9th Sachs Immuno-Oncology Innovation Forum
June 2, 2023
Waldorf Astoria, Chicago, IL

Cytovia On Track to Become A Clinical-Stage Company

First-In-Class Flex-NK™ Bispecific Antibodies Ready to Initiate Clinical Trials in 2023, Addressing 2 Indications w/ Major Unmet Medical Needs & Multi-Billion Dollar Sales Potential

- GPC3-targeted FLEX-NK™ Bispecific Antibody for Hepatocellular Carcinoma (HCC) & Other Solid Tumors
- CD38-targeted FLEX-NK™ Bispecific Antibody for Multiple Myeloma (MM) & Other Hematological Tumors

Optimally-Designed Natural Killer Cell Products To Enhance Flex-NK™ Bispecific Antibody Therapy

Validating Data Presented at Major International Oncology Conferences in 2022 & 2023

- AACR, EHA, ESMO, SITC, ASH, ASCGT

Ready to Scale up Revenues Through Partnerships

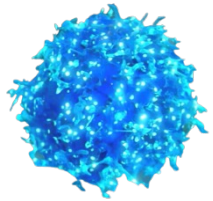
- First corporate partnership executed with CytoLynx, generating $42.5 million to date, with potential future revenues of up to $400 million
- Additional biopharma partnerships expected starting in 2023 to generate significant revenues, leveraging both technology platforms

Strategically In-Licensing Additional Clinical-Stage Assets

Cytovia Therapeutics: An Emerging NK Therapeutics Leader

Cytovia is the first company to validate both an antibody & supporting NK cell platform, for use alone or in combination:

FLEX-NK™ Bispecific Antibodies
to Engage Both Endogenous & iNK Cells at the Tumor Site



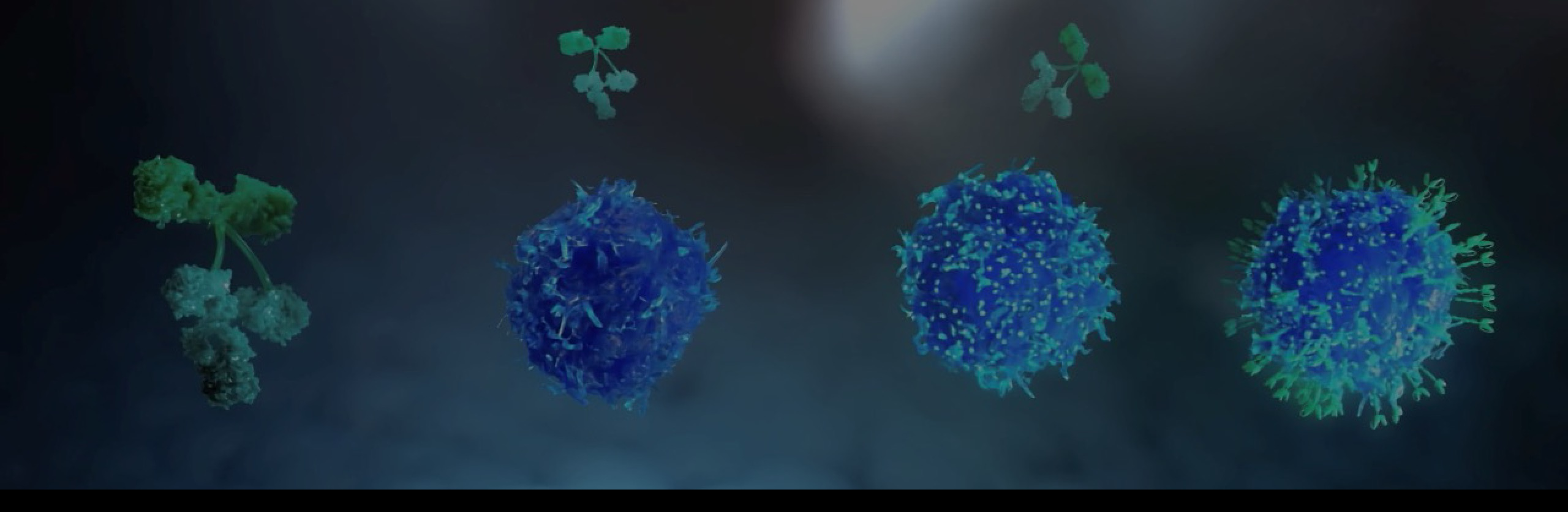
TALEN® Gene-Edited iNK & CAR-iNK Cells
to Enhance Flex-NK™ Antibody Therapy

- Potential for products in both platforms to be applied either to internal pipeline or as partnered products
- Strong Technology & Product IP, with 33 owned or licensed patents
- R&D Center of Excellence in Greater Boston area, supported by world-class academic partnerships *(National Cancer Institute, UCSF, New York Stem Cell Foundation, Hebrew University of Jerusalem, INSERM)*
- Strategic Partnership with Cellectis (NASDAQ:CLLS) for TALEN® gene-editing

Cytovia Pipeline Supports 2 INDs in 2023 for GPC3 and CD38 Flex-NK™ Bispecific Antibodies

Product Platform	Product Candidates	Indication	Pre-Clinical	Clinical	IND Filings
Flex-NK™ Bispecific Antibodies *(monotherapy & combination with iNK cells)*	**CYT-303**	**HCC**	**GPC3 Flex-NK™ Bispecific Antibodies**		**2023**
	CYT-338	**MM, CTCL**	**CD38 Flex-NK™ Bispecific Antibodies**		**Monotherapy 2023**
	CYT-103 *(CytoLynx Program)*	HCC	GPC3 Flex-NK™ Bispecific Antibodies Pre-Complexed with iNK Cells		China IIT in 2023
	CYT-303 + CYT-150	HCC	GPC3 Flex-NK™ Bispecific Antibodies + Edited iNK Cells		IIT/IND 2024
CAR-iNK Cells	CYT-503	HCC	GPC3 CAR-iNK Cells		IIT/IND 2024
	CYT-538	MM	CD38 CAR-iNK Cells		2025
	CYT-501	GBM	EGFR vIII + WT CAR-iNK Cells		2025

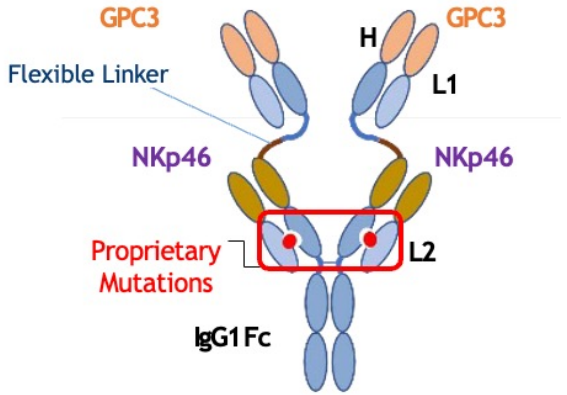
HCC: Hepatocellular Carcinoma
IND: Investigational New Drug
IIT: Investigator-Initiated Trial
MM: Multiple Myeloma
CTCL: Cutaneous T-cell lymphoma
GBM: Glioblastoma Multiforme



Flex-NK™
Bispecific Antibodies

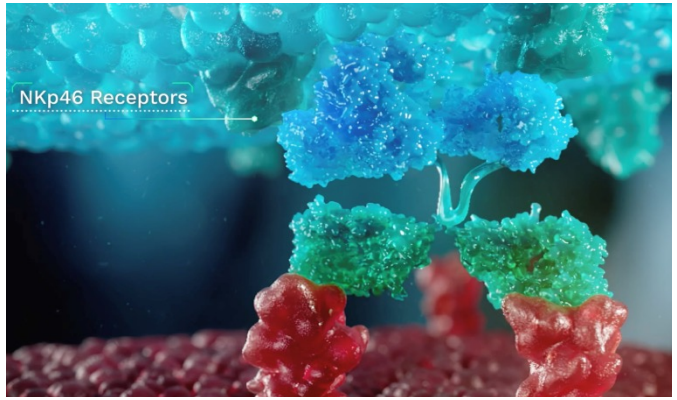
Engaging NK Cells with Cytovia's Flex-NK™ Bispecific Antibodies

