TC BIOPHARM

The Global Leader in Gamma-Delta T-Cell Therapy

Investor Presentation

Q1 2024

Forward Looking Statements

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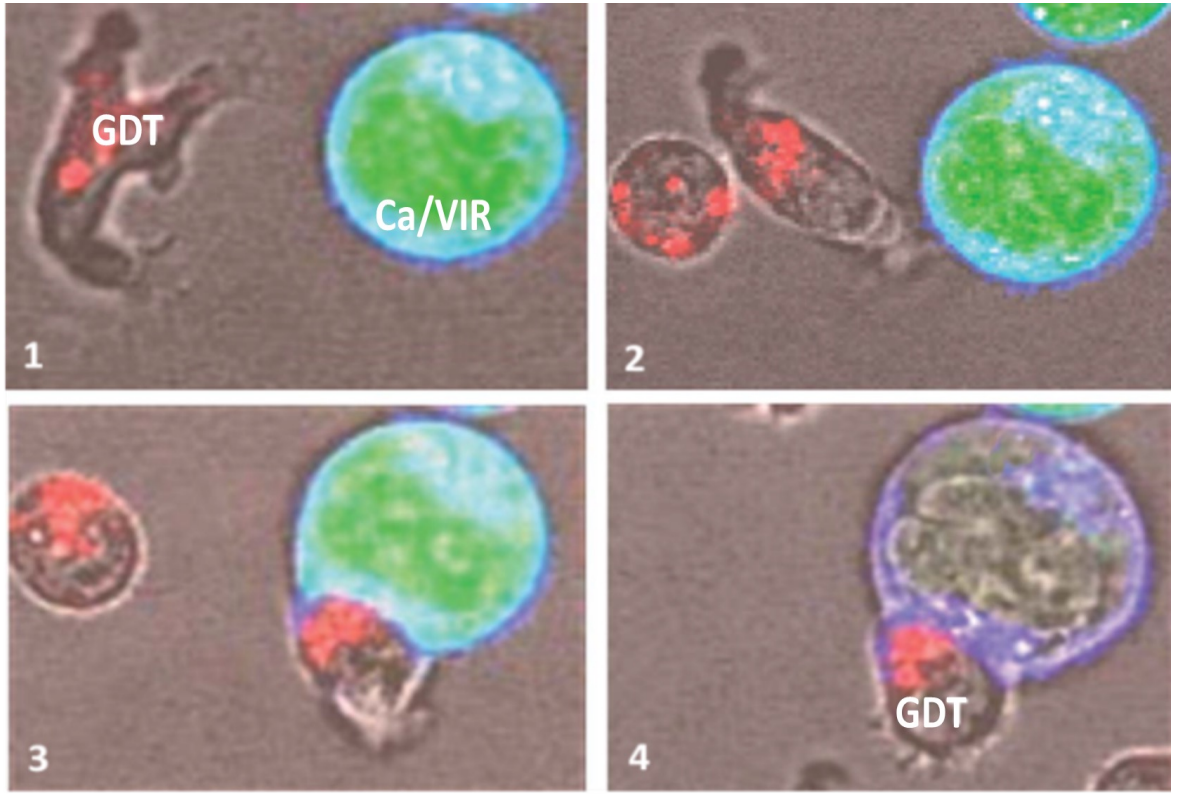
Investment Highlights

- Platform Technology – Allogenic Gamma Delta T-Cell (off-the-shelf) Cell Therapy for Oncology
- Company Focused on ACHIEVE Interim Data Generation
- Clinical Data 2H 2024
- Multiple Partnership Opportunities in Combination Trials Using TCB-008 in Discussion
- Platform Expansion into New Indications with QMUL Collaboration
- Gained FDA Clearance of Phase 1B IND for TCB-008 in Acute Myeloid Leukemia
- Extended Cash Runway Via Decreased Headcount

Gamma-Delta T Cells (GDT) Kill Cancer

Gamma-Delta T's are our first defense against cancer

- Inherent ability to locate, then kill stressed cells
- Innate Mechanism of Action (MOA); presence of IPP triggers GDT "kill signal"
  - IPP expressed by all tumors studied
- As we get older GDTs may become less potent
- TC BioPharm (TCB) manufactures young, activated GDTs
- Two distinct variants can be used (delta1's and 2's)



Clinical Development Pipeline

Next generation GDT cell therapies for both solid tumors and blood cancers

Program	Indication	Pre-clinical	Phase 1	Phase 2	Phase 3	Status / Upcoming Milestone
OmnImmune (Vδ2 subtype) Allogeneic (Unmodified)	**AML**			2b		Phase 1b/2a complete H1 2020 – PR & CR achieved **Phase 2b launched, 5 patients dosed to date**
TCB-008 (Vδ2 subtype) Allogeneic (Unmodified)	**AML**		1b			**Announced FDA Clearance of Phase 1B IND for TCB-008**
Anti-Bacterical/Anti-Fungal						**Proof of Concept & Pre-clinical Work**

