Revolutionizing CAR T-Cell Therapy

April 2024

OTCQB: KRBP

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Forward-Looking Statements

This presentation contains forward-looking statements that involve substantial risks and uncertainties. Kiromic makes such forward-looking statements pursuant to the safe harbor provisions of the United States Private Securities Litigation Reform Act, Section 21E of the Securities Exchange Act of 1934, as amended, and other federal securities laws. All statements other than statements of historical facts are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as: "will," "potential," "could," "can," "believe," "intends," "continue," "plans," "expects," "anticipates," "estimates," "may," or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements regarding: Kiromic's current and anticipated IND applications including statements regarding the scope of and timing for submission of an IND application; the Deltacel™ product platform; the sponsored research agreement and the data that will be generated as a result of such collaboration; the timing for submitting and activating Kiromic's IND applications; the benefits of utilizing non-genetically engineered Gamma Delta T cells as our first in-human study; Kiromic's ability to achieve its objectives; and the timing for the initiation and successful completion of Kiromic's clinical trials of its product candidates. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, levels of activity, performance, or achievements to be materially different from the information expressed or implied expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, the risks and uncertainties discussed in our Annual Report on Form 10-K for the year ended December 31, 2022, and as detailed from time to time in our SEC filings. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Such forward-looking statements relate only to events as of the date of this press release. We undertake no obligation to update any forward-looking statements except to the extent required by law.

Contents

The Kiromic Difference

Kiromic BioPharma is an allogeneic Gamma Delta T-cell company featuring unique, proprietary, end-to-end bioinformatic, AI-targeting and manufacturing technologies to treat solid tumors

1 Diamond AI™ Neural Network

2 Gamma Delta CAR-T Cell Platform

3 Allogeneic, Off-the-Shelf Cellular Therapy

Cells from healthy donors, not ill cancer patients, for maximum efficacy

4 Solid Malignancies

(~90% of all cancers[1])

5 In-House cGMP Manufacturing

[1]American Cancer Society, Cancer Facts & Figures, 2022. https://www.cancer.org/research/cancer-facts-statistics.html.

Competitive Landscape

8 Known Companies Working in the Gamma Delta T-Cell Therapy Space.

No Known Competitors with AI-driven Technology Combined with a Gamma Delta CAR-T Delivery Platform.

Solid Malignancy Market Opportunity

Global CAR T-Cell Therapy Market by 2027[1]

$33+ Billion

90%

of Cancers Are Solid Tumors[2]

[1] Global CAR T-Cell Therapy Market, By Product Type, By Tumor Type, By Indication, By Treatment Type, By Targeted Antigen, By End User, By Region, Competition, Forecast and Opportunities, 2017-2027 (ReportLinker)

[2] American Cancer Society, Cancer Facts & Figures, 2022. https://www.cancer.org/research/cancer-facts-statistics.html

Competitive Difference

Allogeneic Gamma Delta Based T-Cell Therapies

Superior Specificity for Multiple Solid Tumors

- **Potential broad treatment** for solid malignancies that express Kiromic-developed biomarkers such as Iso-mesothelin.
- Solid tumors represent ~90% of new cancer diagnoses but finding specific targets to treat them has been challenging.
- Kiromic tackles the issue by identifying new cancer-specific targets.

Vertical Integration

- In-house **cGMP manufacturing**
- In-house **QC/EM lab**
- In-house **product and process development** (R&D and MSAT)

Superior Efficacy from γδT Cells

- **Strong efficacy** demonstrated in preclinical animal models.
- In solid tumors, the benefit of infiltrating conventional T cells may vary.
- In contrast, GDT cells are the infiltrating immune cells most likely to be associated with positive outcomes, as shown in an analysis of 18,000 tumors from 39 indications[1]

Lower Costs/ Greater Access[2]

1. Outpatient treatment means reduced hospitalization and other treatment-related costs.

2. Lower projected cost increases patient and health care professional access to these therapies, and potentially provides important quality-of-life benefits for patients as well.

1. Gentles AJ, Newman AM, Liu CL, *et al*. The prognostic landscape of genes and infiltrating immune cells across human cancers. Nat Med. 2015 Aug;21(8):938-945.
2. Maziarz RT. CAR T-cell therapy total cost can exceed $1.5M per treatment. Cell Therapy Next; May 29, 2019.