Our Proprietary Flex-NK™ Platform

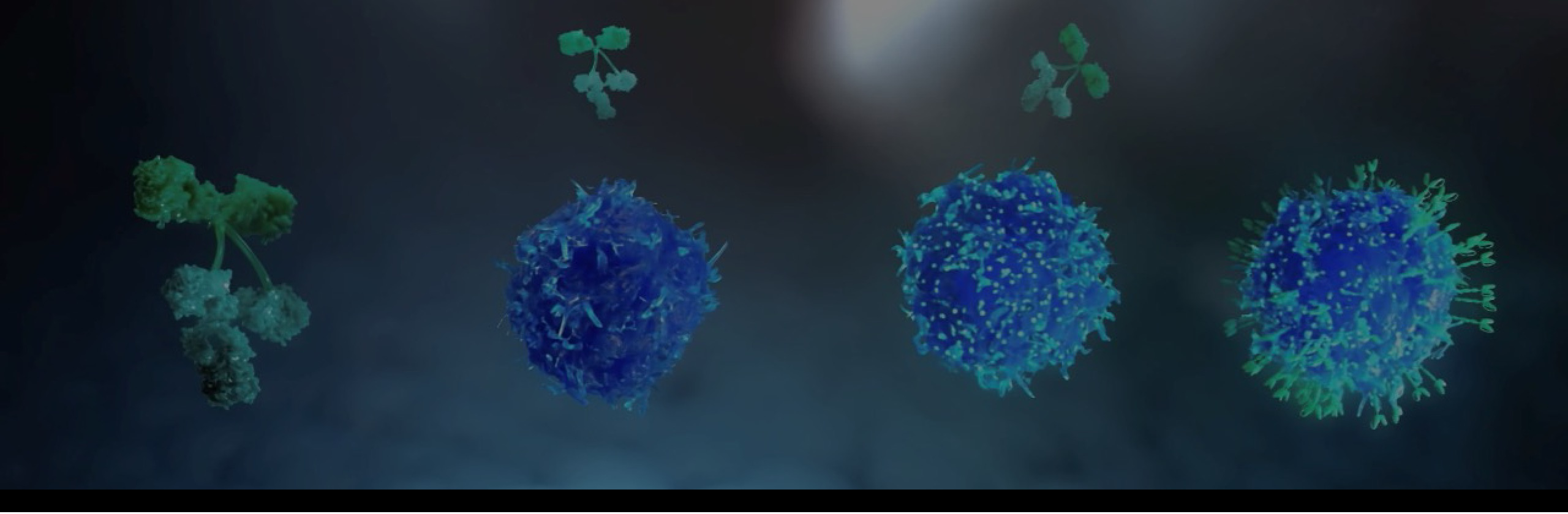


- Worldwide patent granted
- Tetravalent format for increased affinity & avidity
- Full Fc function supports longer half-life
- Proprietary flexible linker allows simultaneous binding to 2 different cells
- Proprietary mutation ensures proper alignment of light and heavy chains and molecule stability
- Validated Manufacturability trough STC Biologics partnership

Engaging NK cells with NKp46



- NKp46 has significant benefits as an activating receptor
- Primary driver of NK Cell's "natural cytotoxicity"
- Shows sustained expression on NK cells in the tumor microenvironment while other activating receptors are downregulated



CYT-303:
Our GPC3-Targeted Flex-NK™ Bispecific Antibody for Hepatocellular Carcinoma

Cytovia Uniquely Positioned to Address the High Unmet Need in HCC

HCC is The Most Frequent Form of Liver Cancer

- Liver cancer is the 3rd leading cause of cancer-related deaths worldwide
- HCC represents ~90% of liver cancer cases, with over 800,000 patients worldwide

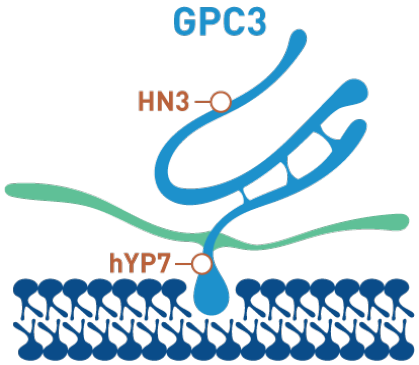
Suboptimal Therapies Are Driving High Unmet Need

- Response rate with best standard of care (Tecentriq® + Avastin®): 28%
- Average progression-free survival: 6.8 months
- 5-year survival rate: < 9%

Addressable Market Expected to Grow Substantially

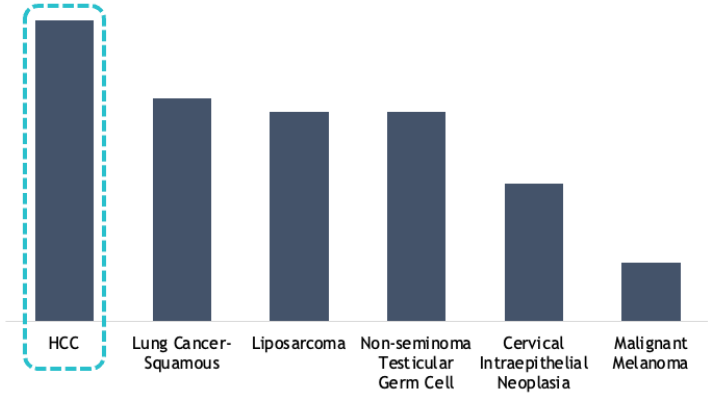
- Unresectable HCC market expected to surpass $10 billion over the next decade

GPC3: A Promising New Therapeutic Target for HCC and Other Solid Tumors

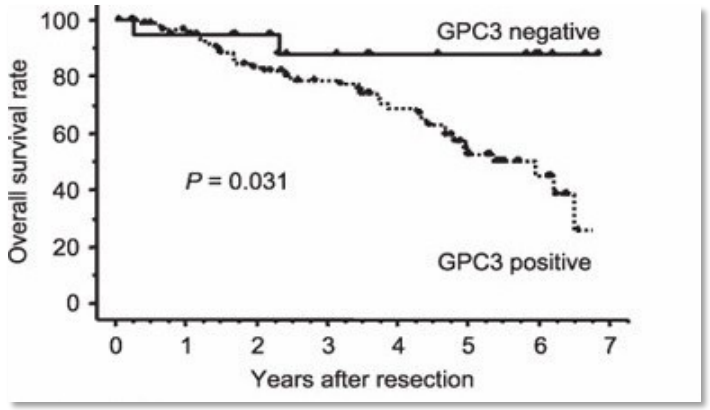


Glypican 3 (GPC3) is a protein expressed on the cell membrane of HCC & select other solid tumors, while predominantly absent in normal tissue.

