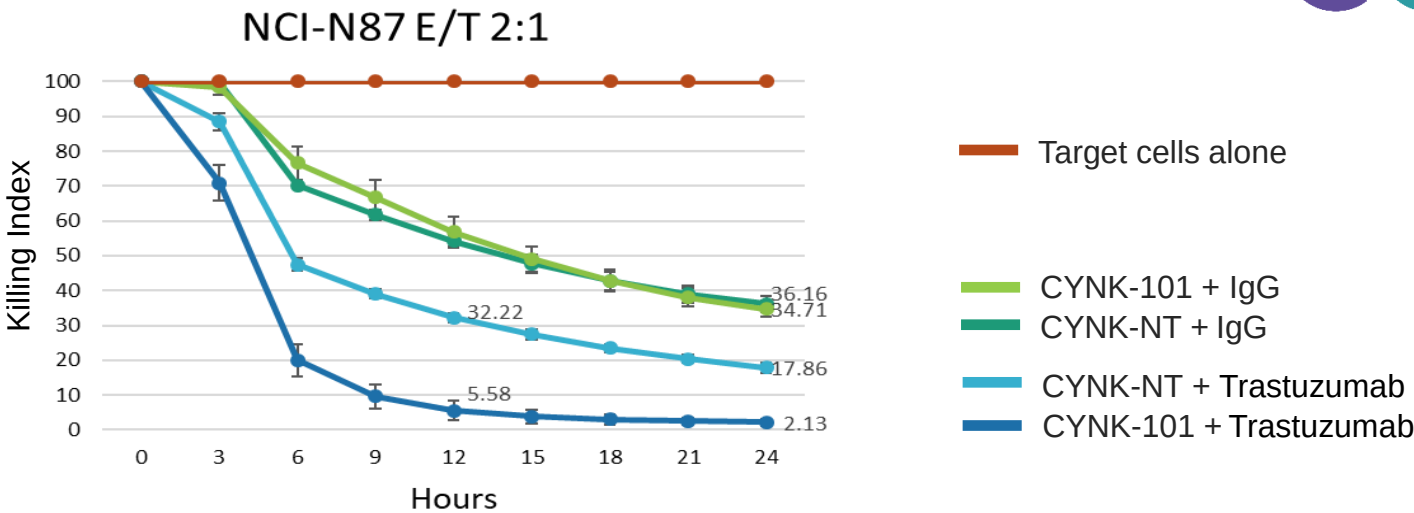


RESULTS

- Significant ADCC activity of CYNK-101 in combination with Trastuzumab against both gastric cancer cell lines was shown at E:T ratio of 2:1 over 24h in comparison with that of CYNK Non-Transduced (NT) or IgG control

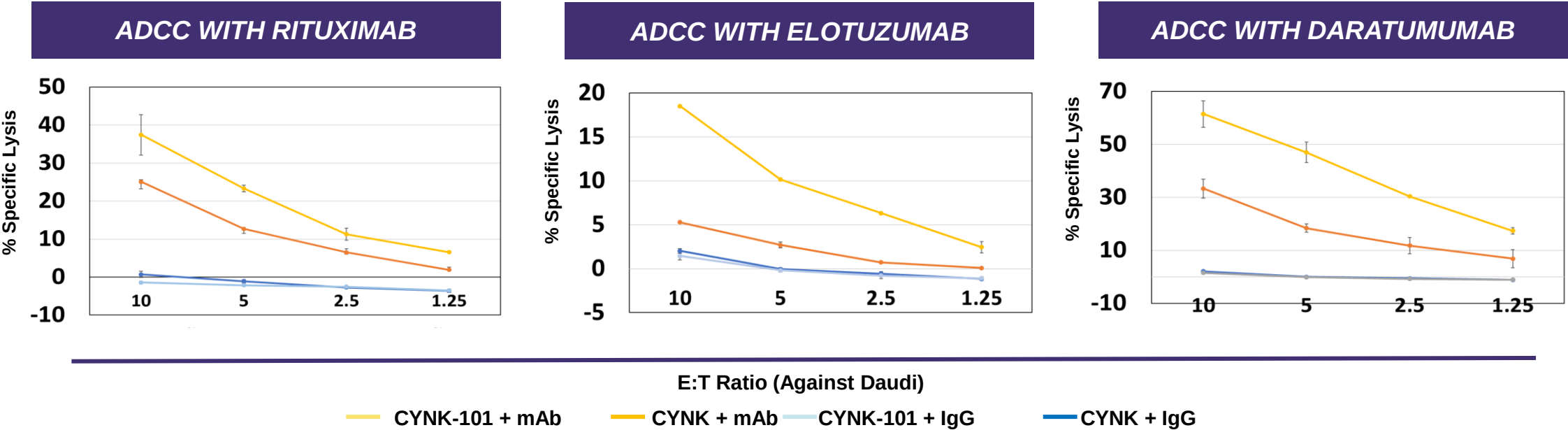
CONCLUSION

- Demonstrated ADCC activity of CYNK-101 in combination with Trastuzumab against HER2+ gastric cancer cells
 - HER2+ Gastric demonstrated to be an immunologically susceptible tumor type with evidence of strong NK cell infiltration



CYNK-101 PROVIDES A BACKBONE FOR COMBINATION THERAPIES

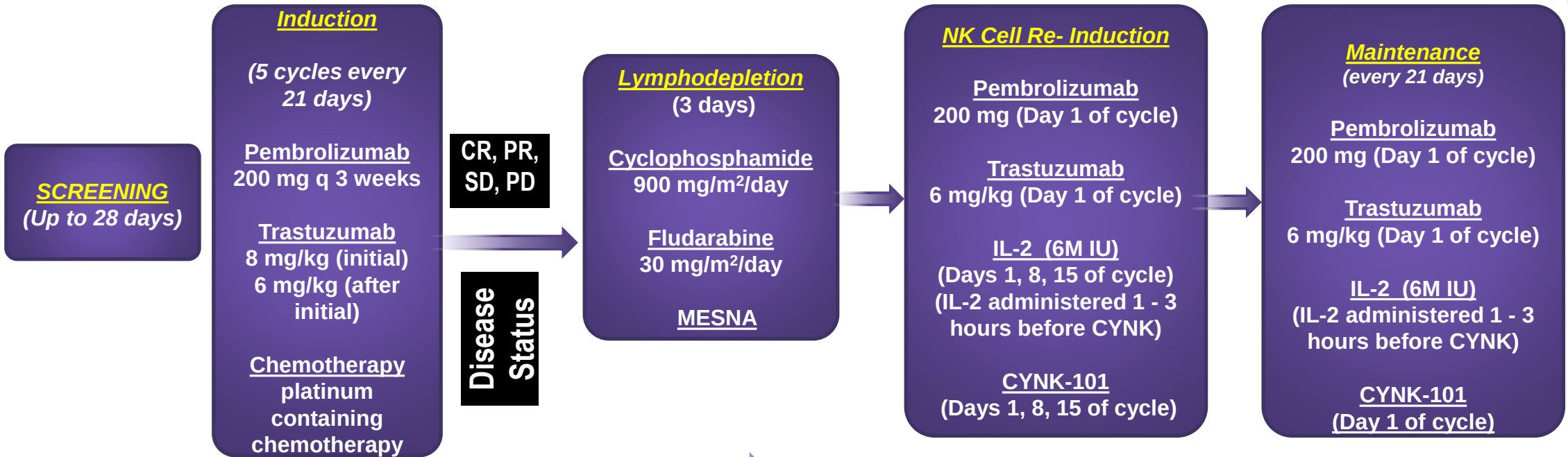
Enhanced ADCC with Multiple Antibodies Forms the Basis of Combination Therapy