Program that does not involve any current development or clinical activity by the Company

Program	Indication	Pre-clinical	Phase 1	Phase 2	Phase 3	Status / Upcoming Milestone
TCB001 Autologous (Unmodified)	Melanoma					Phase 1b/2a POC complete – evidence of tumor shrinkage (not pursuing further development)

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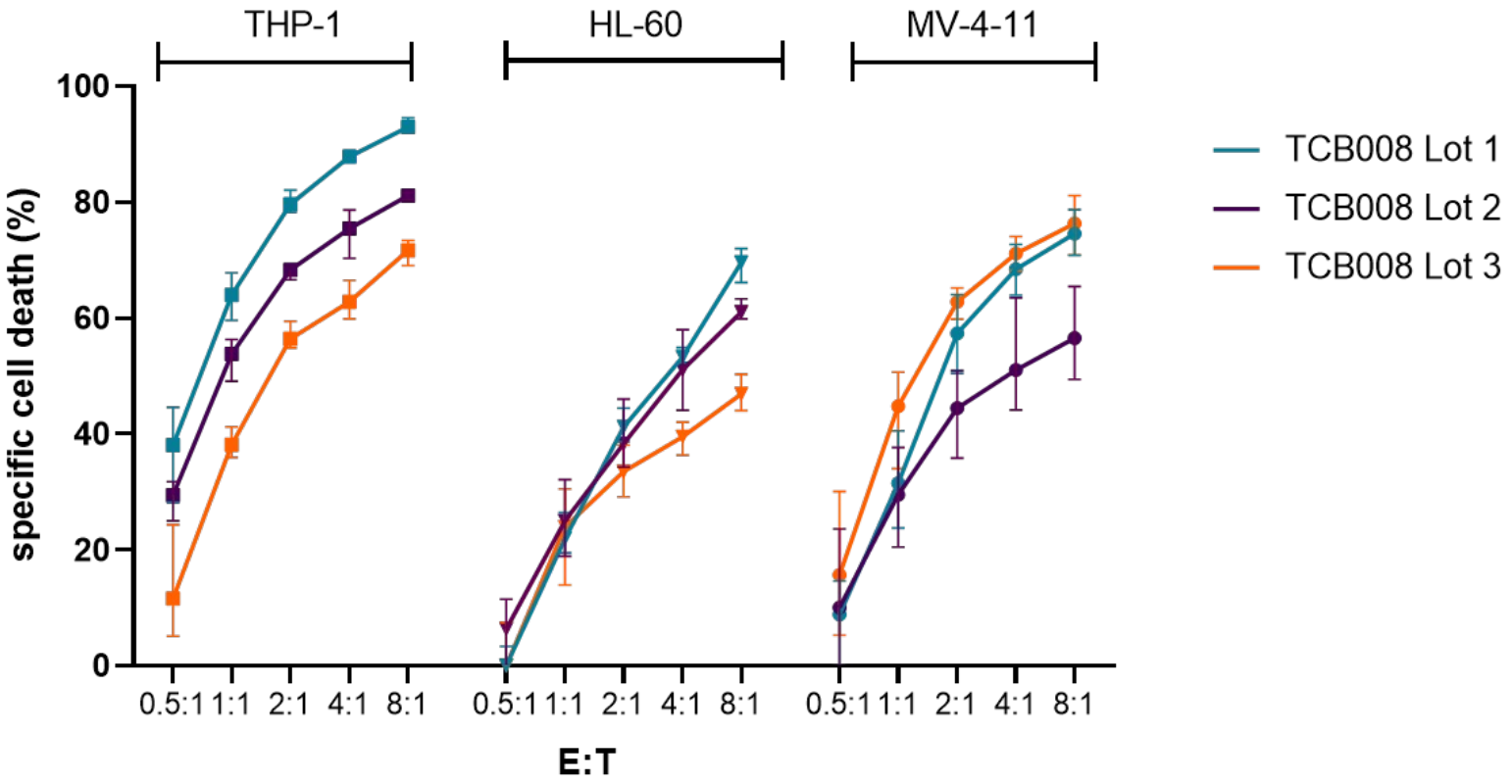
Oncology Indications

TCB008 Cytotoxicity Against AML Cell Lines

- Three lots of TCB008 were tested against a panel of AML cell lines for their ability to specifically eradicate/kill the cancer cells
- Within 24 hours of exposure of AML cell lines to TCB008 drug product, TCB008 exhibited substantial cytotoxic effects against all 3 AML cell lines.
- TCB008 lots were manufactured from 3 different starting material donors that met TCBP's criteria for selection