GPC3 Relative Expression in Solid Tumors



GPC3 Blood Levels Correlate with Severity of Disease



Cytovia's CYT-303 Bispecific Antibody Positioned To Be First-in-Class in the Emerging GPC3 Market

Select Competitive GPC3 Programs

	Takeda	LEGEND BIOTECH	UNUM THERAPEUTICS / Sotio	Adicet Bio / REGENERON	Cytovia
Stage	Phase 1	Pre-Clinical	Pre-Clinical	Pre-Clinical	**Pre-Clinical**
Cell Type	CAR-T	CAR-T	CAR-T	Vδ1 gamma delta CAR-T	**iNK CAR-iNK**
Source	Patient	Patient	Donor-Derived	Donor-Derived	**iPSC**
Bispecific Antibodies	✗	✗	✗	✗	**FLEX-NK™**

(1) Athenex acquired Kuur Therapeutics in May, 2021

Source: Baumhoer et al., Am J Clin Pathol 2008;129:899-906

CYT-303 Bispecific Antibody Combination Therapy Options in HCC

Non-Responders to Atezo + Bev Show High cGPC3 & Low NK Cell Functionality

CYT-303 Flex-NK™ Bispecific Antibody For HCC

CYT-303 Flex-NK™ Bispecific Antibody combination with CYT-150 (gene-edited iNK Cell)

or

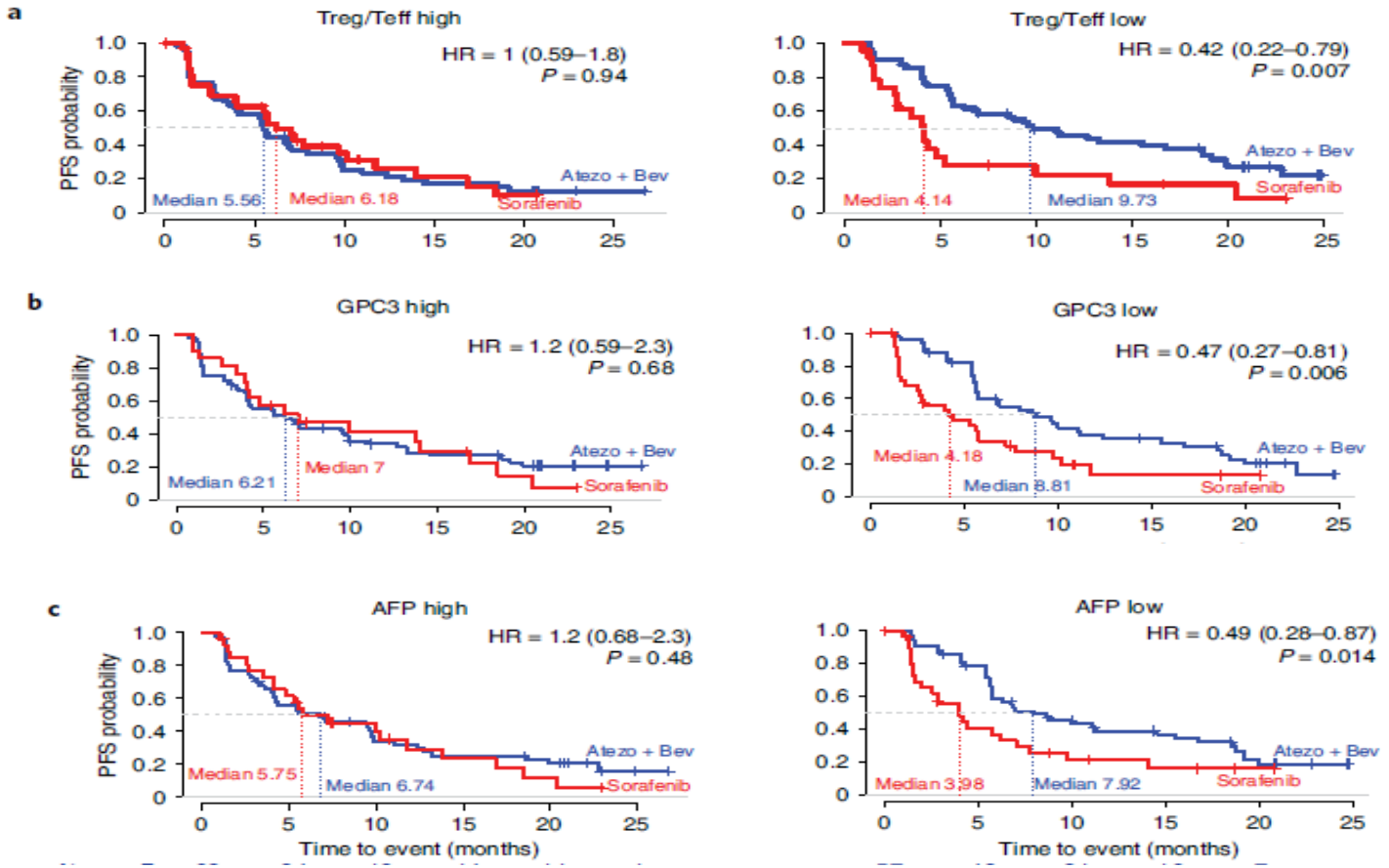
CYT-303 Flex-NK™ Bispecific Antibody precomplexed with iNK CYT-100 (iNK Cell)

CYT-303 Flex-NK™ Bispecific Antibody combination with Atezo +Bev checkpoint inhibitor refractory patients (2nd line immunotherapy)

Rationale for CYT-303 Combination Therapy with Check Point Immunotherapy

Retrospective Biomarker Analysis of Atezo + Bev First Line HCC Immunotherapy Approval

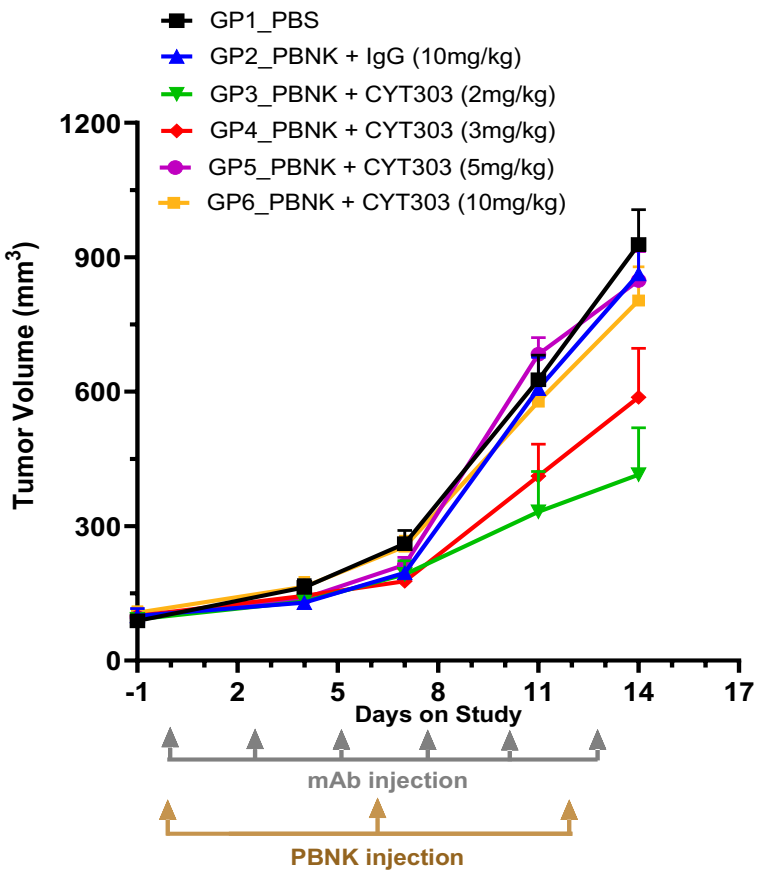
Since CYT-303 can activate NK cells and reduce HCC tumor burden, high GPC3 & AFP levels can be converted to low GPC3 & AFP signatures that are responsive to Atezo + Bev first-line immunotherapy