- Improved ADCC response observed from CYNK-101 compared to unmodified CYNK cells against lymphoma cell lines in combination with: Rituximab, Daratumumab and Elotuzumab antibodies
- IND-enabling studies on-going to evaluate CYNK-101 + mAbs in subcutaneous and orthotopic tumor models

CYNK101-HER2-001 (HER2+ GASTRIC/GEJ CANCER)

Planned Phase 1 - Dose Escalation / Phase 2a Expansion/Proof of Concept



Phase 1: Dose Escalation (n = up to 15 patients)

- **Primary Endpoints:** Determine safety and maximum tolerated dose
- **Secondary Endpoints:** Various Efficacy measures

Dosing Cohorts

CYNK101 Re-Induction Dosing

Cohort -1: 1.8 x 10⁹ cells
Cohort 1: 3.6 x 10⁹ cells
Cohort 2: 7.2 x 10⁹ cells

CYNK101 Maintenance Dosing

Cohort -1: 1.8 x 10⁹ cells
Cohort 1: 3.6 x 10⁹ cells
Cohort 2: 3.6 x 10⁹ cells

Phase 2a: Expansion/Proof of Concept (n = ~40 patients)

- **Primary Endpoints:** ORR (CR+PR) (>65%-80%)
- **Secondary Endpoints:** (For patients that are CR, PR and SD)
 - Landmark PFS at 6 months & 12 months (CR, PR and SD)
 - Duration of Response (CR and PR)
 - Incidence of response conversion (PR and SD)
 - ORR for patients after initial induction are PD
 - Safety
- **Maintenance Dosing**
 - Patients in CR after CYNK-101 to dose an additional 2 cycles of NK cells combination
 - Patients in PR/SD after CYNK-101 to dose until CR or Progression
 - Patients in PD after CYNK-101 to discontinue to from study

CyCART-19

B-Cell Malignancies

CyCART-19 OVERVIEW

Celularity Approach and Advantages

RATIONALE

- Rationale for greater stemness, expandability, persistence
- Abundant renewable starting cell source for allogeneic therapies
- Potential for improved safety profile due to immunological naivety

KEY HIGHLIGHTS

- Celularity has established a robust process to obtain placental T naive/scm population as source materials to produce off-the-shelf, highly scalable CyCART-19 cells
- CyCART-19 demonstrates stem cell memory characteristics as evidenced by greater in vivo persistence and durable antitumor activity in preclinical models
- Strong pre-clinical evidence of anti-tumor activity
 - CyCART-19 cells outperform adult blood-derived CART cells by significantly greater persistence and longer survival in preclinical studies
- Early data suggesting no signs of GvHD
- Note: If Phase 1 successful, Celularity plans to pursue a Phase 2 basket trial across major B-cell malignancies (subject to FDA discussions)

CLINICAL PLAN

- 2H21: IND Submission Expected
- 2H21: Phase I Study Start
- 1H22: Phase II Study Start

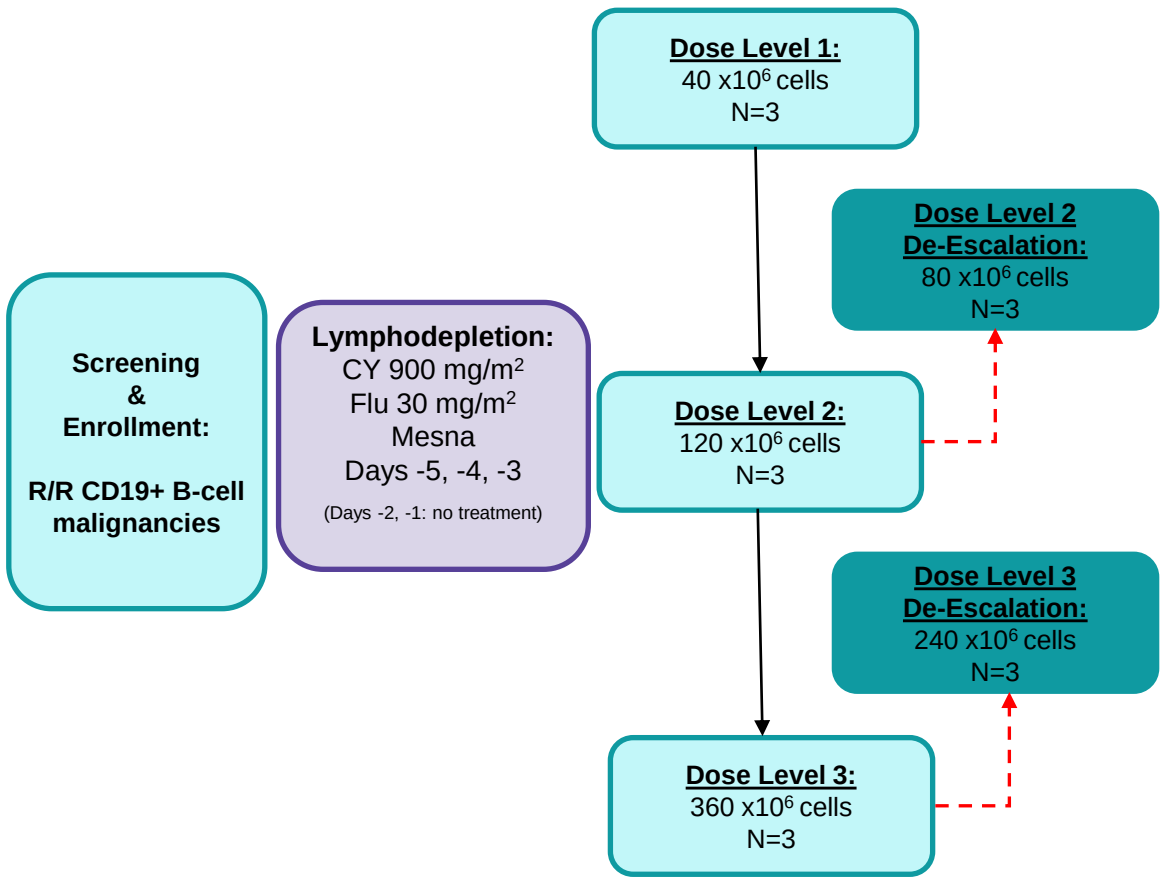
		CAR-T THERAPIES		
MANUFACTURING COMPLEXITY	Cell Therapy Technology Scorecard	AUTOLOGOUS	OTHER ALLOGENEIC	CELULARITY CyCART-19
	Source Procurement Non-invasive Collection / Reliable Procurement	✗	✗	✓
	Lower COGs Standardized, Scalable Manufacturing	✗	✓	✓
	Starting Material Consistent Quality and Phenotype	✗	✗	✓+
	Ability to Readily Expand While Maintaining a Less Differentiated Phenotype	✗	✗	✓
	“Off-the-Shelf” Treatment	✗	✓	✓+
	Ability to Re-dose Patients (if Necessary)	✗	✓	✓+

CYCART19-BCM-001 (RELAPSED/REFRACTORY B-CELL MALIGNANCIES)