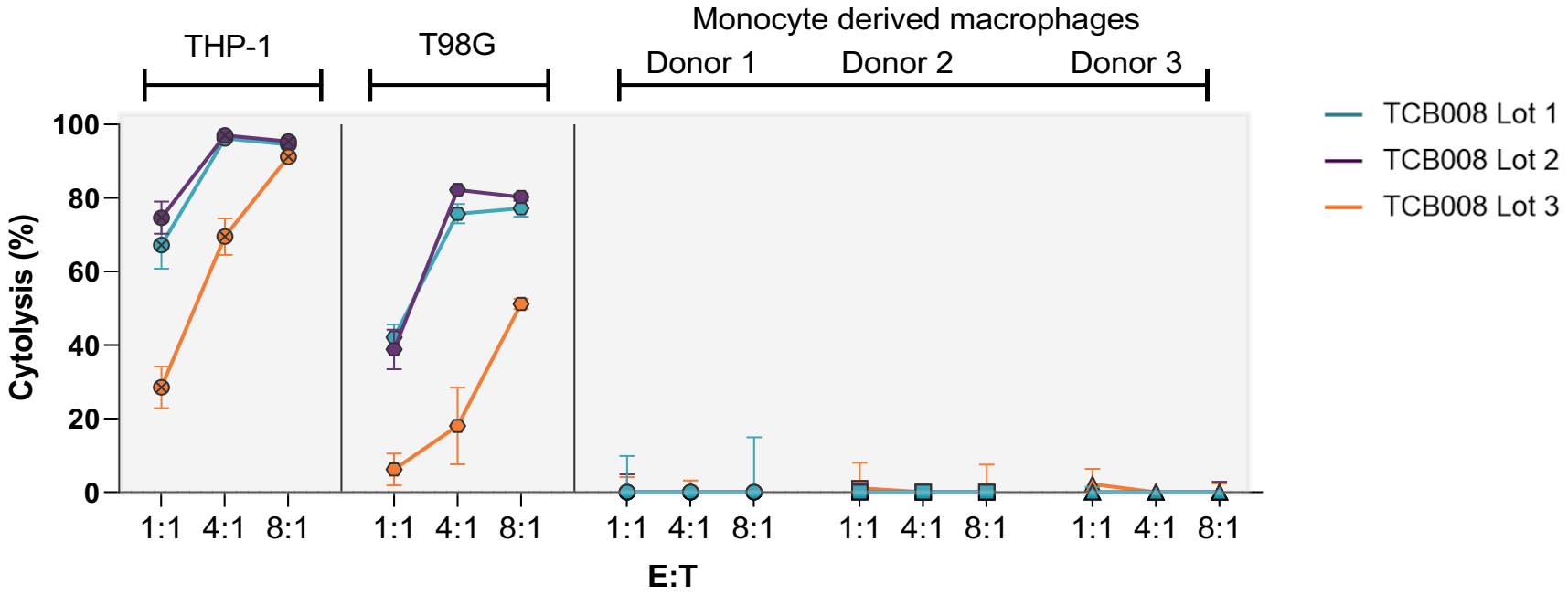
E = Effectors

T = Targets



TCB008 *in vitro* Safety Testing

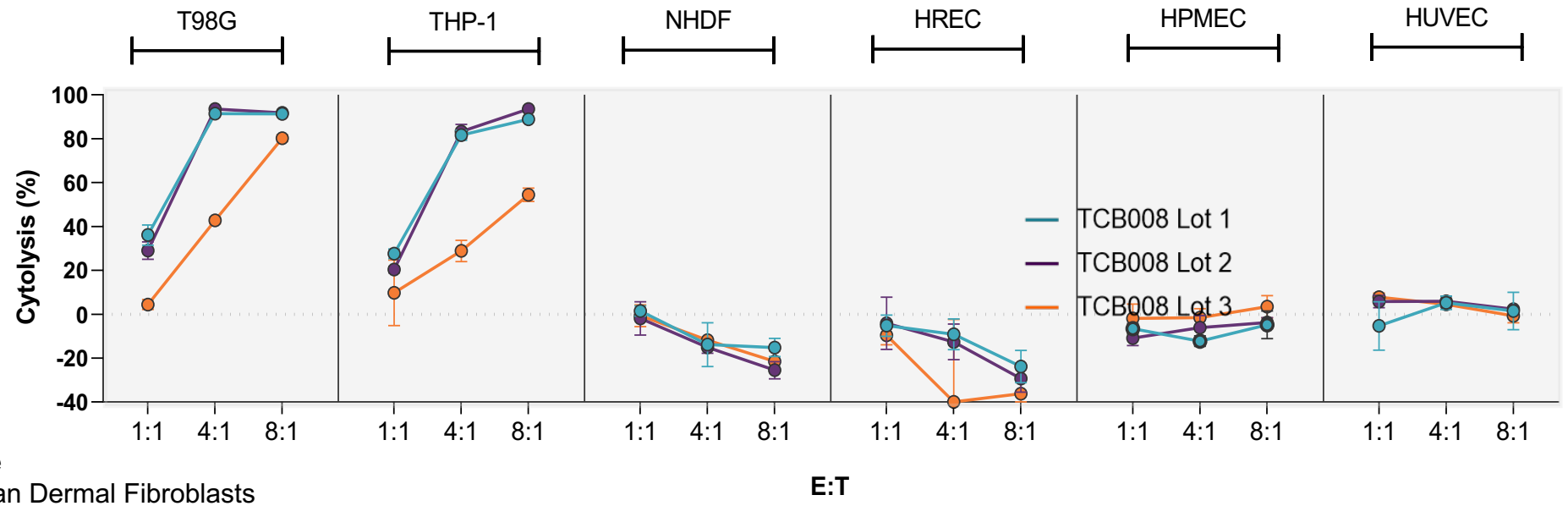
- The safety of TCB008 was confirmed in an off-target cytotoxicity assay against primary human monocyte derived macrophages – healthy counterpart for AML
- TCB008 at doses of effector : target that exhibited potent cytotoxicity against two cancer cell lines did not exhibit off target cytotoxicity against the healthy control cells.