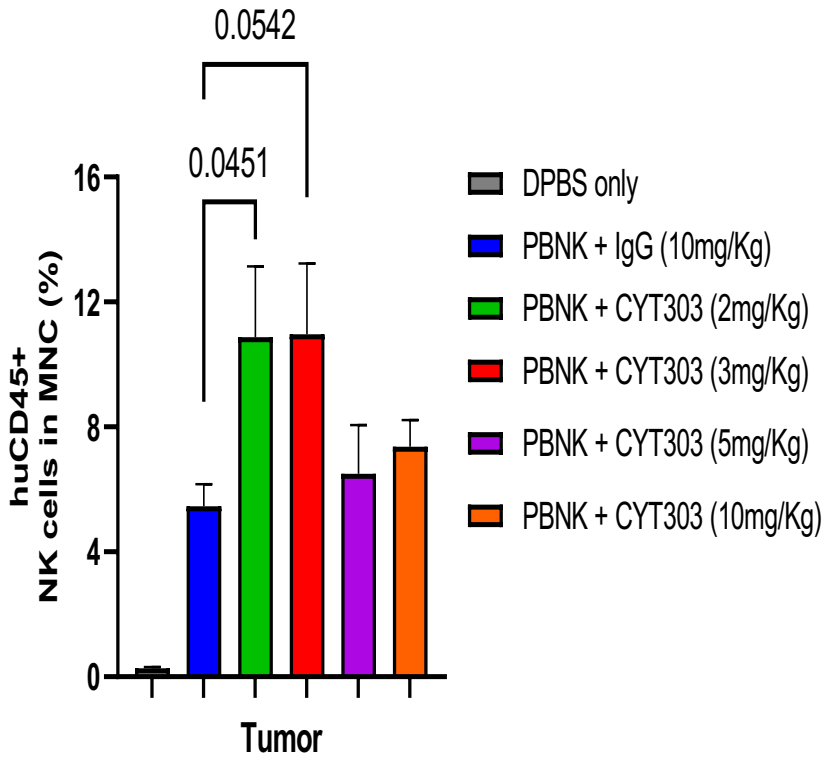
A Xu et al Nat Med 2022 and GO30140 and IMbrave150

CYT-303 Anti-HCC Tumor Dose Response Correlates with Increased PBNK Trafficking from Blood to the Tumor

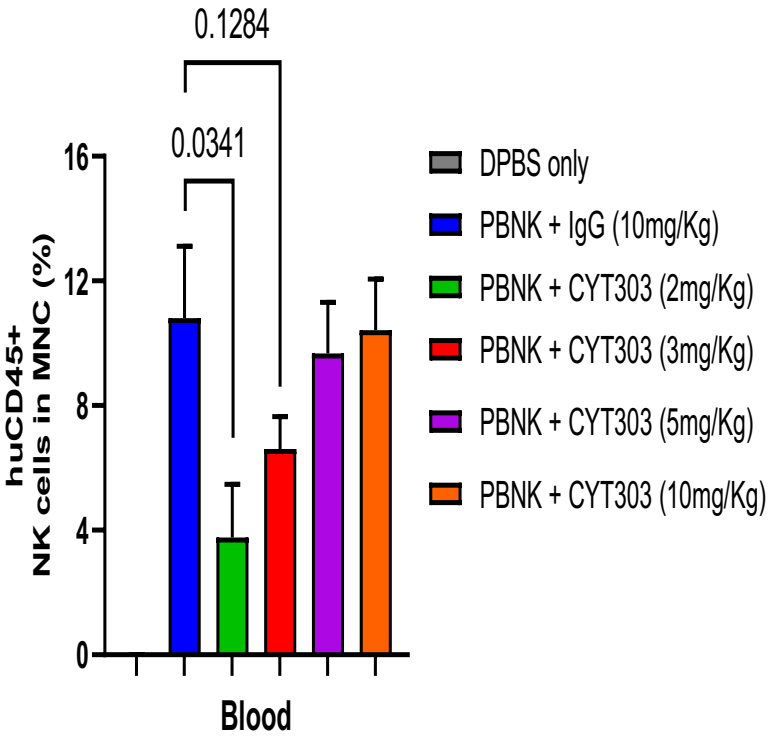
CYT-303 Tumor Growth Inhibition



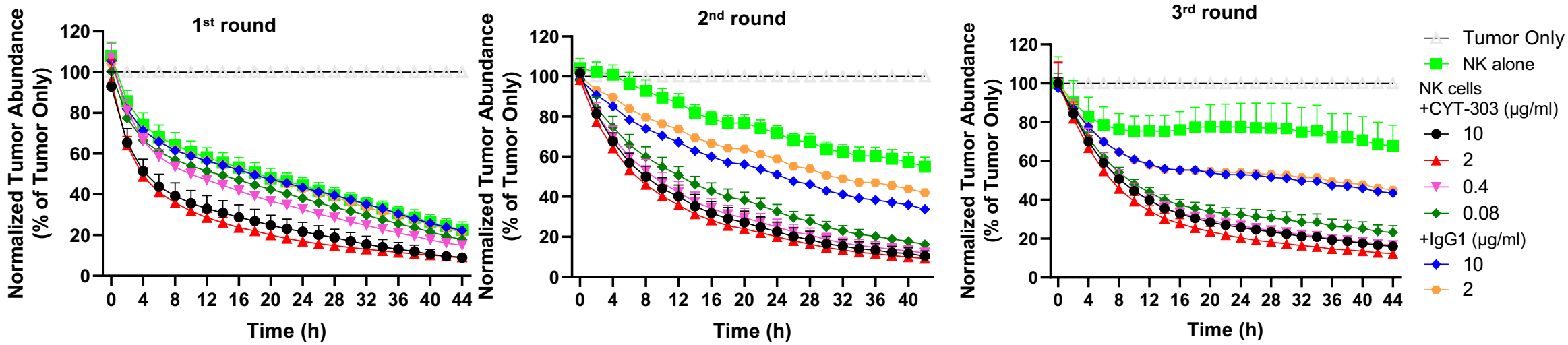
PBNK Tumor Infiltration



PBNK Pharmacodynamics in blood



CYT-303 Enhances HCC Tumor Killing & Reverses Dysfunction of PBNK Cells During Serial Killing



E/T ratio 1:2

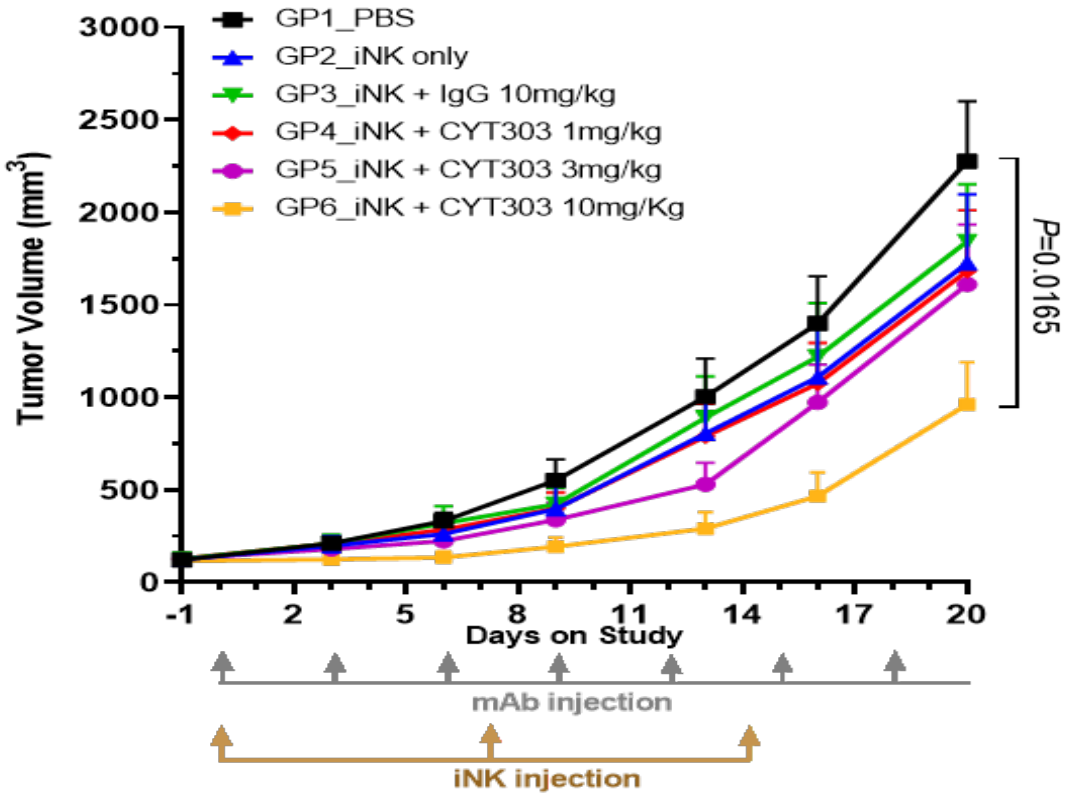
→ **PBNK cells alone showed gradual reduction in serial killing of Hep3B tumors suggesting dysfunction of these cells over time**