Contents

Artificial Intelligence and Bioinformatic Analytic Discovery & Development Platform

Algorithms and Large-Scale Genomics Analysis for Target Prediction

Diamond AI™

Artificial Intelligence Neural Network

AI Integrated with Each Stage of the Kiromic Therapy Production Lifecycle

Discovering New Multi-tumor Targets

Identifying Optimal Donors and Patients to Maximize the Therapy Success

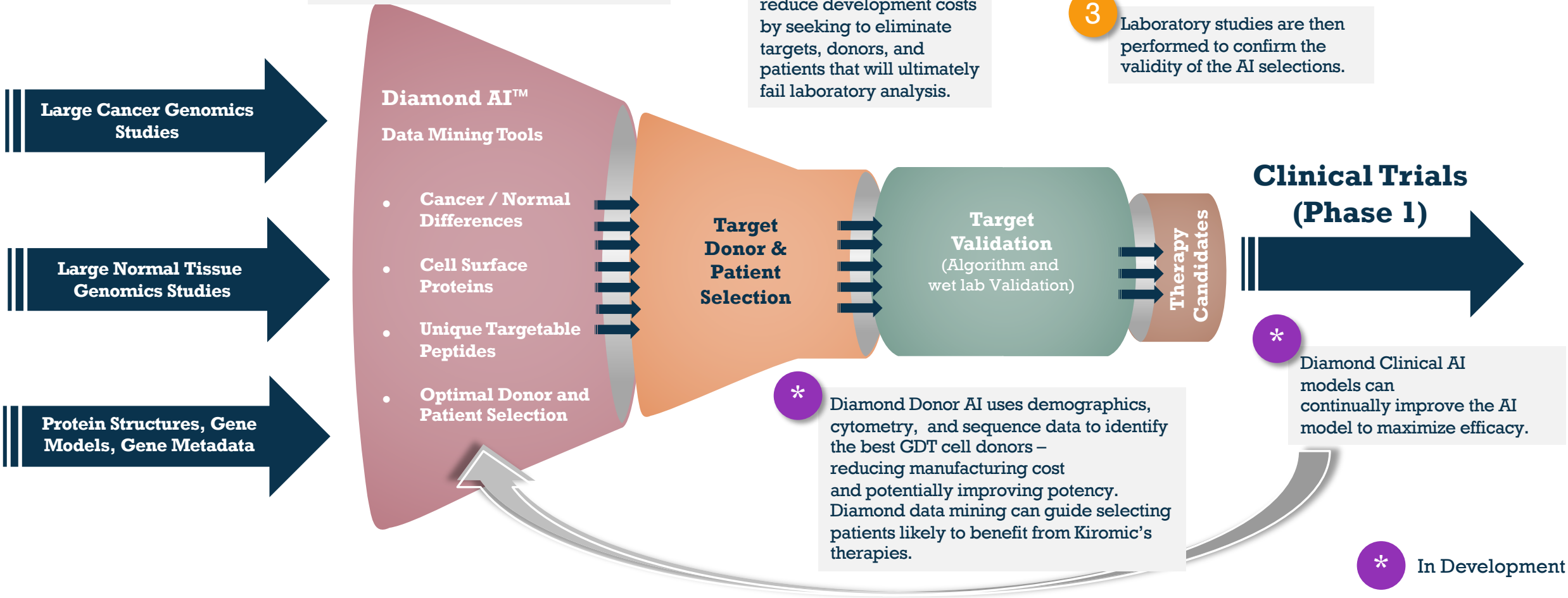
The Kiromic Difference - Diamond AI™ Target Discovery Platform

Diamond AI™ target discovery platform powers innovation and significantly reduces development time and cost.

1. Diamond AI drives discovery by sifting through billions of data points to identify cancer specific immunotherapy targets, donors with the best GDT cell yields, and patients who will most likely benefit from our therapies.

2. Diamond AI prediction and validation platform reduce development costs by seeking to eliminate targets, donors, and patients that will ultimately fail laboratory analysis.