THP-1 – AML Cell Line
T98G – Glioblastoma Cell Line

TCB008 *in vitro* Safety Testing

- Furthermore, as TCB008 is a systemic infusion, the safety of TCB008 was further confirmed against representative healthy tissues from human skin, kidneys and lung
- As with the myeloid cells TCB008 was not cytotoxic against healthy human tissues at effector: target doses that exhibited potent cytotoxicity against cancer cells.
- These in vitro data are indicative that TCB008 is effective against AML cells whilst maintaining a suitable safety profile.



THP-1 – AML Cell Line
T98G – Glioblastoma Cell Line
NHDF – Primary Normal Human Dermal Fibroblasts
HREC – Primary Human Renal Epithelial Cells
HPMEC – Primary Human Pulmonary Microvascular Endothelial Cells
HUVEC – Human Umbilical Vein Endothelial Cells (Cell Line)

OmnImmune Acute Myeloid Leukemia Phase 1b Trial Summary

Based on compelling clinical data in non-responding patients TCB has progressed to phase 2/3 studies

AML patients, late-stage, non-responders

- Poor life expectancy (often days/weeks)
- Prior clinical options have failed in all patients

Results

- Average cancer levels in bone **decreased from 38% to 6%**
- One patient had a complete response; another classified MLFS* following treatment; and one stable disease
- No serious adverse treatment-related safety events
- No grade 3≥ OmnImmune® (TCB002) treatment related toxicities were noted
- One patient died because of bilateral pneumonia determined unrelated to study medication

*MLFS: morphologic leukemia-free state

ACHIEVE1 (TCB008-001) Ph II UK Study Update

- Safety Cohort (N=5) study completed as of July 2023
  - 7 patients screened, 1 screen failure, 1 patient discontinued prior to treatment with TCB0008, 4 patients dosed with one dose of TCB008 (7 X 10^7 cells administered IV), 1 patient dosed with two doses of TCB008 (7 X 10^7 cells administered IV)
  - None of the adverse events were considered related to TCB008 and no dose limiting toxicities were reported in these 5 patients
    - All 5 patients reported treatment emergent serious adverse events (TESAEs) and all experienced at least one TESAEs, however none were considered related to TCB008.
    - 2 patients died during the study (*post transplant lymphoproliferative disorder* and *disease progression*), 2 patients withdrew consent, and 1 subject was withdrawn due to disease progression.
- The best overall response per ELN 2020 Criteria was stable disease (2 patients, 40%)
- DSMB review meeting occurring end of September 2023

ACHIEVE2 (TCB008-003) Ph I US Study (In Planning)

Open-label, multi-center study conducted in 2 parts (dose escalation followed by dose expansion) to evaluate safety, persistence/expansion, and preliminary efficacy of single and multiple IV doses of TCB008 in patients with AML or MDS/AML, MRD-persistent AML, or MDS/AML who have failed or are intolerant to the current standard of care.