Planned Phase 1 Dose Escalation / Phase 2 Registrational



Phase 1 Safety and Dose Finding



Phase 2: Potential Registrational Cohorts

Cohort A: High Grade NHL
CD-19 targeted therapy naïve (n= ~66)

- DLBCL
- High Grade B-Cell lymphoma
- Primary mediastinal B-Cell lymphoma
- Transformed follicular lymphoma
- Mantle cell
- Burkitt lymphoma/leukemia
- Any B-Cell malignancy with Secondary CNS involvement

Cohort B: Low Grade NHL
CD-19 targeted therapy naïve (n= ~66)

- Follicular
- Marginal Cell
- CLL/SLL
- Waldenström’s macroglobulinemia
- Any other low grade NHL subtypes

Cohort C: Any Grade NHL
CD-19 targeted therapy exposed (n= ~66)

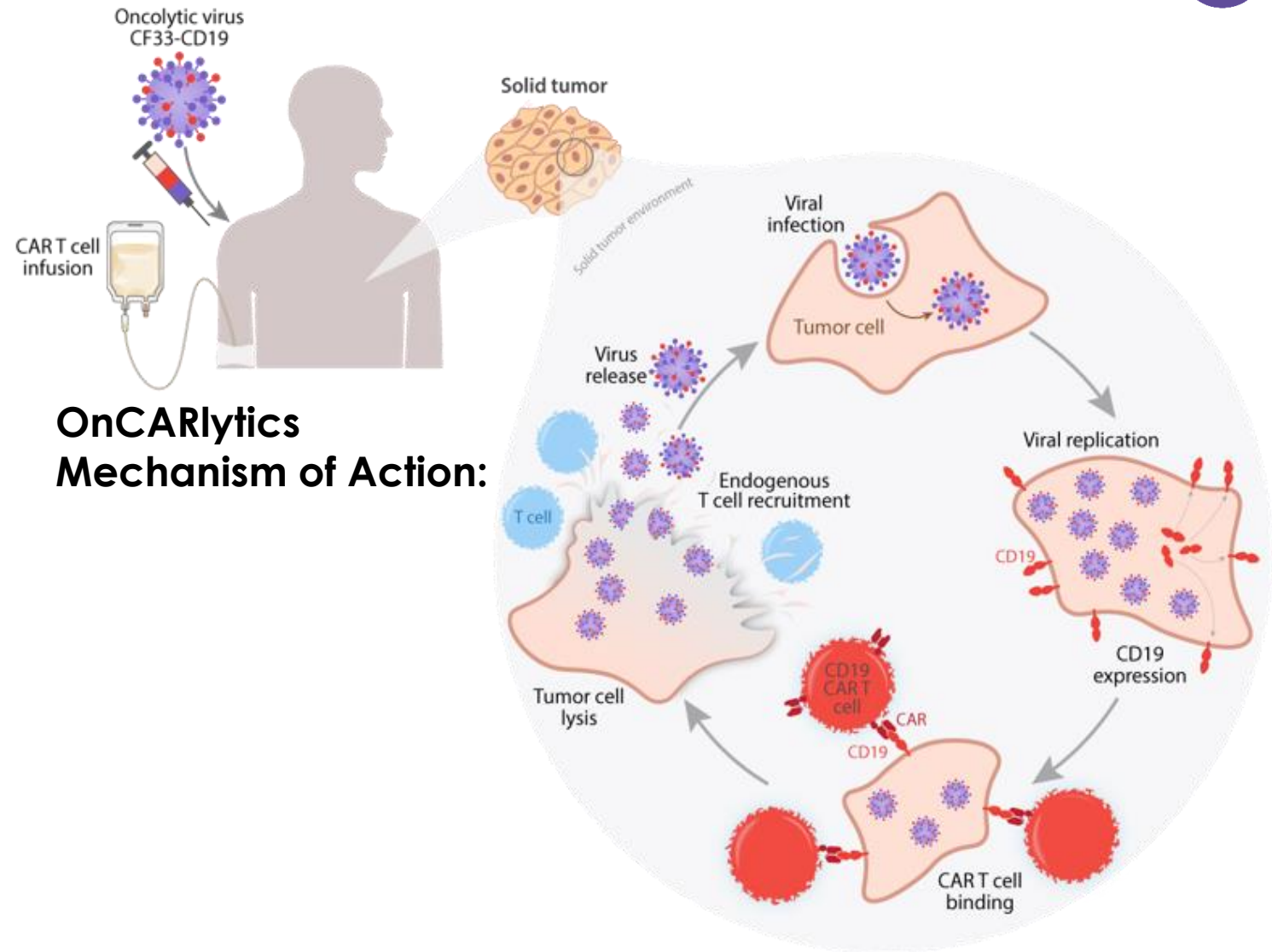
Cohort D: Primary Central Nervous System Lymphoma
(n= ~74)

IMUGENE COLLABORATION

Exclusive Strategic Partnership Combining CD19 Oncolytic Virus + CyCART-19 in Solid Tumors



- Based on Dr. Yuman Fong's oncolytic virus technology from City of Hope
- OnCARlytics infects tumor cells → replicates and produces CF33-CD19 on the tumor cell surface
 - Enables CD19 CAR-T therapy – CyCART-19 to recognize 'flags' on tumor surface
 - Potential for CyCART to target solid tumors



Degenerative and Autoimmune Diseases



APPL-001 OVERVIEW

Celularity Approach and Advantages



RATIONALE

- Immune-modulatory properties of mesenchymal-like adherent stromal cells (ASCs) have the potential to alleviate autoimmunity and possess anti-inflammatory activity
- Off-the-shelf potential
 - ASCs are immune-privileged due to relatively low-level MHC class I and II protein expression

KEY HIGHLIGHTS

- Clinical evidence supporting ASCs potential applications
 - 1st generation ASCs demonstrate signs of clinical activity in Crohn's Disease, Diabetic Foot Ulcers and Diabetic Peripheral Neuropathy
 - Well-tolerated and no SAE's at therapeutic dose
- Placental-derived ASCs (APPL) are potentially more immune privileged due to their fetal origin
- Celularity is developing the next generation of ASCs with APPL-001, a genetically modified placental-derived ASC, for the treatment of Crohn's Disease
 - Engineered Tissue factor (TF) Knockout (KO) is designed to reduce potential toxicities and lower the risk of adverse effects.
- One placenta can yield more than 100,000 Doses.

CLINICAL PLAN

- Crohn's Disease
 - 1H22: IND Submission Expected
 - 1H22: Phase I/IIa Study Start

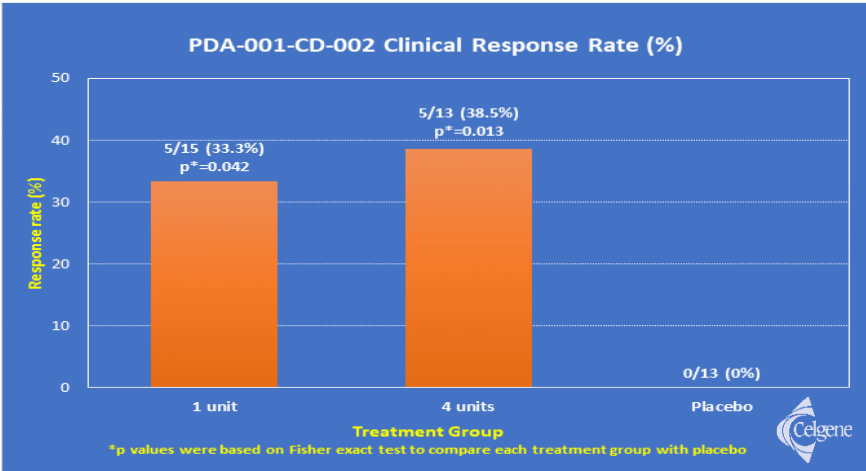
NEWLY DEVELOPED APPL PROGRAM

Leveraging Legacy Placental Mesenchymal-like Stromal Cell Studies to Expand to Degenerative Diseases