3. Laboratory studies are then performed to confirm the validity of the AI selections.



* Diamond Donor AI uses demographics, cytometry, and sequence data to identify the best GDT cell donors – reducing manufacturing cost and potentially improving potency. Diamond data mining can guide selecting patients likely to benefit from Kiromic's therapies.

* Diamond Clinical AI models can continually improve the AI model to maximize efficacy.

* In Development

Contents

Kiromic GDT Cell Therapy Pipeline

Multiple Indications

Deltacel™

Unmodified, off-the-shelf product candidate targeting stress ligands on cancer cells

Initial indication: NSCLC in combination with targeted, low-dose radiation

Isocel™

Engineered off-the-shelf product candidate targeting a tumor-specific variant of mesothelin in ovarian cancer, mesothelioma and pancreatic cancer

Procel™

Engineered off-the-shelf product candidate targeting PDL-1+ tumors

Gamma Delta T-Cells: Guardians of the Immune System

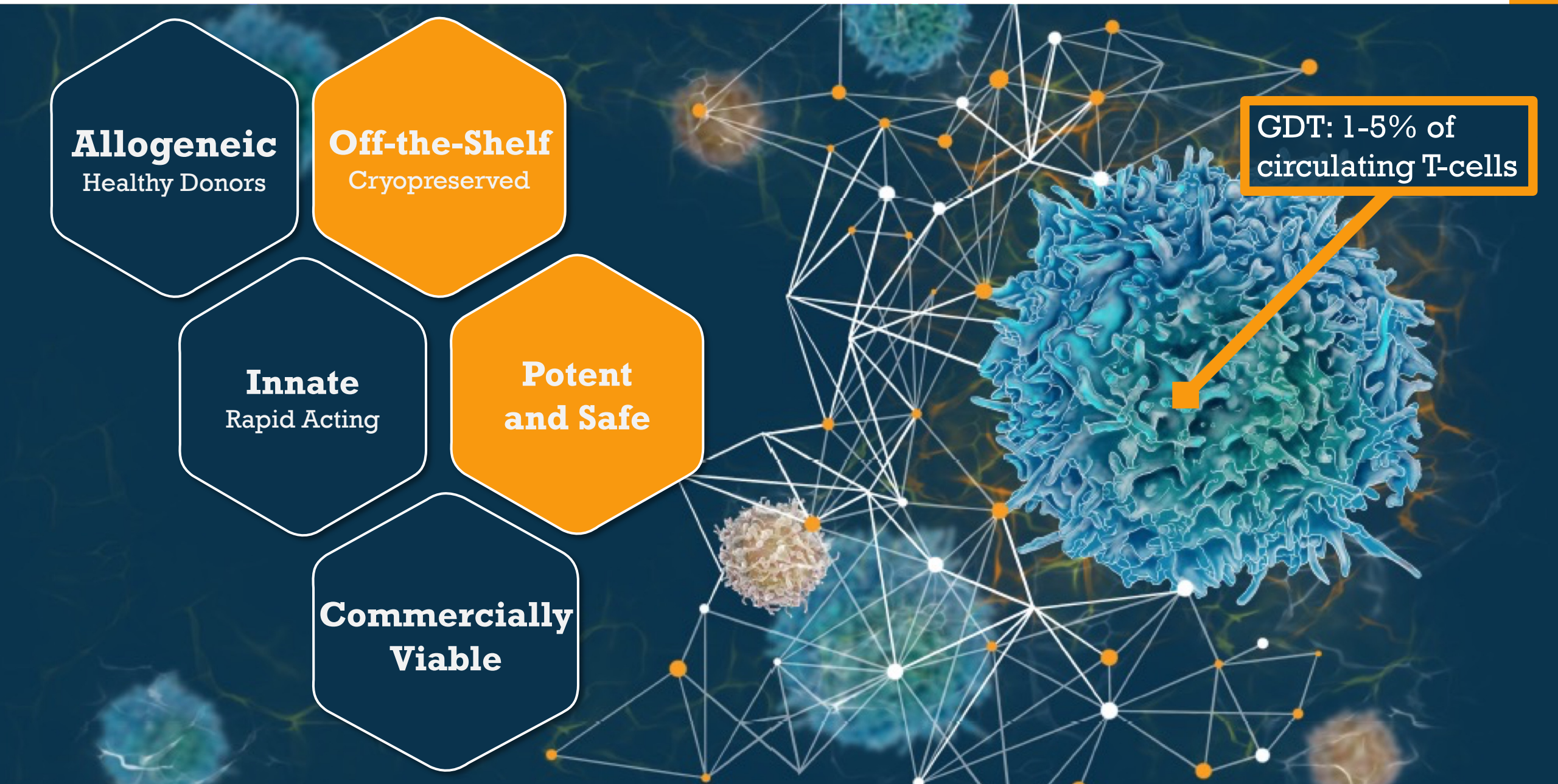
Allogeneic
Healthy Donors

Off-the-Shelf
Cryopreserved

Innate
Rapid Acting

Potent and Safe

Commercially Viable



Deltacel: Non-Viral Gamma Delta T-Cell Development

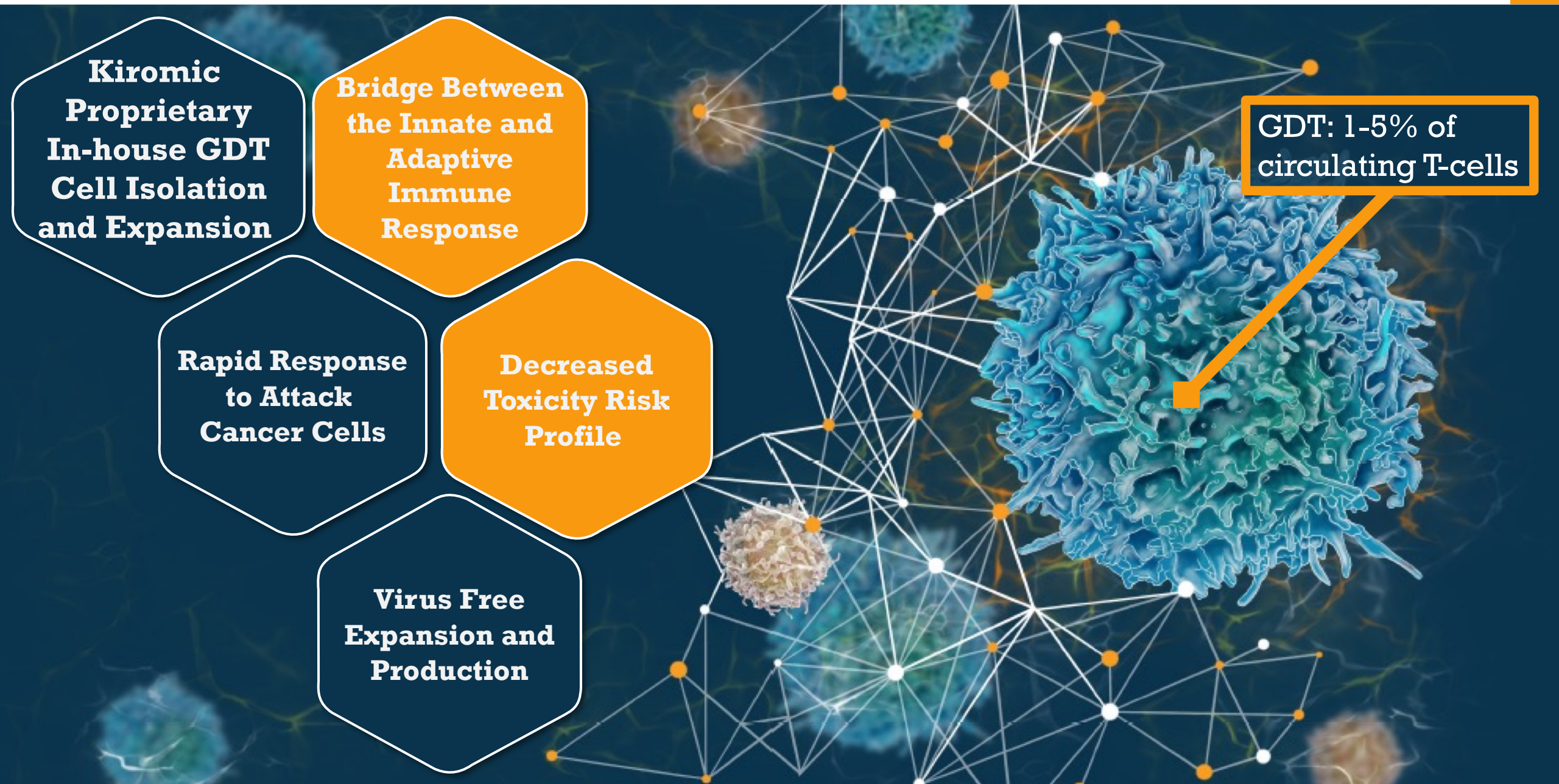
Kiromic Proprietary In-house GDT Cell Isolation and Expansion