Proposed Primary Objectives:

- To establish the recommended dose for further investigation in the dose-expansion part of the study, in patients with previously treated relapsed or relapsed refractory AML or MDS/AML, or MRD persistent-AML or MDS/AML (dose escalation part only)

- To determine the safety and tolerability of TCB008 in patients with previously treated relapsed or relapsed refractory AML or MDS/AML, or MRD-persistent AML or MDS/AML

Proposed Number of Patients:

- Dose escalation: approximately 9 to 24 DLT evaluable patients are planned to follow a 3 + 3 enrollment design. Non-DLT-evaluable patients will be replaced.
- Dose expansion: Up to 60 patients are planned (up to 20 patients in each of the 3 cohorts)

Proposed Dosing Regime:

- Dose escalation:
  - Cohort 1: 1.5 mL TCB008 (3.6×10^7 to 6.9×10^7 cells)
  - Cohort 2: up to 5 mL TCB008 (12.0×10^7 to 23.0×10^7 cells)
  - Cohort 3: up to 18 mL TCB008 (43.2×10^7 to 82.8×10^7 cells)
- The dose level for the dose expansion will be based on the recommended dose for further investigation (RDE) determined in the dose escalation part of the study

Patients may be reinfused with TCB008 up to 3 times following initial infusion (at the same dose as the initial infusion) as deemed appropriate by the investigator or designee should protocol specified criteria be met.

Protocol finalized in October 2023, First Patient Dosed Q2 2024

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Platform Expansion; TCB-008 and Beyond

Repositioning TCB-008; Best-in-Class for Combination Therapies

TCB-008 will be focused as a "best-in-class" allogeneic gamma delta variant 2 product

- TCB-008 has an ideal profile for combination therapies
  - No drug related toxicity
  - Allogeneic, should not cause drug on drug interaction
  - Chemo resistant when activated
- TCBP has the internal capability to deliver a Best-in-Class allogeneic gamma delta t-cell (GMP grade or non-GMP grade) for use in clinical trials and research
- Company focus for TCB-008 will be on multiple exclusive partnerships/agreements for TCB-008 in Combination trials
  - Upfront payments, non-dilutive with royalty agreements
  - Exclusive supplier agreements for GDT v2
- Companies claiming to turn the "cold tumor hot" or "light the tumor" to gamma deltas in cancer patients
- Inherent issue in immune suppressed,/immune compromised patients will be the lack of gamma delta population or very inert gammas
- To maximize the effect of the "trigger" asset, exogenous gamma deltas will be necessary.

Cell-Based Immunotherapy Landscape

Company	Lead Indication	Pre-Clinical	Phase 1/2	Phase 2/3	Status / Upcoming Milestone
TC BIOPHARM *	**AML**		**1b/2a**	**2b**	**Phase 2a complete Commenced Phase 2b into pivotal (AML)**
Adicet Bio **	NHL		1b/2a		Plan to file Investigational New Drug Application (IND) for ADI-925 in H2 2023 and ADI-270 in H1 2024
INBbio	HAEM & CNS		1b/2a		Plans to complete INB-200 Phase 1 study enrollment in 2023 with updated data expected later this year.
LAVA THERAPEUTICS	Lung Cancer		1b/2a		Expects to report additional safety and efficacy data for the dose escalation phase of the trial in the next twelve months,
KIROMIC	Solid Tumors		Phase 1		FDA Authorization of IND to Initiate Phase 1 Clinical Trial of Deltacel
ImCheck therapeutics	Solid Tumors		1b/2a		Achieved Primary Objective of Phase 1 Trial

* Formulation GMP of product in-house ** Formulation with contract development and manufacture organization

Management & Board of Directors

Team with Success in Drug Discovery and Development

Bryan Kobel – Chief Executive Officer

- More than 15 years of capital markets / banking experience in Healthcare and Life Sciences
- Former Head of Healthcare Investment Banking at EF Hutton
- Previous Head of Healthcare for the Alberleen Group

Martin Thorp – Chief Financial Officer

- Founder & Global CEO of Arthur Andersen Corporate Finance (NYC HQ)
- 30 years experience in implementing capital strategies (seed to IPO)
- Founder NCL: life science investor and regulated adviser to life science enterprises