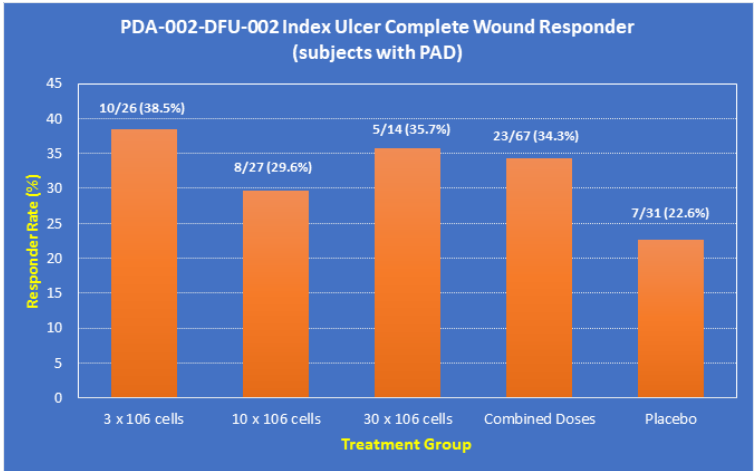
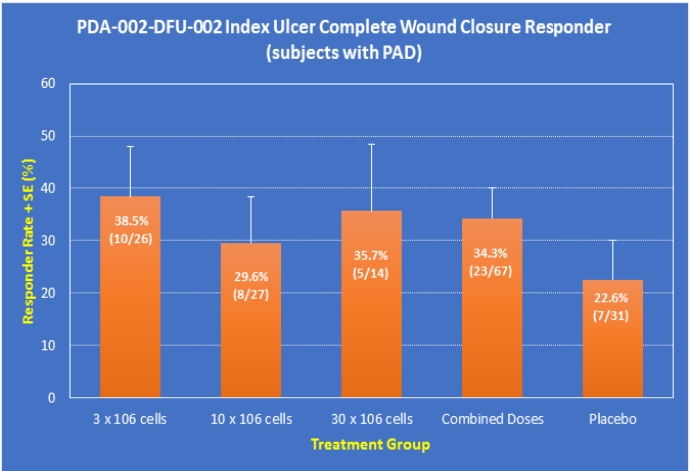
IV Formulation

- 50+ patients dosed in **multiple Crohn's Disease studies**
- Clinical response rates were significantly higher in IV Formulation treatment groups compared with the placebo group
 - Response rates were 43% points in the treatment group vs 0% in the placebo group on Day 365
 - Well-tolerated, no SAEs at therapeutic dose



IM Formulation

- 140+ patients dosed in **Diabetic Foot Ulcer (DFU) and Diabetic Peripheral Neuropathy Ph II studies**
- IM Formulation has systemic microvascular/neovascularization effects
 - Enhanced healing of diabetic foot ulcers compared to placebo
 - Improvement of retinopathy
 - Well-tolerated, no SAEs at therapeutic dose



NEWLY DEVELOPED APPL PROGRAM

Leveraging PDA Cells and Develop New APPL Candidate

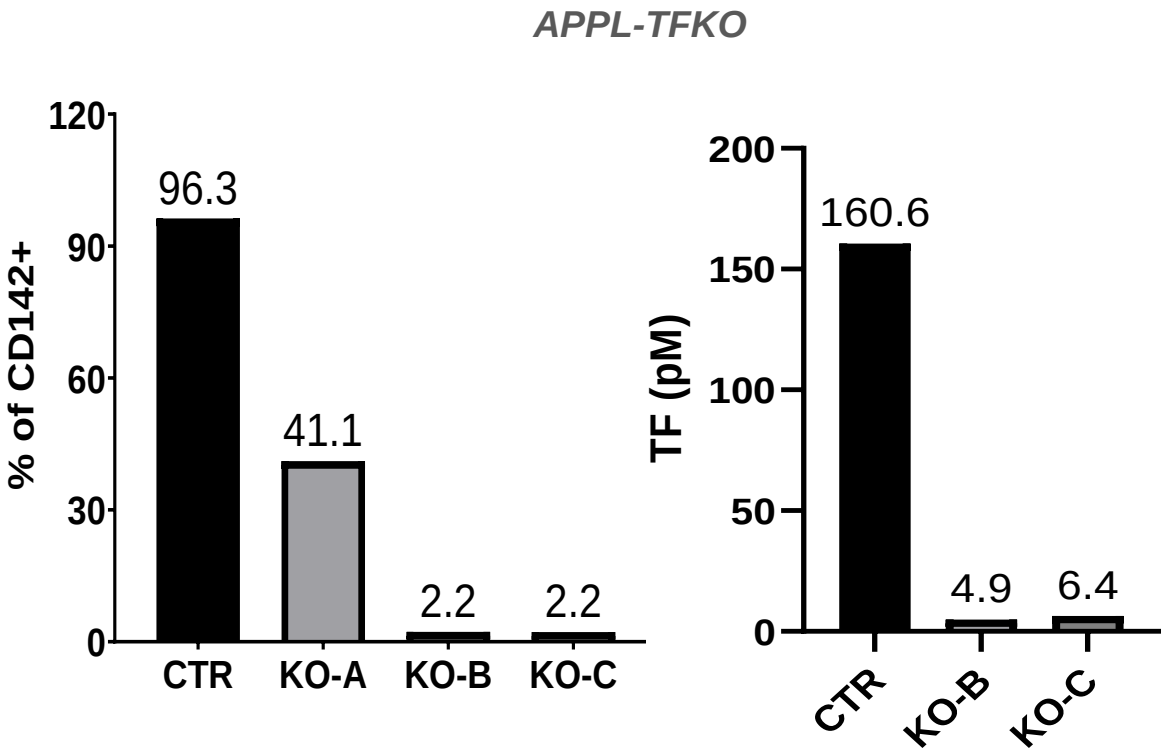


Genetically Modified APPL with Greater Safety Profile

- Tissue factor (TF) Knockout (KO) in APPL using CRISPR/Cas9 to reduce potential safety risk associated with TF
- Identified two of four CRISPR guide RNAs showing >95% high KO efficiency
- Demonstrated sustained TF KO throughout culture expansion
- APPL-TFKO cells significantly reduced TF activity
- TF KO showed no effect on cell proliferation and viability

Novel Media and Culture Method Established to Develop APPL with Greater Potency

- Demonstrate immune modulation and regenerative functionality
- New IP opportunities in process and product composition



Next Steps:

- Clinical Program Milestones

NEAR-TERM MILESTONES

To Achieve the Next Advance in Placenta-based Cell Therapy



Achievements to Date

- April 2020:** Received FDA Safe to proceed on IND for CYNK-001 in COVID-19
- September 2020:** Completion of Facility at Florham Park
- January 2021:** Announce merger with GXGX Acquisition Corp.
- Completed concurrent \$80m PIPE financing
- March 2021:** Received Fast Track Designation by the FDA for CYNK-001 in recurrent GBM
- April 2021:** Received Orphan Drug Designation by the FDA for CYNK-001 in malignant gliomas
- July 2021:** Complete public listing on NASDAQ (CELU)