Bridge Between the Innate and Adaptive Immune Response

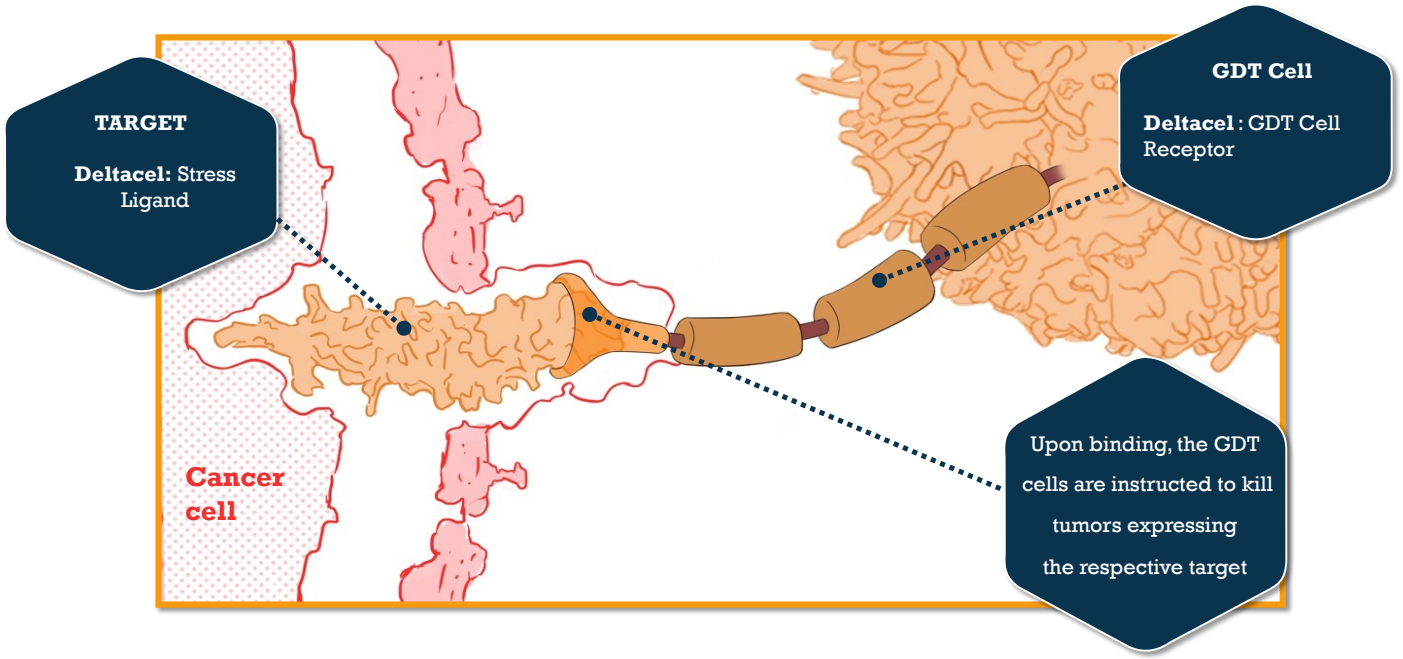
Rapid Response to Attack Cancer Cells

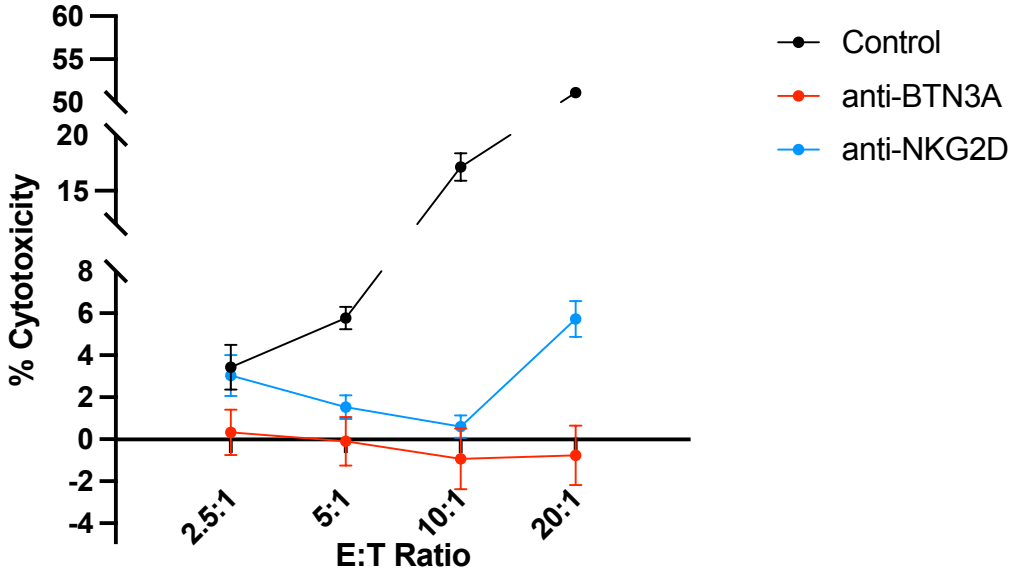
Decreased Toxicity Risk Profile

Virus Free Expansion and Production



GDT Cell Therapy Mechanism of Action: Targeting Unique Identifiers on Tumor Tissues