Dr. Mark Bonyhadi	▪ Senior Advisor at Qiming Venture Partners USA ▪ Various positions held from 2013-2018 at Juno Therapeutics ▪ Former Director of Global Business Development for Cell Therapy at Invitrogen, which was merged with Applied BioSystems, to create Life Technologies, which subsequently was acquired by Thermo-Fisher ▪ Former Director and later Vice President of Research at Xycte Therapies, a T cell therapy company treating cancer, infectious disease, and autoimmunity
James Culverwell	▪ Served as a non-executive director and chairman of the audit committee of Innocoll Holdings plc (a collagen-based drug delivery company) from 2013 until 2017 ▪ Non-executive director and chairman of the audit committee of Safeguard Biosystems, a private company providing high throughput, multiplexed, molecular diagnostic tests and now generating commercial revenues ▪ Former director and chairman of the audit committee of Amryt Pharmaceuticals plc, a commercial and research-based company specializing in rare diseases
Arlene Morris (Chairperson)	▪ Non-executive director of the following companies: Cogent Biosciences, Inc. (NASDAQ: COGT), Viridian Therapeutics, Inc. (NASDAQ: VRDN), and Palatin Technologies, Inc. (NYSE: PTN) ▪ Former non-executive director at the following companies: Neovacs SA (2011 to 2021), Dimension Therapeutics, Inc. (2015-018), Biodel, Inc. (2012-2015), MediciNova, Inc. (2006-2013) ▪ Emeritus member of the board of directors at the Medical University of South Carolina ('MUSC') (since 2012) and is also (since 2016) a member of the board of trustees of Carlow University (PA)
Edward Niemczyk	▪ Lead healthcare partner with the private equity firm, Bridges Fund Management, Ltd since 2016 ▪ Served on the board of directors of the following private companies which are investees of Bridges: Impact Fitness North America, LP (2016 to 2019); Medwood Holdings, LLC (2018 -); Sunrise Treatment Holdings, LLC (chairman of the board) (2019 -); Jump City Holdings, Inc (chairman of the board) (2019 -); JRHH Holdings, LLC (2020 -) ▪ Former vice president of The Beekman Group, LLC between 2013 and 2016 and prior to that with the private equity firm Cordova, Smart and Williams, LLC (2006-2013) and GE Capital Corporation (2002-2006)

Timelines – PR, Financial and Commercial

Recent Milestones

- Completed ACHIEVE Safety Cohort and received positive review from the Data Safety Monitoring Board (DSMB)
- FDA clearance of investigational new drug (IND) application for a Phase 1B study in relapse/refractory Acute Myeloid Leukemia (AML)
- Restructured business for annual cost savings of $7-10M
- QMUL project received grant funding from The Impact Fund arm of QMUL, to research the therapeutic potential of gamma-delta T cells for the treatment of mucosal infections.
- Formed a third-party manufacturing partnership in US with Excellos

2024 Target Milestones

- Launch of ACHIEVE 2 Trial
- Execute partnership/collaboration in combination with TCB-008
- Establish proof of Concept for anti-fungal/anti-bacterial and expansion of platform

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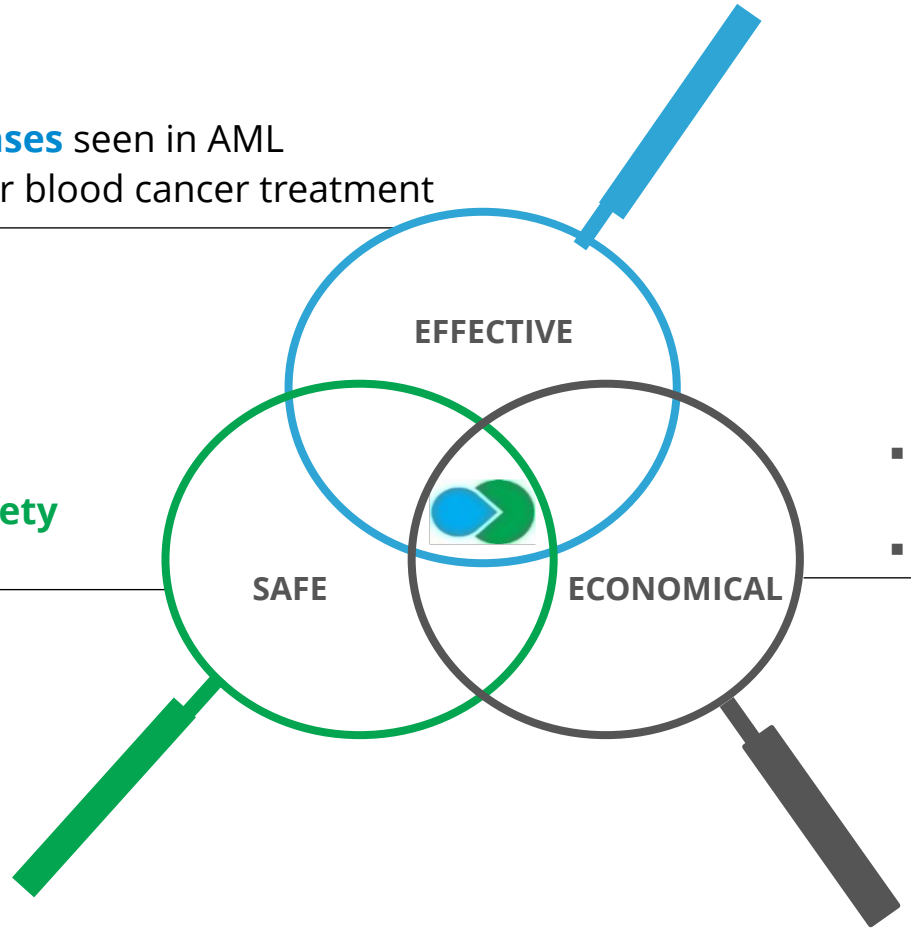
Appendix