Key Near-Term Development Milestones

CYNK-001

- 2H21: Establish Phase 2 Dose (GBM)
- 2H21: Dose Selection & Initiation of Expansion Cohorts (AML)

CYNK-101

- 2H21: IND Submission
- 2H21: Phase I/IIa Study Start

CyCART-19

- 2H21: IND Submission
- 1H22: Phase I Study Start

APPL-001

- 1H22: Phase I/IIa Study Start

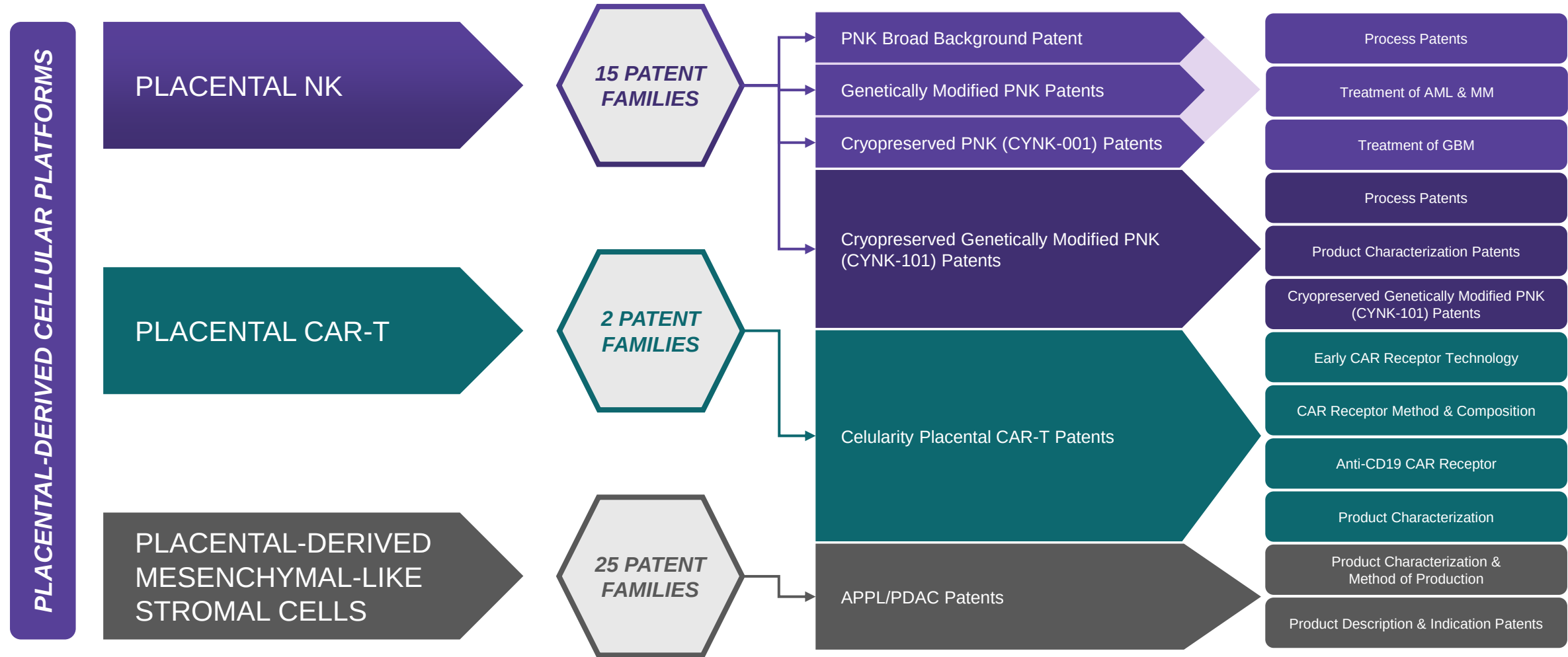
Appendix

Additional Detail



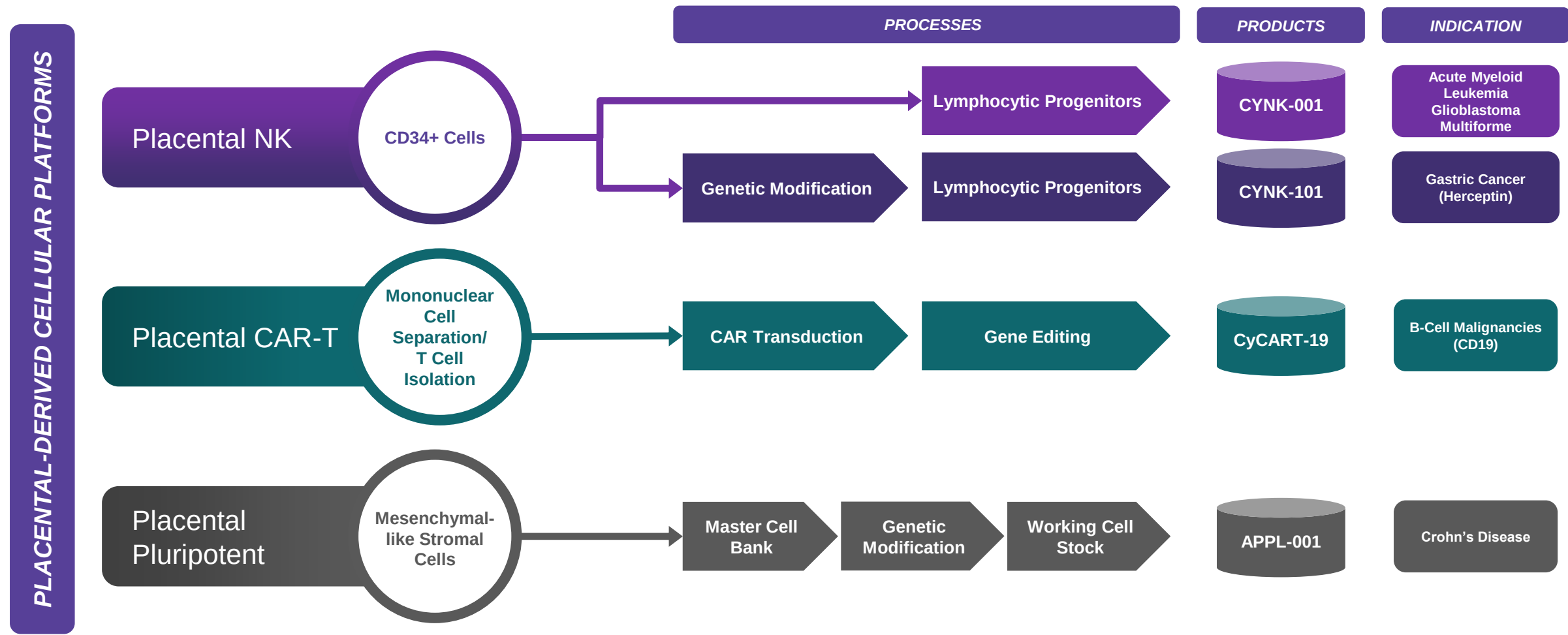
CELULARITY IMPACT™ PLATFORM

Broad IP Protection Across All Lead Programs



CELULARITY IMPACT™ PLATFORM

The Placenta as a Renewable Allogeneic Source, with Purpose-Built Commercial Scale Manufacturing