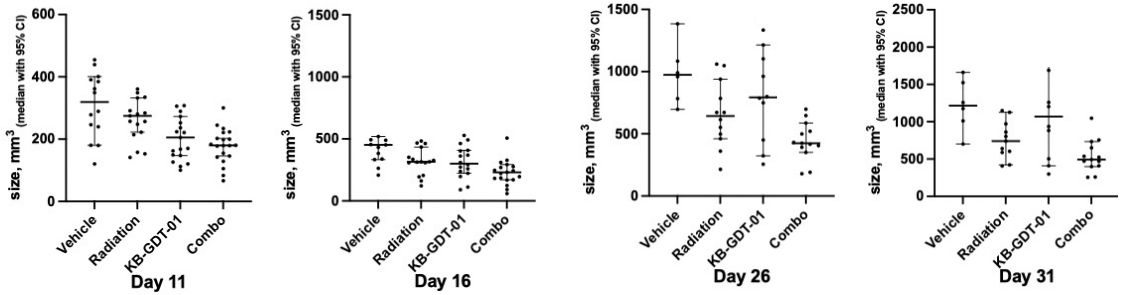




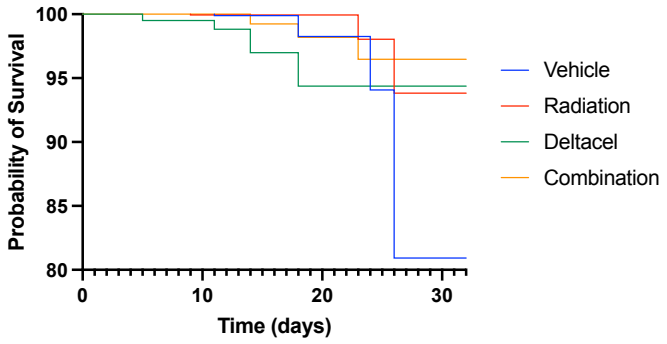
KB-GDT-01 T-Cell Therapy (Deltacel) Strong Efficacy

Deltacel™ effectively controls established A549 NSCLC tumors in immunocompromised mice when combined with a low-dose radiation