→ **CYT-303 reversed dysfunction of PBNKs and enhanced serial killing of Hep3B tumors in a dose dependent manner**

Society for Immunotherapy of Cancer

CYT-303 Flex-NK™ Bispecific Antibody Combination with iNK cells Demonstrates Dose-Dependent Anti-Tumor Efficacy in HCC Tumor Models

CYT-303 Tumor Growth Inhibition
In a Hep3B HCC Mouse Model



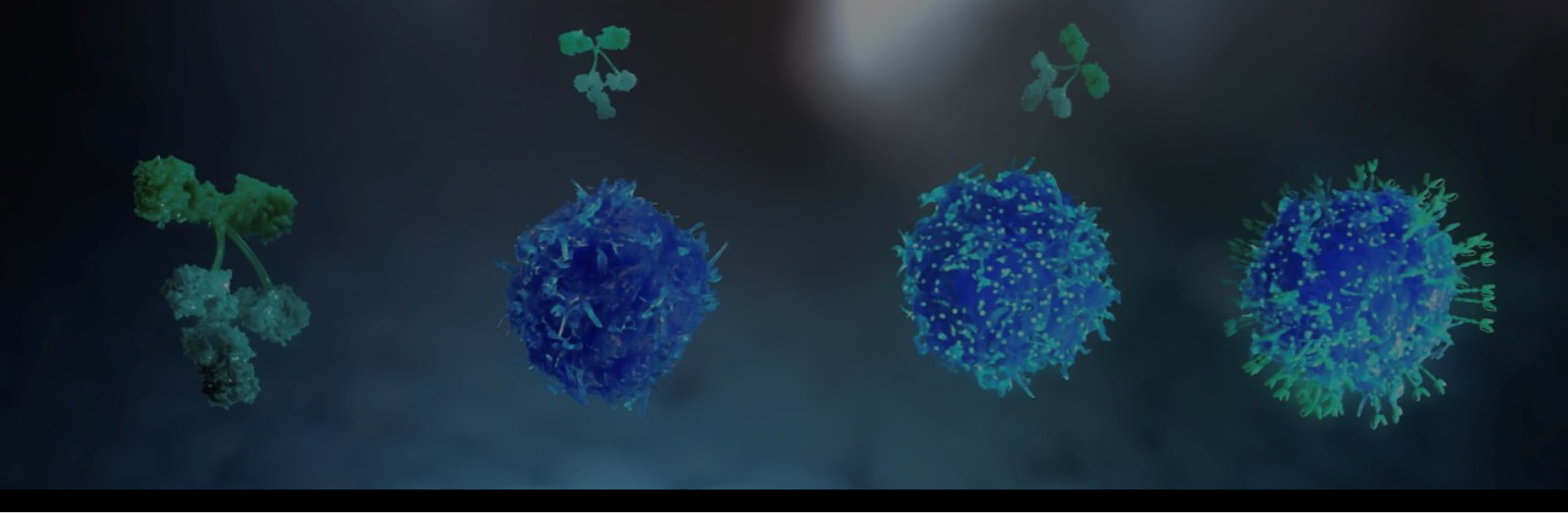
Arulanandam, et al, Abstract 756, Glypican-3 (GPC3) and NKp46 directed FLEX-NK™ cell engager antibody (CYT-303) distributes to tumors and shows dose-dependent tumor growth inhibition in a hepatocellular carcinoma (HCC) mouse model, Ann Oncol 2022 September: 33 (Suppl 7)

Pre-Clinical Data Supports Advancement to IND & Clinical Trials

CYT-303:
Cytovia's GPC3-Targeted Bispecific Antibody for Hepatocellular Carcinoma (HCC)

- Ability to Redirect NK Cells to Kill HCC Tumors Cells
- Enhances Killing Ability & Reverses Dysfunction of NK Cells
- Increased Tumor Growth Inhibition when combined with iNK Cells
- Improved Dose-Response in HCC Tumor Models in Combination with Both iNK & PBNK Cells
- No toxicity at up to 20 times expected therapeutic dose
- Supports Weekly Administration in Patients

(1) Athenex acquired Kuur Therapeutics in May, 2021
Source: Baumhoer et al., Am J Clin Pathol 2008;129:899-906



CYT-338:
Our CD38-Targeted Flex-NK™
Bispecific Antibody for Multiple Myeloma

Multiple Myeloma: High Unmet Medical Need Despite Significant Progress

Multiple Myeloma is the 3rd Most Common Blood Cancer Worldwide

- 176,444 new cases worldwide in 2020

Antibody & Cell Therapy Have Transformed the Market

- MM market has grown rapidly over the last 10 years with increased use of biologics and cell therapy – primarily Darzalex & CAR-Ts - to reach $22 billion in 2021
- J&J's Darzalex (CD38-targeted antibody) reached $8B sales in 2022

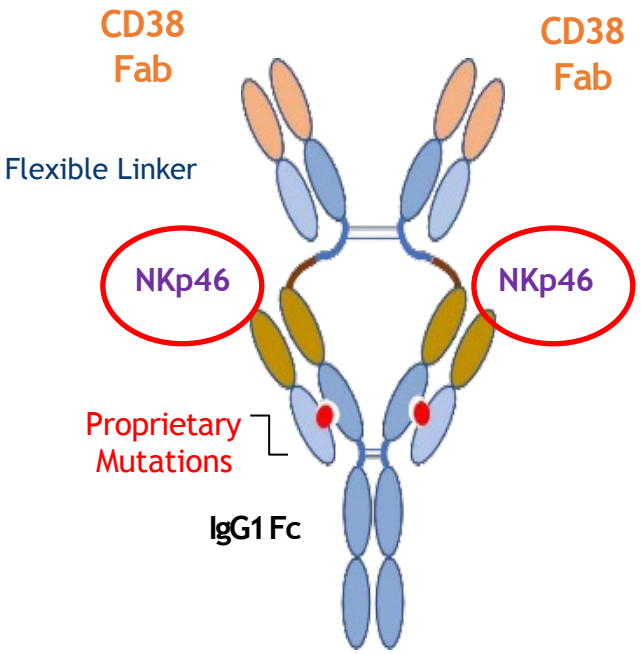
Addressable Market Expected to Grow Substantially with 2nd generation products

- Darzalex moved to 1st line of treatment, opening the need for 2nd & 3rd line treatments
- Cost, accessibility, and safety concerns limit CAR-T therapies to small number of academic centers
- Bispecific antibodies & off-the-shelf cell therapy expected to address current limitations and expand the market

Source: Future Market Insight ; N Engl J Med 2019;380:1450-62. DOI: 10.1056/NEJMra1713263; N Engl J Med 2020;382:1894-905. DOI: 10.1056/NEJMoa1915745; J Res Med Sci. 2019; 24: 86. Published online 2019 Oct 25. DOI: 10.4103/jrms.JRMS_1017_18; GlobalData 2021; Cancer Treatment Centers of America 2022