CELULARITY PLACENTAL CAR-T (CyCART)

Solving the Downside of Autologous CAR-T Therapies



AUTOLOGOUS CAR-T THERAPY		ALLOGENEIC PLACENTAL CAR-T
Status Quo	Downside	Celularity's Scalable Solution
➤ All CAR T-cell therapies on the market and most (~75%) of clinical assets are autologous	▪ Complex, high COGS manufacturing and <i>one-batch, one-patient</i> supply chain	✓ No apheresis capacity constraints ✓ High volume manufacturing ✓ On-demand, off-the-shelf cryopreserved packaged product
➤ Peripheral blood-derived T-cell is the immune cell 'vehicle' used to express a CAR	▪ Multiple rounds of lymphocyte-depleting therapies cause inconsistent apheresis cell recovery in relapsed or refractory patients	✓ Placentas provide a profuse, renewable source of healthy, ready to use lymphocytes ✓ Placental T-Cells containing abundance of stem cell memory conferring greater expansion and persistence potential
➤ "Patient as their own donor" automatically makes the patient part of the supply chain	▪ Therapeutic outcomes affected by <i>collection-manufacturing-release-administration</i> timeframe "Long vein-to-vein time"	UNIQUE ADVANTAGES OF PLACENTAL-DERIVED CELLS ✓ Dynamic & flexible supply chain ✓ Patient-responsive, not patient-dependent ✓ Simplified logistics, ability to pre-position cryopreserved product at treatment sites

CELULARITY PLACENTAL CAR-T (CyCART)

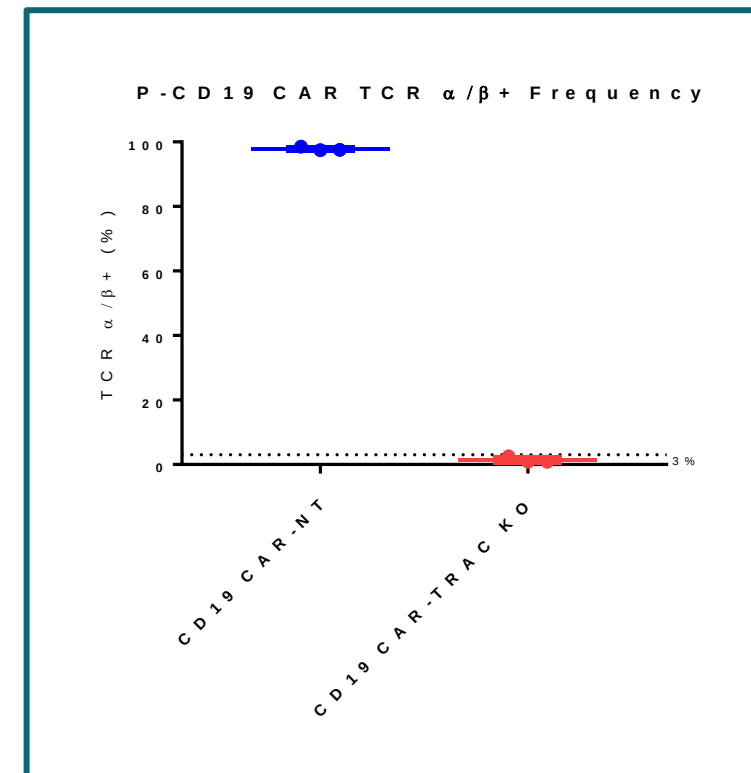
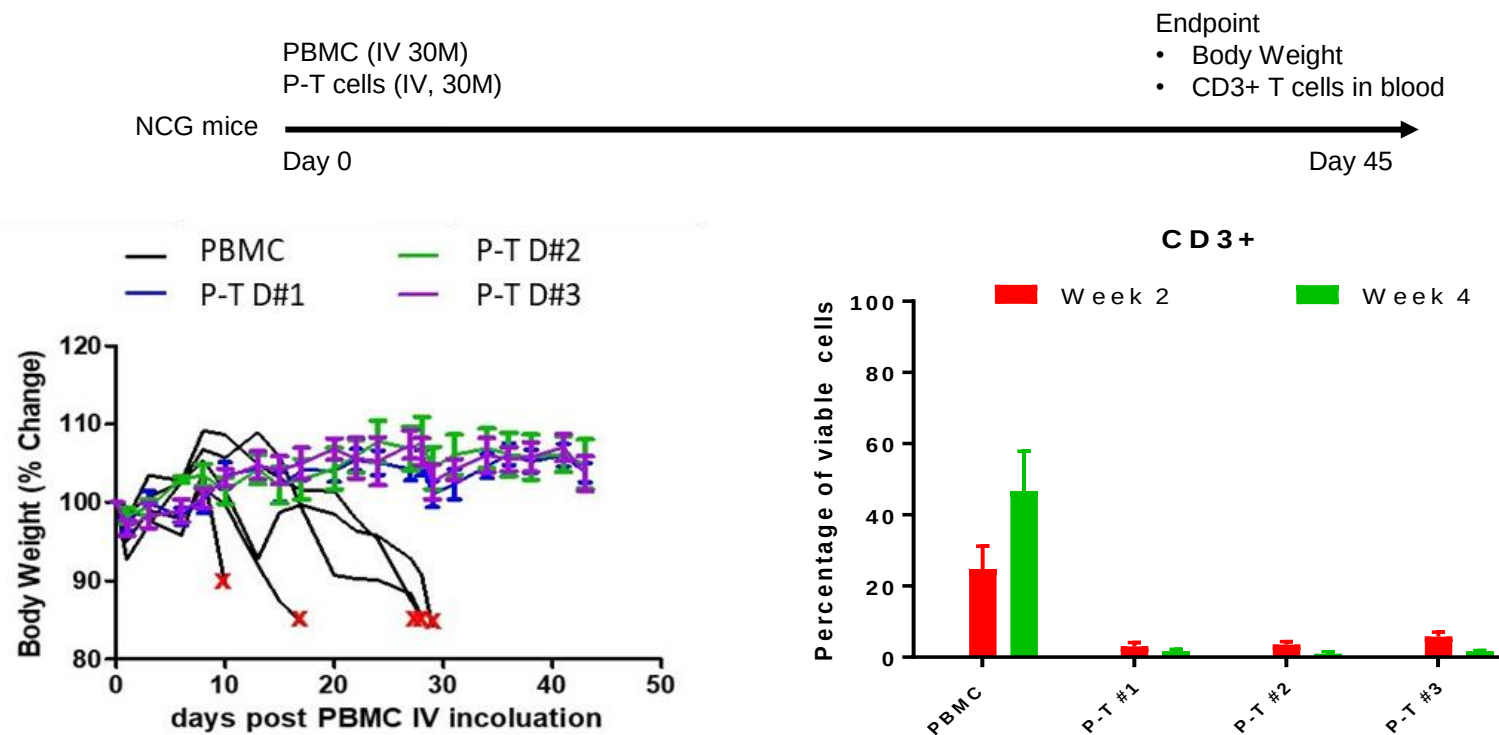
Providing Upside to Adult-donor Allogeneic CAR-T Therapies



