

# **Tri-Specific NK Cell ENGAGERS (TriKE<sup>®</sup>)**

### Targeted NK Cell Therapies to Treat Cancer and Autoimmune Disease

GT Biopharma (Nasdaq: GTBP) Corporate Presentation – August 2025

### Disclaimer



This presentation includes statements that are, or may be deemed, "forward-looking statements." In some cases, you can identify forward-looking statements by terminology including "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "should," "will," "would" or the negative thereof, other variations thereon or other comparable terminology. We operate in a very competitive and rapidly-changing environment and new risks emerge from time to time. As a result, it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. You are cautioned not to place undue reliance upon such forward looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements will be achieved or occur. We direct you to our Annual Report on Form 10-K for the year ended December 31, 2024, and our other filings with the Securities and Exchange Commission. Any forward-looking statement included in this presentation speaks only as of the date hereof. Except as required by law, we do not undertake any obligation to update or revise, or to publicly announce any update or revision to, any of the forward-looking statements, whether as a result of new information, future events or any other reason after the date of this presentation. For all forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

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## Investment Opportunity – Next Generation of NK Cell ENGAGERS

Proprietary TriKE® Platform – Camelid Nanobodies	<ul> <li>TriKE<sup>®</sup> are tri-specific NK cell ENGAGERS</li> <li>Incorporate Camelid "nanobodies"</li> </ul>
NK Cell ENGAGERS – Safer than T Cells <sup>1</sup>	<ul> <li>Protein therapeutics to harness the natural killing power of NK cells with – NOT NK cell therapy</li> <li>Activates NK cells via CD16A and IL-15 while targeting tumor antigens</li> <li>Potentially safer than T-cell immunotherapy</li> </ul>
POC Established and Broad Applicability	<ul> <li>GTB-3550 (targeting CD33) showed POC in Phase 1 in AML patients</li> <li>GTB-3650 will supplant 3550 as 2<sup>nd</sup> generation TriKE<sup>®</sup> with several advantages</li> <li>TriKE<sup>®</sup>s target multiple tumor antigens including B7H3, HER2, CD33, PDL1</li> </ul>
Multiple Catalysts	<ul> <li>6+ pipeline assets in preclinical development, both solid tumors and hematological malignancies</li> <li>GTB-3650 IND accepted in June 2024, first patient dosed Q1 2025</li> <li>GTB-5550 IND submission expected Q4 2025</li> </ul>
<b>Broad Indication Potential</b>	<ul> <li>GTB-7550 TriKE<sup>®</sup> candidate in development for the treatment of lupus, other autoimmune disorders</li> <li>Exploring manufacturers for GTB-7550</li> </ul>
Well-funded Experienced Leadership	<ul> <li>Management team with deep expertise in all stages of oncology drug development</li> <li>\$5.3M in cash as of June 30, 2025 (unaudited), anticipated to be sufficient to fund operations into Q1 2026</li> </ul>

## **TriKE® Nanobody Pipeline**



TriKE <sup>®</sup> Product Candidates	Approach	Target	Indication	Pre-Clinical	IND-Enabling/ GMP Manufacturing	Phase 1	Phase 2	
GTB-3650	Monotherapy	CD33	Leukemia – AML, MDS			GTB-365 initiated	3650 Phase 1 trial ted: First patient	
2 <sup>nd</sup> Generation Camelid	Combination with Chemotherapy	CD33	Leukemia – AML, MDS			dosed	I Q1 2025	
GTB-5550	Monotherapy & Combination	B7H3	Solid Tumors			GTB-5550 IND submission		
GTB-6550	Monotherapy & Combination	HER2	Solid Tumors			expected Q4 2025		
GTB-7550	Monotherapy & Combination	CD19	B-Cell Malignancies					
GTB-1050	Monotherapy & Combination		HIV					
Undisclosed Candidates	Monotherapy & Combination		Solid & Hematological Malignancies				GTB-3550 supplanted by second	
GTB-3550	Monotherapy	CD33	Leukemia – AML, MDS				generation GTB-3650	