CYT-338 NK cell engager bispecific Abs are differentiated from Daratumumab

Supports Monotherapy or combination with BCMA T Cell Engagers or NK Cells



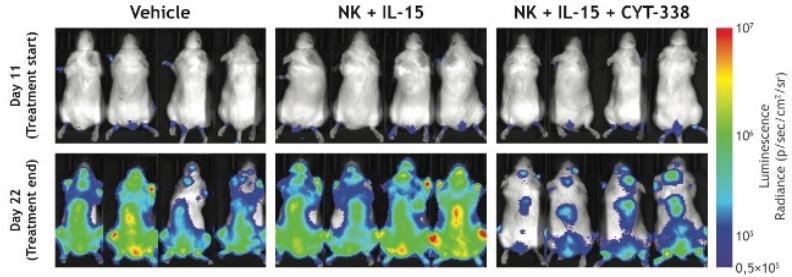
Attribute	CYT-338	Daratumumab
MOA	CD38 cytotoxicity + NK cell redirected cytotoxicity (NKp46+ CD16)	ADCC
CD38 Binding	Different epitope 3 fold higher than Dara	Lower
NK and Macrophage cytotoxicity against MM	Higher	Lower
Fractricide	Minimal (unique MOA)	Significant
Immune subset depletion	Minimal (unique MOA)	Significant
Cytokine release	Minimal (unique MOA)	Significant

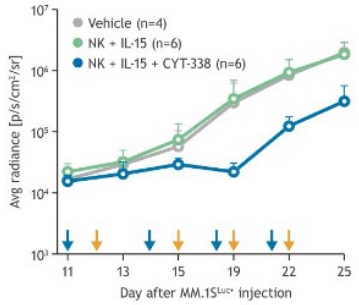
Pre-Clinical Data Supports Developing CYT-338 As a Therapeutic With Differentiated Functionality Compared to Daratumumab

CYT-338 Actively Targets and Kills Multiple Myeloma Cells While Sparing Immune Cells

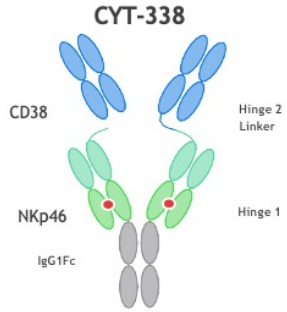
Functional Activities in vivo

Tumor growth inhibition

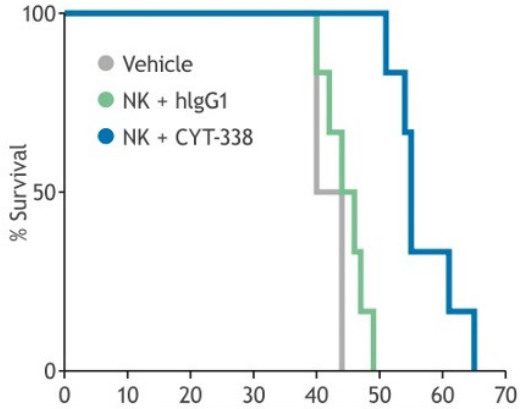




CYT-338 showed MM1S multiple myeloma tumor growth inhibition in NSG mice injected with PBNK cells and hIL-15.



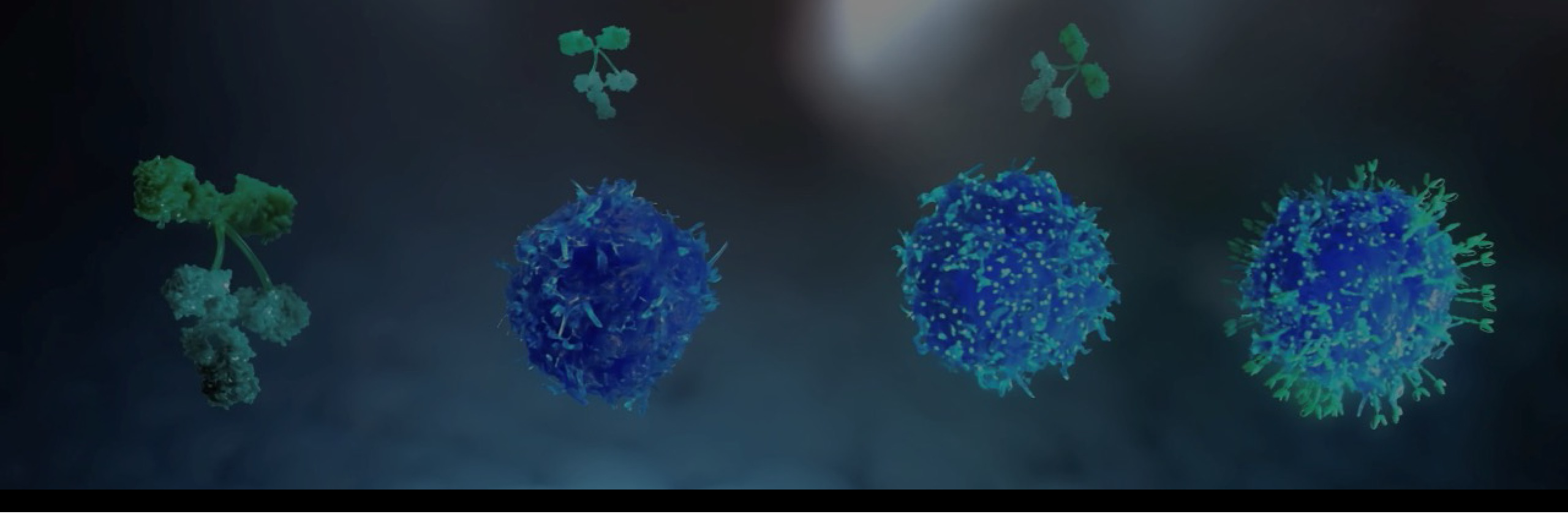
Improved survival



CYT-338 treated NOG-hIL15 mice showed significantly greater survival compared to vehicle treated mice in a MM1S multiple myeloma tumor model

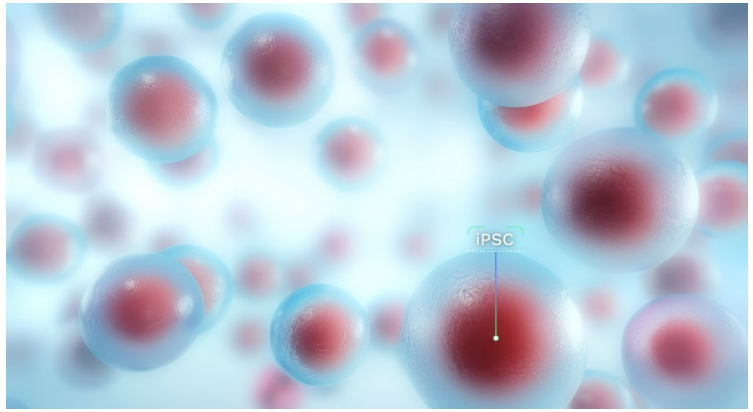
- **Favorable Safety Profile:** CYT-338 also showed minimal NK cell fratricide, immune depletion, and cytokine release compared to daratumumab in human PBMCs (published data)

Source: Lin L, Chang H-M, Nakid C, Frankel S, Wu D, Kadouche J, et al. P842: NOVEL MULTIFUNCTIONAL TETRAVALENT CD38 NKP46 FLEX-NK ENGAGERS ACTIVELY TARGET AND KILL MULTIPLE MYELOMA CELLS. HemaSphere. 2022;6:736-7.