ALLOGENEIC CAR-T THERAPY		ALLOGENEIC PLACENTAL CAR-T
Status Quo	Downside	Celularity’s Scalable Solution
➤ Requires selection, screening & testing T cells from healthy adult donors e.g. donor bone marrow	▪ Complex logistics, multistep manufacturing process to source, limited scalability, improved speed vs. autologous but still measured in days	✓ No apheresis capacity constraints ✓ High volume manufacturing ✓ On-demand, off-the-shelf cryopreserved packaged product
➤ High cost of treatment inherent of engineered T cell therapy	▪ Requires separate engineering for each new therapeutic candidate	✓ Placentas provide an abundant, renewable source of healthy, ready to use lymphocytes ✓ Placental T-Cells containing abundance of stem cell memory conferring greater expansion and persistence potential
➤ Adult donor ≠ universal donor	▪ Potential safety complications observed from graft versus host disease (GvHD), as well as CRS and cerebral edema	UNIQUE ADVANTAGES OF PLACENTAL-DERIVED CELLS ✓ Dynamic & flexible supply chain ✓ Patient-responsive, not patient-dependent ✓ Simplified logistics, ability to pre-position cryopreserved product at treatment sites

CyCART-19 CELLS DO NOT INDUCE XENOGENEIC GvHD IN VIVO

Efficient TCR Knockout as Risk Mitigation



- Placental T (P-T) cells do not induce xenogeneic GvHD in vivo
 - Evidenced by **100% survival**, **no weight loss**, no increase in detection of any human CD3+ T cells in P-T treated mice
 - PBMC-treated mice exhibited significant weight loss, death of all mice, and increase of detection of human CD3+ T cells at Day 28
- Celularity includes CRISPR-mediated TRAC KO in its process as a risk mitigation strategy to prevent GvHD
 - **97-99% TRAC KO efficiency** achieved in CyCART-19 cells

CELULARITY PLACENTAL NK CELLS

Providing Upside to both Adult-donor NK Cells



ADULT DONOR NK CELL THERAPY		ALLOGENEIC PLACENTAL NK
Peripheral Blood NK	iPSC NK	Celularity's Scalable Solution
➤ Apheresis of peripheral blood from healthy donor / patient ➤ Requires voluntary donor	▪ De-differentiated adult fibroblasts ▪ Additional processing required	✓ No apheresis capacity constraints ✓ High volume manufacturing ✓ On-demand, off-the-shelf cryopreserved packaged product
➤ Cytokine activation without expansion or direct expansion on feeder cell platform	▪ Two-stage differentiation: – First from iPSC's to iCD34 cells, and then to NK cells ▪ Expression of multiple de-differentiation genes higher risk of insertional mutagenesis	✓ Feeder cell-free, cytokine cocktail-based NK cell expansion and differentiation ✓ No prior exposure to physiological or environmental factors; no exhaustion
➤ Heterogeneous NK cells with high expression of both NK cell activating receptors and inhibitory receptors (KIRs) ➤ Potential for fratricide exists with CD38 mAb	▪ NK cells with high expression of both NK cell activation and inhibitory receptors (KIRs) ▪ Potential for fratricide necessitated knock out of CD38 when combined with CD38 mAb	✓ Heterogeneous NK cells with high expression of natural cytotoxicity receptors (NCRs) with low expression of inhibitory receptors (KIRs) ✓ No fratricide observed in combination with CD38 targeted approaches

APPL CROHN'S DISEASE (CD)

Study Design



Study Design: Randomized, double-blind, Placebo-controlled study in adults with 5 doses of 1/4th unit APPL (~ 37 million cells) over 8 weeks vs. Humira treatment.

Study Population: Moderate-to-Severe CD (CDAI score: 220-450) who are refractory to Corticosteroids

Primary objective: To assess the clinical efficacy by measuring response/remission rates during the induction phase as well as to explore durability of response during the maintenance phase in subjects with moderate to severe CD. Subjects shall be re-treated if a flare is developed during the 1-year.

Secondary Objective: The secondary objectives of this study are to assess clinical improvement by endoscopic measurements and quality of life assessments.

Primary Endpoint: To assess clinical efficacy, the modified Crohn's Disease Activity Index (CDAI) scoring system will be used to measure the following:

- Clinical Remission: Reduction of CDAI score to less than 150 points 4-6 weeks
- Clinical Remission: Reduction of CDAI score to less than 150 points 1-year

Secondary Endpoints:

- Clinical Response Rate: Reduction in CDAI score by 100 points to the baseline at 1-year
- Evaluation of mucosal healing as measured by Simple Endoscopic Score for Crohn's Disease (SES-CD) at week 4-6 and 1-year
- Patient-reported outcome of quality of life as measured by Inflammatory Bowel Disease Questionnaire (IBDQ)

Sample Size: 162 subjects in each arm (80% power and 10% drop out) involving APPL versus Humira with NI margin of 12%

Timeline Estimate:

- IND: 1H 2022

MANUFACTURING PROCESS

Celularity Purpose-built Commercial Scale 150,000 sq. ft. Manufacturing Facility



Network of Longstanding Partnerships

- Birthing Centers
- Obstetricians
- Academic Hospitals
 - Controllable and scalable on-demand birthing material
 - Supports multiple products/programs

Controlled Courier System

- Procurement Kits
- Temperature tracking
- Unique barcoding/labeling
- Traceability from birthing center to Celularity through manufacturing & distribution

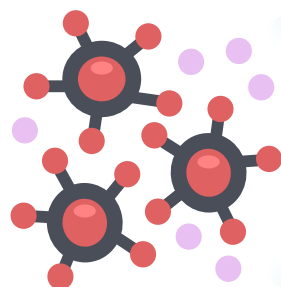
Collection & Documentation of Donor Information

- Qualified donors/Donor eligibility
- Informed consent
- Detailed maternal and family health questionnaire
- Completed delivery information
- Comprehensive data set on donor and cell source



Cell Isolation and Selection

- Proprietary perfusion methodology
- Removal of vascular/circulatory blood
- Cell suspension/separation
- Cell selection/sorting for hematopoietic, progenitor, and T-cells.
- Cryopreserved donor stock

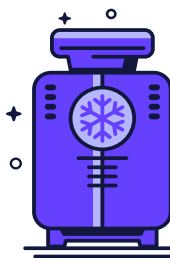


Cell Manufacturing

- Controllable and flexible manufacturing
- Cell seeding, expansion and differentiation
- Cell harvesting & formulation
- Use of automation (i.e., bioreactors, etc.)
- Highly scalable

Tissue Manufacturing

- Multiple commercial products with (30+ SKUs)
- Multiple suite allocation allows for rapid increase in product manufacturing
- Multiple shift manufacturing
- In house packaging capability
- Ambient product storage
- Long product shelf life/expiry

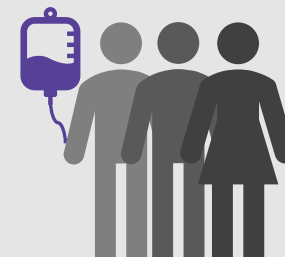


Product Cryopreservation

- In-process cooling/cryopreservation of drug product
- In-house cryostorage facility with 24/7 monitoring
- Long term storage readiness
- Cold-chain logistics and distribution expertise
- Cold-chain monitoring and traceability