**Clinical Product Candidates** 

**Preclinical Product Candidates** 

**Development Abandoned** 

## **Natural Killer Cell ENGAGERS to Fight Cancer**





### **Natural Killer Cells**

- Cytotoxic lymphocytes in the innate immune system
- Recognize and kill cancer cells
- Mediate antibody-dependent cellular cytotoxicity (ADCC) via the highly potent CD16 activating receptor

### **NK Cell ENGAGERS**

- TriKE<sup>®</sup> nanobody platform designed to activate endogenous NK cells to target specific cancer cells
- Potential for less toxicity than other cellular therapies such as CAR-T therapy
  - Less cytokine release syndrome (CRS)
  - Fewer neurological complications

Source: Levy R. Paths of Progress 2019, Natural Killer Cells: How the immune system's first wave of defense may play a newfound role in cancer care; accessed: 6 September 2021 <a href="http://www.dana-farber.org/newsroom/publications/paths-of-progress-2019/natural-killer-cells/">www.dana-farber.org/newsroom/publications/paths-of-progress-2019/natural-killer-cells/</a>

### TriKE<sup>®</sup>: Tri-Specific Natural Killer (NK) Cell ENGAGERS - A Modular Platform



# Proprietary platform utilizing camelid nanobody technology designed to bridge NK cells to tumor cells while inducing NK cell activation and expansion at the site of the tumor to enhance killing

#### Tri-specific Modular Platform with Nanobody Technology

- Anti-CD16 nanobody\* binds CD16 receptor on NK cells, triggering antibody directed cell-mediated cytotoxicity (ADCC)<sup>1</sup>
- IL-15 crosslinker that binds IL-15/IL-2 receptor on NK cells to induce self-sustaining expansion and extended survival<sup>2,3</sup>
- Anti-TAA scFv scFv domain binds to various tumor-associated antigens on tumors



\* 1<sup>st</sup> generation TriKE GTB3550 utilizes scFv for a-CD16 1. Semin Immunol. 2017 Jun; 31: 64–75.

2. J Exp Med. 1994 Oct 1; 180(4): 1395–1403. 3. Vallera et. al. Clin Cancer Res. 22(14) July 15, 2016



#### **TriKE® Modular Platform Allows for Multiple Tumor-Associated Antigen**





#### **Anti-Tumor Associated Antigen**

- Binds to well-known tumor-specific antigens
- Defines the specificity of each TriKE®
- Localizes NK cells at the site of the malignancy
- Utilizes scFv fragments for most TriKE<sup>®</sup> constructs
- Certain TriKE<sup>®</sup>s utilize nanobodies for the  $\alpha\text{-TAA}$



### TriKE<sup>®</sup> – NK Cell-Driven Serial Killing of AML Tumor Cells

- First-in-class modular immune oncology protein therapeutic platform technology – not a cell therapy
- Target-directed antibody-dependent cellular cytotoxicity (ADCC) killing
- Integrated CD16 and IL-15 driven activation of NK cells:
  - ADCC activation for enhanced serial killing of cancer cells
  - NK cell proliferation
  - NK cell persistence
- Minimizes toxicities such as cytokine release syndrome (CRS) resulting from hyperactivation of T cells
- Can be used to treat BOTH solid tumors and hematological cancers



BIOPHARMA

(Click on Image to Play Video) Enhanced Serial Killing of Cancer cells (green) by TriKE<sup>®</sup> directed NK cell (blue)



#### GTB-3550 Phase 1 Demonstrates Proof of Concept for CD33 TriKE® in AML/MDS



- GTB-3550 induces reproducible NK cell proliferation, activation and persistence in all patients at all dose levels with minimal clinically significant toxicity
- Minimal CRS resulting from hyperactivation of patient's T-cell population at doses 5–150 µg/kg/day
  - Fever (Grade 1 CRS) observed in Subject #12 (150 µg/kg/day); resolved upon acetominophen treatment
- No loss in CD16 expression on patient's NK cells
- GTB-3550 significantly reduced CD 33+ bone marrow blast levels by 33.3%, 61.7%, 63.6%, 50% in Patient 5 (25 µg/kg/day), Patient 7 (50 µg/kg/day), Patient 9 (100 µg/kg/day), and Patient 11 (150 µg/kg/day), respectively
- After the end of infusion, GTB-3550 & IL-15 concentrations declined rapidly with overall geometric mean terminal phase elimination half-life (T1/2) of 2.2 and 2.52 hours, respectively