TCB's Allogeneic Platform Profile

GDTs provide a unique product development platform, which will enable next-generation infectious disease therapies

- **Marked responses** seen in AML
- Primed for other blood cancer treatment



- No toxicity
- Established clinical **proof-of-safety** (high dose)
- "Off the Shelf" capabilities with frozen/thawed product

- TCB's allogeneic products will **cost substantially less than current therapies**
- Can be campaign manufactured

OmnImmune Case Histories

OmnImmune (TCB002) – a single dose leads to marked AML blast reduction (bone marrow) in relapsed/refractory AML patients

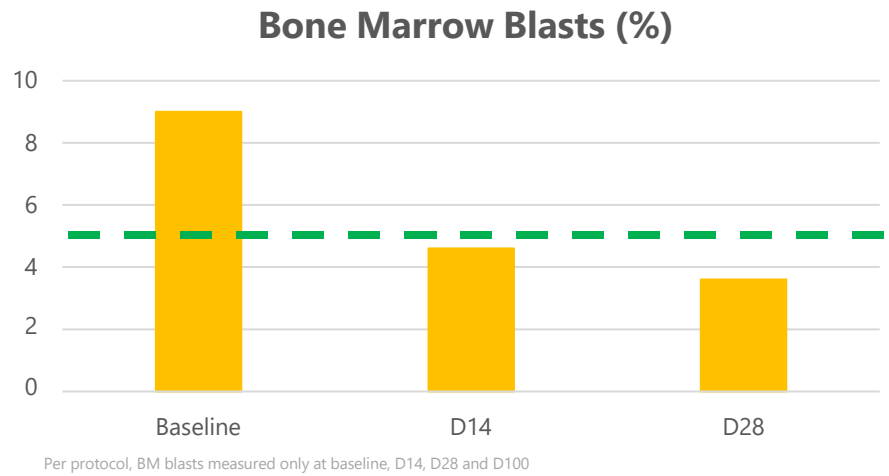
- 8 individuals enrolled all with poor life expectancy (often days/weeks), 7 of whom received OmnImmune
- Patients PRA1-5001, 5004 and 5005 were screening failures, patient PRA1-5003 died 21 days post-treatment, patient PRA1-5010 was withdrawn because of COVID pandemic before follow-up bone marrow aspirate and patient PRA1-5011 was withdrawn before OmnImmune treatment due to COVID pandemic
- Baseline high blast counts, and all patients had progressive/aggressive disease
- All prior clinical options have failed (4th line of treatment)

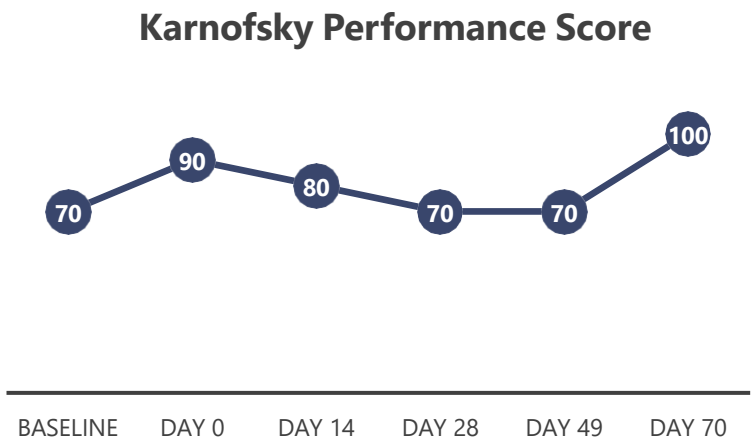
	PRA1-5002	PRA1-5006	PRA1-5007*	PRA1-5008	PRA1-5009
Initial Dose	1x10^6 cells/kg (total dose 6.1 x 10^7)	1x10^6 cells/kg (total dose 7.0 x 10^7)	1x10^7 cells/kg (total dose 7 x 10^8)	1x10^7 cells/kg (total dose 6.5 x 10^8)	1x10^7 cells/kg (total dose 8.5 x 10^8)
Preliminary Data	**Blast cell reduction:** 62.8% at baseline 28.5% 14 days post-treat **10% on D28 (STABLE DISEASE)**	**Blast cell reduction:** 51.2% at baseline 8.4% 14 days post-treat **2.6% on D28 (MLFS)*** **	**Blast cell reduction:** 9.0% at baseline 4.6% 14 days post-treat **3.6% on D28 (COMPLETE RESPONSE)**	**Blast cell reduction:** 14.8% at baseline 6.9% 14 days post-treat** **Disease progression**	**Blast cell reduction:** 66.6% at baseline 38.0% 14 days post-treat **Study discontinued due to COVID**