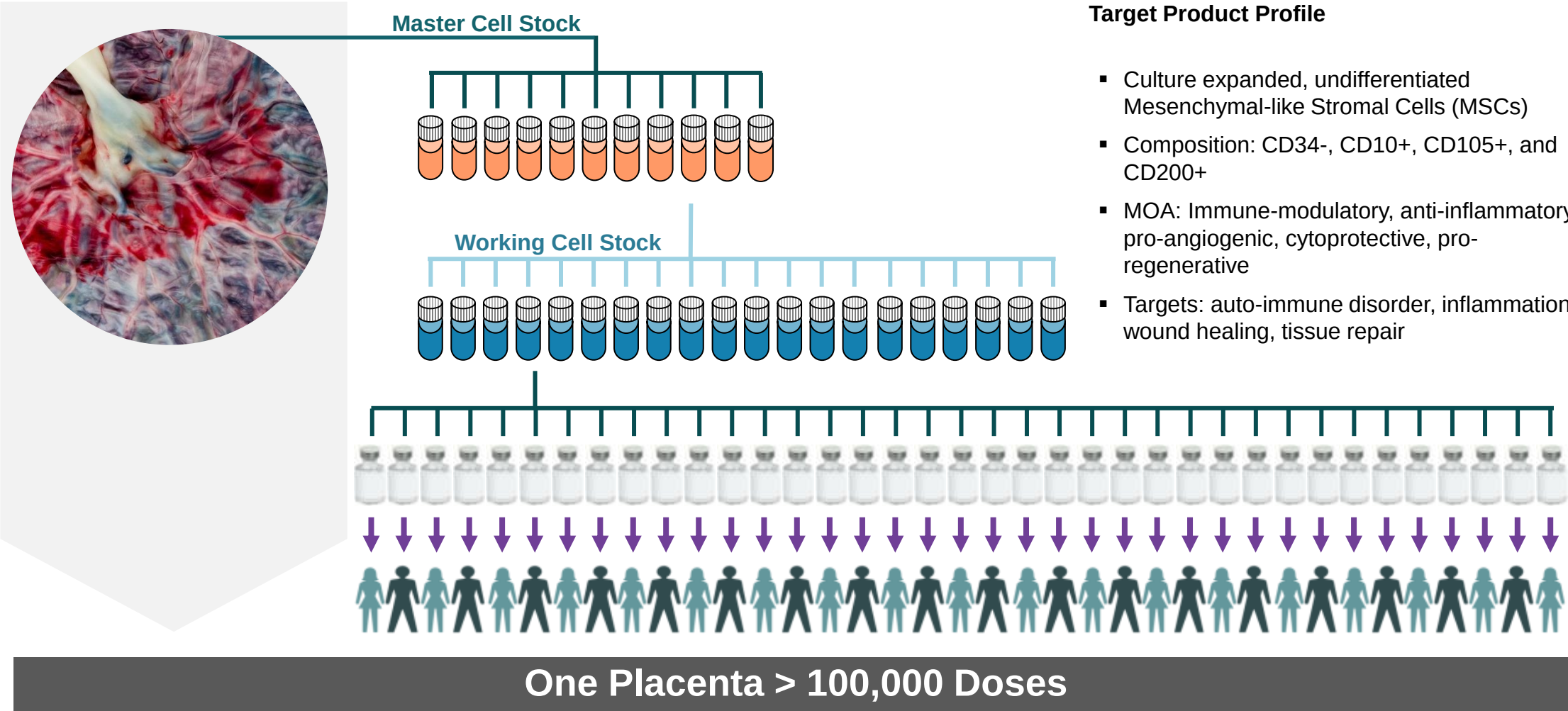


Delivery to Patients



ALLOGENEIC PLACENTAL PLURIPOTENT CELLS: SCALABLE & OFF-THE-SHELF

Clinical Stage

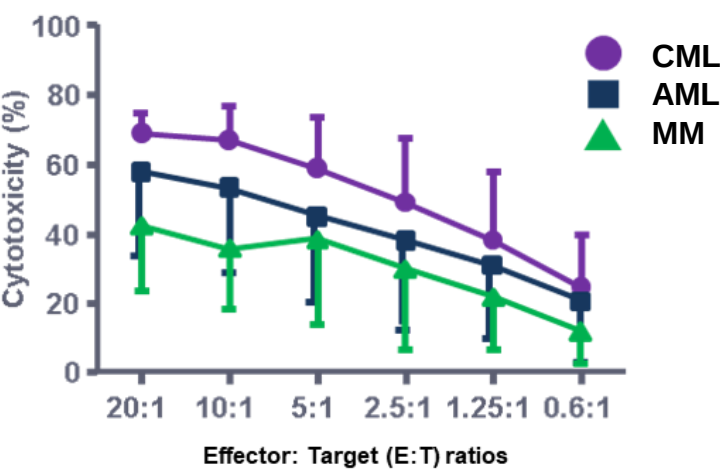


AML: PRE-CLINICAL DATA

Evidence of Significant Leukemia Killing

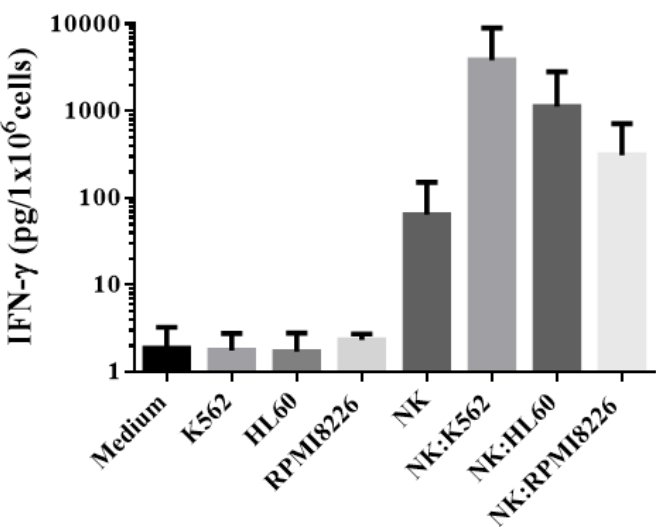


CML, AML, MM IN VITRO KILLING



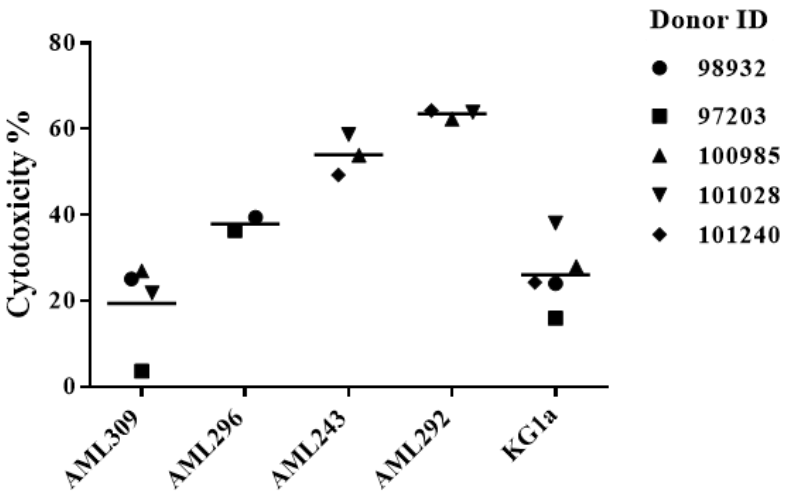
PNK-007 demonstrates robust killing (cytolytic) against CML, AML, MM cell lines and primary AML samples

IFN-G PRODUCTION



PNK-007 activation releases high concentration of IFN-g, favoring Th1 responses

PRIMARY AML KILLING



PNK-007 exerted up to 60% specific lysis against primary AML samples at an Effector: Target (E:T) ratio of 3:1