Second generation TriKEs® utilize camelid nanobody technology

#### Advantages of Camelid Antibodies – Nanobodies in 2nd Generation TriKEs®



- Camelidae family of mammals include llamas, camels, and alpacas
- Camelid antibody is made up of only 2 heavy chains
  - Heavy chain IgG (hcIgG)
  - Do not contain the CH1 region
  - Retain an antigen binding domain  $V_HH$  region
- $V_H$ H are known as single domain antibodies or nanobodies
  - Contain only the  $V_H H$  region from the camelid antibody
- 2<sup>nd</sup> Generation TriKE<sup>®</sup>s utilize nanobodies
- Advantages over 1<sup>st</sup> Generation TriKE<sup>®</sup>s (GTB-3550) include:
  - Improved potency and enhanced binding affinity
  - Commercial manufacturing capabilities through Cytovance
  - Proprietary molecule wholly owned by GT Biopharma
  - Similar preclinical safety profile



### Our Approach – Co-Stimulation of CD16 and IL-15



#### **TriKE®** Competitive Differentiation

- The anti-CD16 component of the TriKE<sup>®</sup> binds FcRγIII with high affinity
- TriKE<sup>®</sup> does not result in proliferation of T-cells
- IL-15 provides NK cell specific proliferation with less bystander T-cell activity compared to the IL-15 protein itself
- IL-15 in TriKE<sup>®</sup> is less active surrounded by ENGAGERS than rhIL-15
- TriKE<sup>®</sup> can be targeted to heme malignancies, solid tumors and infectious diseases





## **GTB 7550 for Autoimmune Disease**

**Targeting CD19 for B-Cell Depletion In Vivo** 

# **GTB 7550 for Autoimmune Disease**



- GTB-7550 TriKE<sup>®</sup> product candidate is in development for the treatment of lupus and other autoimmune disorders
- GTB-7550 TriKE<sup>®</sup> is a tri-specific molecule composed of a camelid nanobody that binds the CD16 receptor on NK cells, a scFv ENGAGER against CD19 on malignant and normal B cells, and a human IL-15 sequence between them
- Published data shows that GTB-7550 effectively targets CD19+ malignant cell lines and primary chronic lymphocytic leukemia (CLL)
- Preliminary data shows that GTB-7550 can target and eliminate normal B cells
- NSG mice will be used to test the ability of GTB-7550 to deplete normal B cells in vivo
- Exploring manufacturers for GTB-7550
- Quickest path to clinic may be testing safety in B cell malignancy first

# **GTB 7550 for Autoimmune Disease**



#### REGULAR ARTICLE

#### S blood advances

Novel CD19-targeted TriKE restores NK cell function and proliferative capacity in CLL

Martin Felices,<sup>1</sup> Behiye Kodal,<sup>1</sup> Peter Hinderlie,<sup>1</sup> Michael F. Kaminski,<sup>1</sup> Sarah Cooley,<sup>1</sup> Daniel J. Weisdorf,<sup>1</sup> Daniel A. Vallera,<sup>2</sup> Jeffrey S. Miller,<sup>1</sup> and Veronika Bachanova<sup>1</sup>

<sup>1</sup>Division of Hematology, Oncology, and Transplantation, Department of Medicine, and <sup>2</sup>Department of Radiation Oncology, University of Minnesota, Minneapolis, MN

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1. <u>Demaria</u>, et.al. Eur J. of Immun; (2021)51:8; 1934