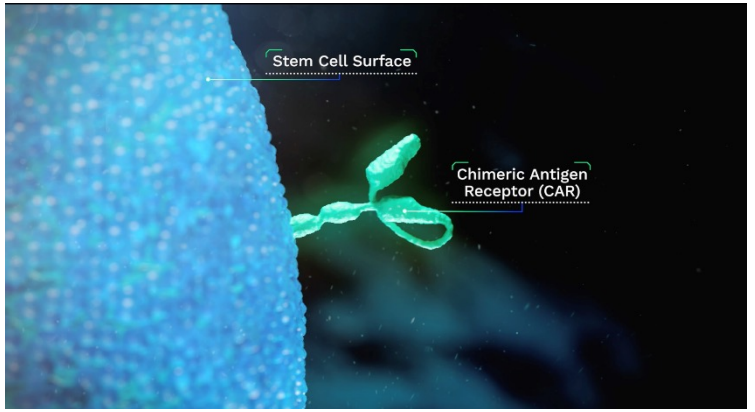
iNK & CAR-iNK Cells:
Optimally-Designed Natural Killer Cells
To Enhance Flex-NK™ Bispecific Antibody Therapy

Cytovia Has Best-in-Class Toolbox to Develop The Next Generation of Cell Therapeutics



Induced Pluripotent Stem Cells (iPSCs)

TALEN® Gene-Editing

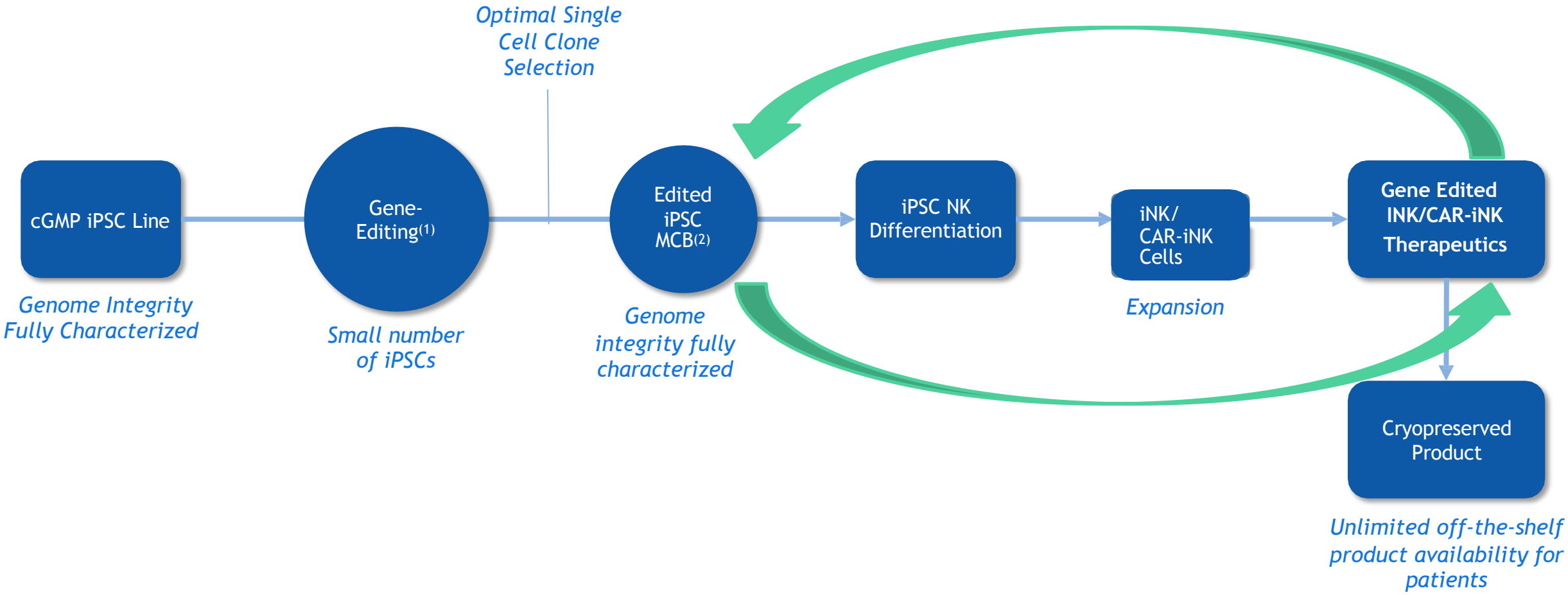


Chimeric Antigen Receptors (CARs)

iPSC Technology: The Key To Lower-Cost, "Off-the-Shelf" Cell Manufacturing & Consistent Gene-Editing

Donor-derived approaches are limited by:	Advantages of iPSC-derived approach:
▶ Batch-to-batch variation ▶ Capacity bottleneck ▶ Challenging repetitive quality control needed to eliminate off-target gene edits	▶ **Streamlined, lower-cost manufacturing** with gene-editing as a one-time event ▶ **Consistent "off-the-shelf" product** from optimally-designed, single-iPSC clone (Master Cell Bank) ▶ **Easier quality control** supporting homogeneous and consistent products, even when complex gene-editing is used

Fully-Integrated In-House Process Development Capabilities for Gene-Edited iNK / CAR-iNK Cell Platform

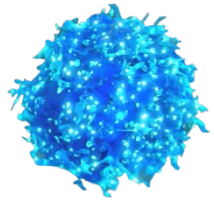


Augmenting the Persistence & Performance of iNK Cells Through TALEN® Gene-Editing

Cytovia Therapeutics
Allogeneic, iNK & CAR-iNK Expertise

+

cellectis EDITING LIFE
TALEN® Gene-Editing Expertise



TALEN® Gene-Edited iNK and CAR-iNK Cells

Gene-editing can be used to:

- Augment NK cell anti-tumor functions by targeted CAR insertion
- Ability to knock-in or knock-out specific genes involved in NK activity such as cell exhaustion, activation, tolerance, and memory

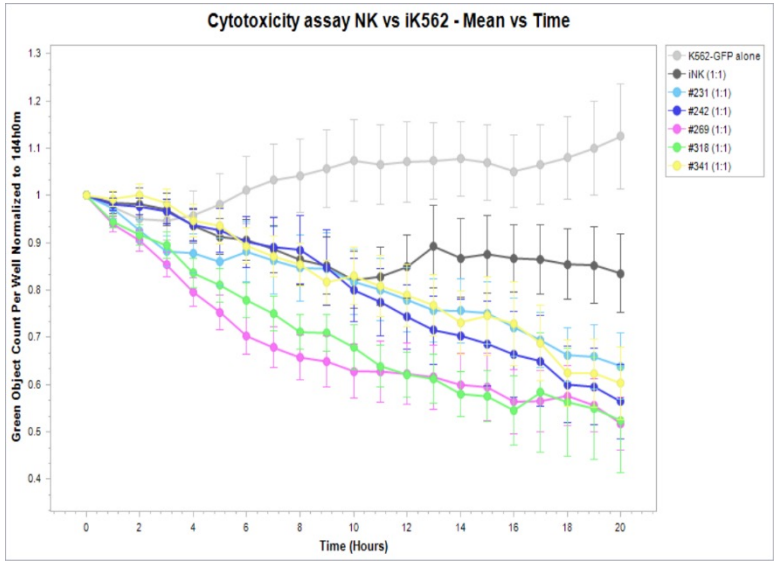
Competitive advantages of TALEN® over other gene-editing tools:

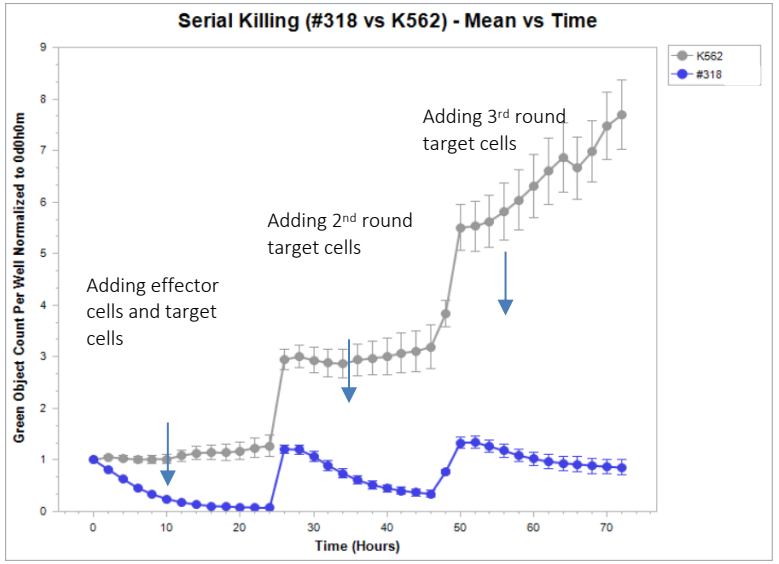
- TALEN® demonstrates comparable knock-in and knock-out efficiency to Cas9
- TALEN® demonstrates higher target specificity with customized nucleases for specific loci compared CRISPR/Cas9