Tumor Size



Survival

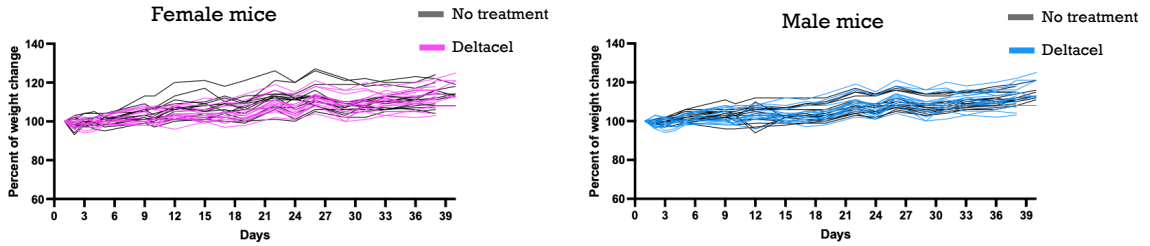


KB-GDT-01 T-Cell Therapy (Deltacel) Strong Safety

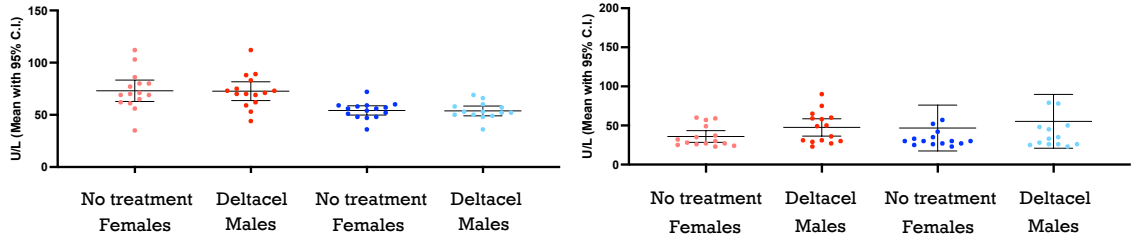
Deltacel™ does not cause any macroscopic or microscopic toxicity, even when given at over 8x the maximum dose that will be tested in the clinical trial

1. Deltacel did not impact body weights, food consumption, or macroscopic evaluations at necropsy.
2. Microscopic histopathological evaluations showed no evidence of toxicity.
3. Blood chemistry tests showed no impact on organ functions.
4. Plasma cytokine analysis showed that Deltacel administration did not result in the overproduction of inflammatory cytokines, commonly associated to cytokine release syndrome.

Percent body weight



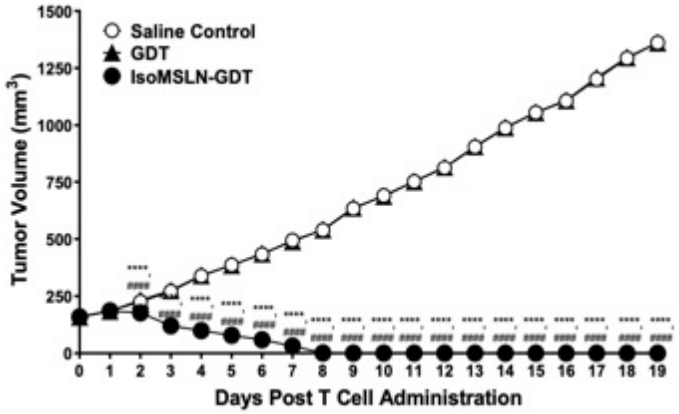
Blood chemistry (excerpt of the report)