## **Contact Us**





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## **APPENDIX**



### **Experienced Team With Deep Immuno-Oncology Experience**



#### Proven Record in Biotech, Pharma, Product Development, Financing

Michael Breen, LL.B Executive Chairman and Chief Executive Officer	<b>Alan Urban</b> Chief Financial Officer CPA (Inactive)	<b>Jeffrey Miller, MD</b> Consulting Senior Medical Director <sup>1</sup>	Martin Felices, PhD Consulting Scientist	<b>Chris Hendry</b> Consultant, CMC and Pharmaceutical Science	Hilary Kramer Board of Directors Nominating and Corp. Gov. Committee Chair	David C. Mun-Gavin Board of Directors Compensation Committee Chair	Charles J Casamento Board of Directors Audit Committee Chair
BNP PARIBAS	RS Research Solutions infotrieve	UNIVERSITY OF MINNESOTA The University of Min	UNIVERSITY OF MINNESOTA nesota, pursuant to its ith GT Biopharma is	STEBIOLOGIES	Morgan Stanley LEHMAN BROTHERS	BROWN SHIPLEY A QUINTET PRIVATE BANK	SANOFI GENZYME 👽
Clyde&Co	REACHLOCAL	entitled to receive royalties should commercial sales of GTB-3650 be realized. This interest has been reviewed and managed by the University of Minnesota in accordance with its conflict of interest		🥏 seragen		INSINGER <sup>de</sup> BEAUFORT	

1. Dr. Miller is the Consulting Senior Medical Director at GT Biopharma and holds stock and options in GTBP.

policies.

# Recent M&A and BD Deals Highlight Value of NK Cell ENGARERS and Immuno-Oncology

Innovator				ಧ <b>ರ್) Dragon</b> fly	innate pharma
Acquirer	SANOFI 🎝	ROIVANT	SANOFI 🎝	GILEAD	SANOFI 🎝
Date	8/27/2018	11/9/2020	12/21/2021	5/2/2022	12/19/22
Deal Type	License Deal	Single Molecule Preclinical License Deal	Company Acquisition	Single Molecule Preclinical License Deal	Collaboration Expansion License Deal
Key Deal Terms	<ul> <li>\$96M upfront</li> <li>\$5B in additional milestones</li> </ul>	<ul> <li>\$60M upfront</li> <li>\$2B in milestones</li> </ul>	<ul> <li>\$1 billion upfront</li> <li>\$225M in milestones</li> </ul>	<ul> <li>\$300M cash upfront</li> <li>Undisclosed milestones</li> <li>20% royalties</li> </ul>	<ul> <li>€25M upfront</li> <li>€1.3B in milestones</li> <li>Royalties</li> </ul>
Technology / Mechanism	Redirected Optimized Cell Killing (ROCK®) platform to generate both NK cell and T cell- engaging antibodies	ROCK® platform generates tetravalent, bispecific antibodies as innate cell ENGAGERS (ICE®) customized to target specific domains on hematologic and solid tumor cells	<ul> <li>Portfolio of T cell ENGAGERS using XTEN technology</li> <li>Lead asset AMX-818 in pre-clinicals</li> </ul>	<ul> <li>NK-cell ENGAGER</li> <li>DF7001 is a TriNKET designed to activate and direct NK and cytotoxic T cell killing of cancer cells</li> </ul>	<ul> <li>NK cell ENGAGER</li> <li>Targeting B7H3</li> <li>ANKET<sup>™</sup> platform</li> <li>Option to add 2 additional targets</li> </ul>
Rationale	Allowed Roche access to Affimed platform to explore range of ENGAGER constructs for multiple oncology applications	Grants Roivant a license to the preclinical molecule AFM32	Combine Amunix's complementary molecules with Sanofi's immuno-oncology portfolio	Enhance Gilead's portfolio with complementary MOAs and scientific rationale for combination opportunities	Allogeneic NK cell immunotherapy is pillar of Sanofi's overall oncology strategy and using engineered lymphokines to stimulate NK cells is a key component



## GTB-3550 AML/MDS Phase 1 Study Design



## **GTB-3550 Activation of Endogenous NK Cells**



**GT BIOPHARMA** 

Source: Data on File, GT Biopharma, Inc.