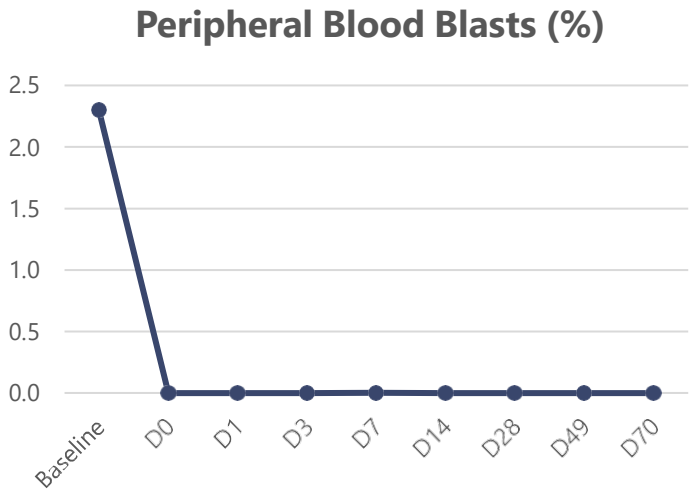
* PRA1-5007 was 4th line of treatment, relapsed refractory with low-blast count AML (LBC-AML). Counts shown in bone marrow - peripheral blood blast count was 2.5% on treatment, 0% at day 14 and D28. Patient PRA1-5007 achieved complete remission by D28.

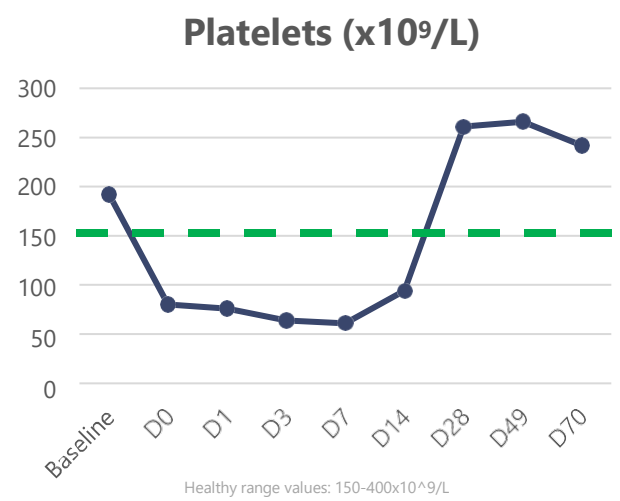
** Peripheral blood (not bone marrow).
*** MLFS: morphologic leukemia-free state

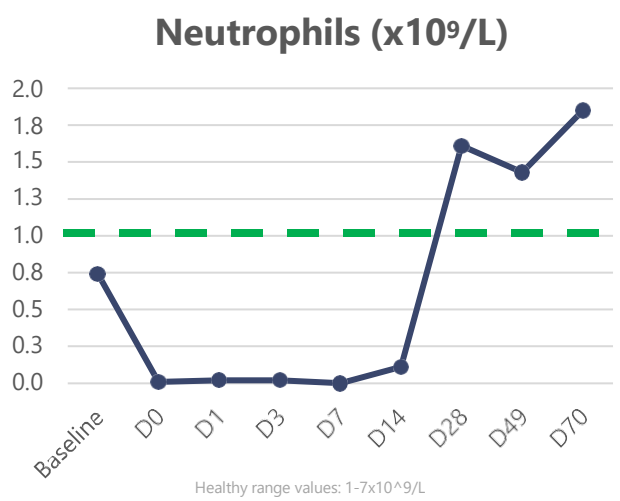
PRA1-5007 (Patient 1 of Cohort 2) - Efficacy











- PRA1-5007 has received three doses of TCB-002 (Day 0, Day 36 and Day 79)
- This patient achieved **complete remission (CR)** by Day 28 following a single infusion of TCB002, defined as Bone Marrow blasts <5%, Peripheral Blood Blasts 0%, and neutrophil and platelet recovery
- Performance status at Day 70, following two infusions with TCB002, reached the maximum score of KPS 100

TCB-202-001 Summary and Conclusions

- This study showed that *ex-vivo* expanded allogeneic γδ T-lymphocytes derived from haploidentical donors is feasible with doses reaching level of 1 x 10^7 cells/kg body weight.

- Infusions and repeat infusions of OmnImmune® were well tolerated with no DLTs and no Serious Adverse Reactions (SARs) or grade 3 treatment related toxicities reported in any of the patients who were treated in the trial

- Two grade 2 IMP related AEs: 1 pyrexia, 1 raised C-reactive protein

- Preliminary evidence of the efficacy of OmnImmune® was observed with 1 CR and 1 MLFS at 28 days post IMP administration.

Thank you

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