Improving the Cytotoxicity & Persistence of iNK Cells Through TALEN ® Gene Editing

	% of CD56+ cells
iNK from clone 242	98.28%
iNK from clone 269	96.94%
iNK from clone 318	96.72%
iNK from clone 341	96.85%

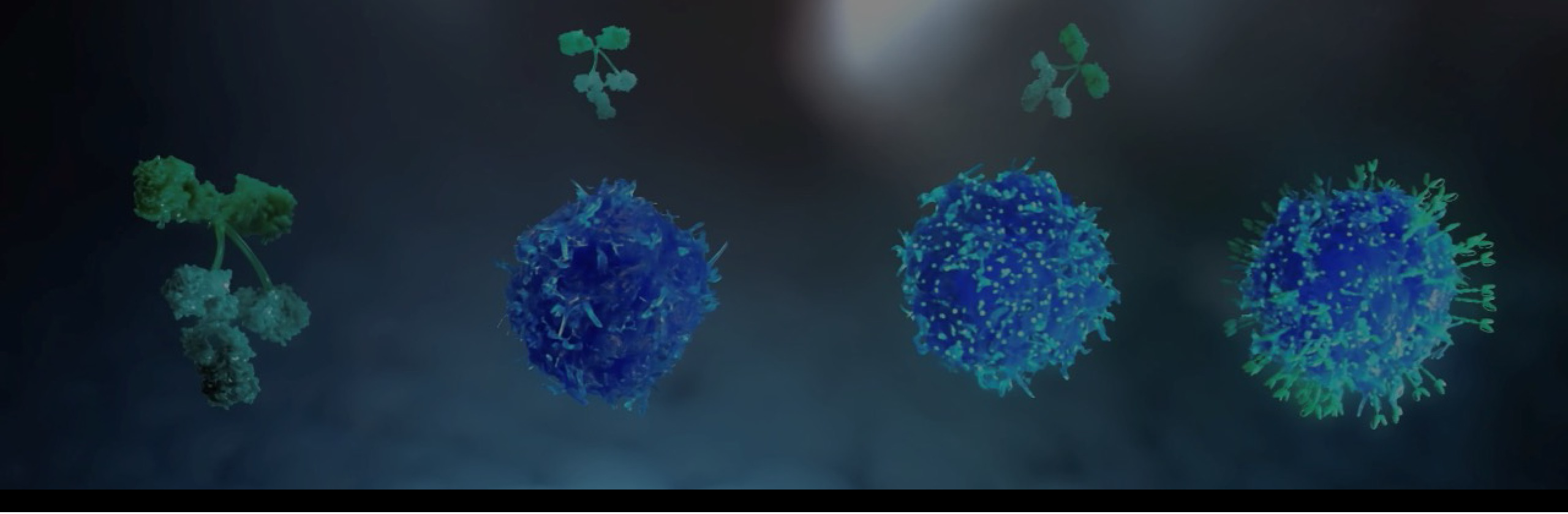
iNK clone	IL-15 KI	TGFbR2 KO
242	+	-
269	-	+
318	+	+
341	+	+





- In all edited iNK cells, cell killing is shown to be higher when compared to unedited iNK cells
- Double-editing of iNK cells allows for sustained ability to kill over 3 rounds (serial killing)

Chen et al, Abstract # 323 Poster Presentation SITC 2022, TALEN®-based Gene Edited iPSC-derived NK (iNK) Cells Demonstrate Enhanced Antitumor Activity



Cytovia Therapeutics

Investment Considerations

Cytovia Value Creation:
From Vision to Operational Execution and Upcoming Clinical Milestones

2019-2020
Vision & Discovery Partnerships

Leveraging Two Cutting-Edge Technology Platforms To Develop First-in-Class Immune Cell Therapeutics

NIH National Cancer Institute · UCSF · Inserm · NYSCF · Yissum · celectis · CytoImmune Therapeutics

2020-2021
Building Capabilities

Advancing our programs through preclinical development & manufacturing

Cytovia Therapeutics

- **Miami:** Finance, Clinical Development, Business Development
- **Boston (R&D):** Cell Therapy & Gene Editing Center of Excellence, Pre-clinical Development

Partnerships

- **STC (Boston):** Antibody Process Development & GMP Manufacturing
- **CytoLynx (Shanghai):** R&D, GMP Manufacturing, Clinical Development

2021-2022
Operational Execution

Advancing Towards a Clinical Stage Public Company

- ✓ Validated Process Development for iNK Cells, Gene-Editing, and Bispecific Antibodies
- ✓ Data Generation & Presentation at Major Conference
- ✓ IND Readiness & Clinical Trial Planning
- ✓ Audited Financials & IPO/Public Company Readiness

2023 & Beyond
Clinical Milestones & Development Partnerships

- 2 Flex-NK™ Bispecific Antibody INDs in 2023
- Initial Clinical Data for GPC3 & CD38 programs in 2024
- INDs for Gene-Edited iNK & CAR-iNK Cells in 2024

Experienced Leadership Team

Daniel Teper, PharmD, MBA
Co-Founder, Chairman & CEO

Wei Li, PhD
Chief Scientific Officer

Michael Noonan, JD, MBA
Chief Financial Officer

Armin Rath, PhD
Chief Operating Officer

Anna Baran-Djokovic
SVP, IR & Corporate Affairs

Tony Arulanandam, PhD
SVP, Pre-Clinical Research

Dan Chiche, MD
SVP, Clinical Development & Medical Affairs

Top KOLs in Clinical & Scientific Advisory Boards

Michael Caligiuri, MD

City of Hope Cancer Center
Duarte, CA

Yaron Ilan, MD

Hadassah Medical Center
Jerusalem, IL

Armand Bensoussan, PhD

INSERM
Paris, FR

Josep Lovett, MD, PhD

Mount Sinai Medical Center
New York, NY

Ola Lungdren, MD, PhD

Sylvester Cancer Center
University of Miami
Miami, FL

Justin Eyquem, PhD

University of California San Francisco
San Francisco, CA

Ofer Mendelboim, PhD

Hebrew University of Jerusalem
Jerusalem, IL

Cytovia On Track to Become A Clinical-Stage Company

First-In-Class Flex-NK™ Bispecific Antibodies Ready to Initiate Clinical Trials in 2023, Addressing 2 Indications w/ Major Unmet Medical Needs & Multi-Billion Dollar Sales Potential

- GPC3-targeted FLEX-NK™ Bispecific Antibody for Hepatocellular Carcinoma (HCC) & Other Solid Tumors
- CD38-targeted FLEX-NK™ Bispecific Antibody for Multiple Myeloma (MM) & Other Hematological Tumors

Optimally-Designed Natural Killer Cell Products To Enhance Flex-NK™ Bispecific Antibody Therapy

Validating Data Presented at Major International Oncology Conferences in 2022 & 2023

- (AACR, EHA, ESMO, SITC, ASH, ASCGT)

Ready to Scale up Revenues Through Partnerships

- First corporate partnership executed with CytoLynx, generating $42.5 million to date, with potential future revenues of up to $400 million
- Additional biopharma partnerships expected starting in 2023 to generate significant revenues, leveraging both technology platforms

Strategically In-Licensing Additional Clinical-Stage Assets