#### **GTB-3550 First in Human Phase 1 Clinical Trial – Individual Results**



Subject	Dose level (µg/kg/d)	Disease and Prior Treatment History	Disease Characteristics Before GTB-3550 Therapy	Disease Characteristics After GTB-3550 Therapy	Response Post Cycle 1
1	5	r/r AML. Triple Hit Lymphoma - 6 therapies: 1. R-EPOCHx6, 2. RICE x3, 3. XRT to abdominal lymphadenopathy, 4. NAM-NK Clinical Trial, 5. CAR-T, 6. andi-CD20 and Anti-CD3 monoclonal antibody clinical trial	Cellularity: 10% Blast: 5 – 10%	Cellularity: 10 – 30% Blast: 10%	Stable AML with improved platelet transfusion needs
2	5	r/r AML. AML- 3 therapies before TriKE: 1. Vyxeos + Midostaurin 2. FLAG-IDA + midostaurin 3. Decitabine + Gilteritinib	Cellularity: 70 – 80% Blast: 7%	Cellularity: 90 - 95% Blast: 94%	Progression
3	10	r/r AML. AML- 3 therapies before TriKE: 1. Azacitidine, 2. Enasidenib, 3. Hydrea	Cellularity: 100% Blast: 85%	Cellularity: 100% Blast: 92%	Stable AML
4	10	t-MDS. Multiple Myeloma - 5 therapies: 1. CyBorD, 2. Bortezomib, 3. Dexamethasone + lenalidomide + idazomib, 4. Daratumumab + Pomalidomide + Dexamethasone, 5. Dara maintenance	Cellularity: 5% Blast: 5.5%	Cellularity: 5% Blast: 20%	Stable MDS
5 —	25 33% re	Secondary AML, progressed from MDS.	Cellularity: 10 – 15% Blast: 18%	Cellularity: 20% Blast: 12%	Blast count reduction, improved platelet needs
6	25	r/r AML. 2 therapies before TriKE: 1. 7+3 with CR1 then relapse, 2. Azacitidine + Venetoclax	Cellularity: 10 - 20% Blast: 29%	Cellularity: 10 – 20% Blast: 35%	Mild blast increase
7	50 <b>61.7%</b> I	HR MDS. MDS - 3 therapies: 1. Decitabine, 2. Luspatercept, 3. Decitabine 10 day reduction in blast count	Cellularity: 70 – 80% Blast: 12%	Cellularity: 60% Blast: 4.6%	Partial remission
8	50	HR MDS. MDS - 3 therapies before TriKE1. Azacitidine, 2. NMA DUCBT, CR1 for 7 years before relapse 3. Azacitidine - CR2 then relapse	Cellularity: 20% Blast: 12%	Cellularity: 30% Blast: 19%	Mild blast increase
9 —	100	High Grade MDS- 1. Azacitidine. 2. Decitabine, 3. 7+3, 4. Allo transplant with CR then relapse and progression to AML then no response to Decitabine + Venetoclax	Cellularity: 20% Blast: 22%	Cellularity: 10 – 20% Blast: 8%	Partial remission
10	63.6% red	Adriamycin/Cyclophosphamide, 4. Taxol.	Cellularity: 10% Blast: 17%	Cellularity: 40% Blast: 31%	Stable AML
11	150	DLBCL - 3 therapies 1. R-DA-EPOCH, 2. Auto Transplant, 3. ADAM-17+Rituximab, Therapy-related MDS: 2 therapies: 1. Azacitidine, 2. Allo transplant CR, Relapse/transformed to AML (bi-phenotypic) - 1 therapy before TriKE: 1. Venetoclax + Decitabine x 2 cycles	Cellularity: 25% Blast: 80%	Cellularity: 80% Blast: 73%	Blast reduction by FLOW
12	50% red	uction in CD33+ blast count r/r AML - 2 therapies: 1. FLAG-IDA + venetoclax, 2. Decitabine	Cellularity: 30 – 40% Blast: 36%	Cellularity: 60 % Blast: 64%	Disease Progression

## **Selected Financial Information**



ASSETS	UNAUDITED AS OF JUN 30, 2025	AUDITED AS OF DEC 31, 2024
Cash + Short Term Investments	\$ 5,321,000	\$ 4,044,000
Other Assets	<u>1,803,000</u>	<u>188,000</u>
Total Assets	7,124,000	4,232,000
LIABILITIES		
Accounts Payable + Accrued Expenses	\$ 2,067,000	\$ 5,650,000
Warrant Liability	<u>240,000</u>	<u>252,000</u>
Total Liabilities	2,307,000	5,902,000
MEZZANINE EQUITY		
Total Mezzanine Equity	\$ 1,956,000	\$ -
STOCKHOLDERS' EQUITY (DEFICIT)		
Total Stockholders' Equity (Deficit)	\$ 2,861,000	\$ (1,670,000)