GDT CAR T-Cell Therapy (Isocel)* Strong Efficacy

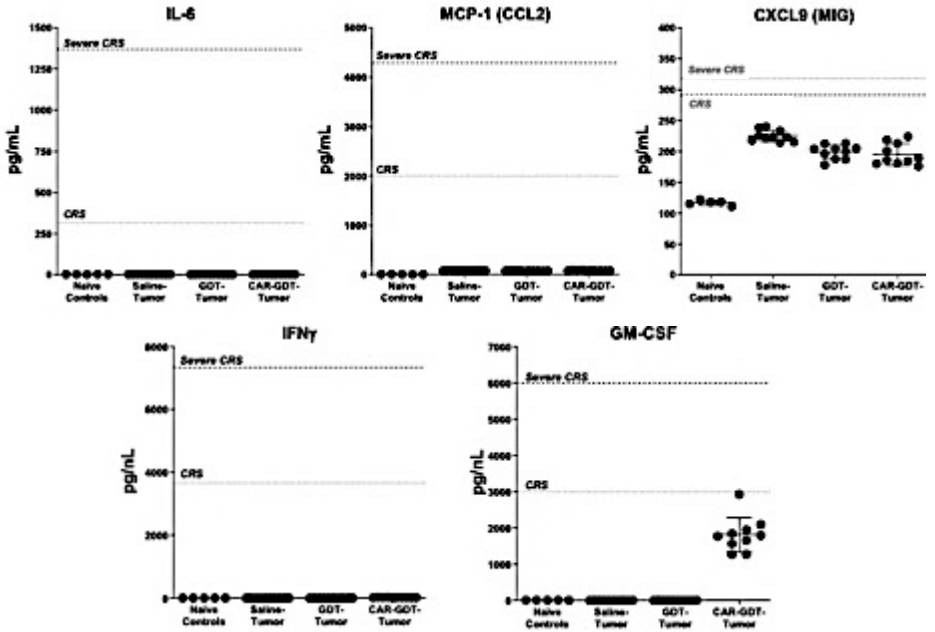
Isocel eradicates established NCI-H226 pleural epithelioid mesothelioma and prevents tumor growth in a model of recurrence.

Tumor eradication



GDT CAR T-Cell Therapy (Isocel)* Strong Safety

Isocel does not lead to cytokine level increases modeled to cause severe CRS or CRS, with circulating cell numbers regulated by objective response.

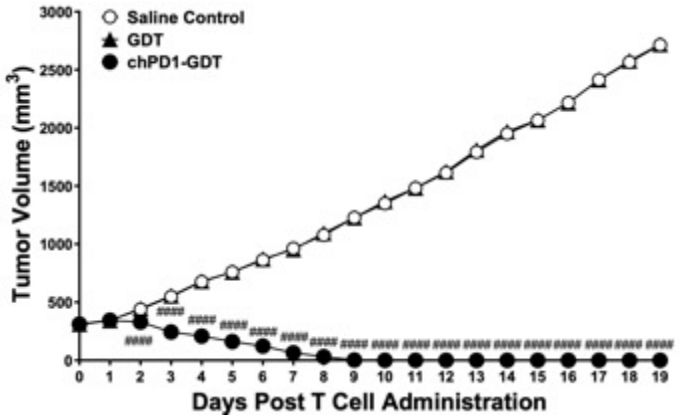


*Preclinical models: nude mice with subcutaneous NCI-H226 cells injections

GDT chPD1 T-Cell Therapy (Procel)* Strong Efficacy

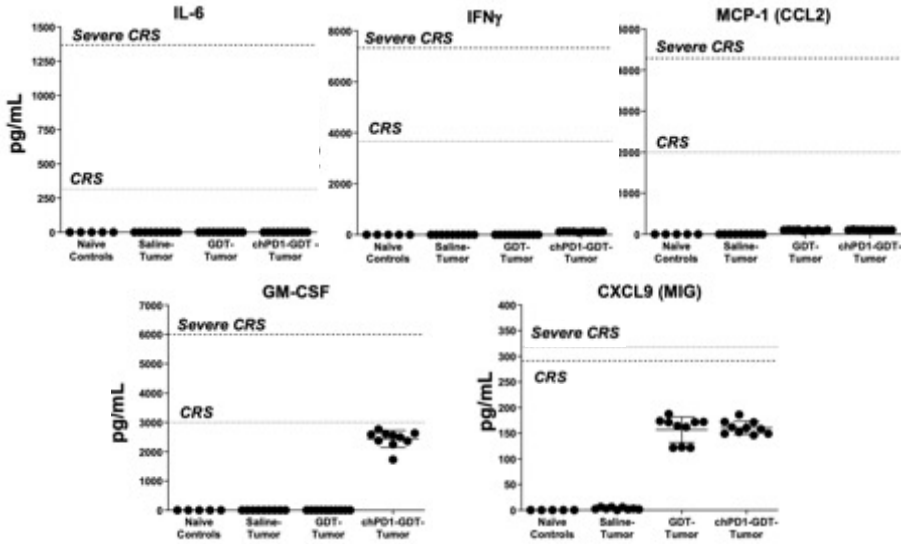
Procel eradicates established NCI-H226 pleural epithelioid mesothelioma and extends survival.

Tumor eradication



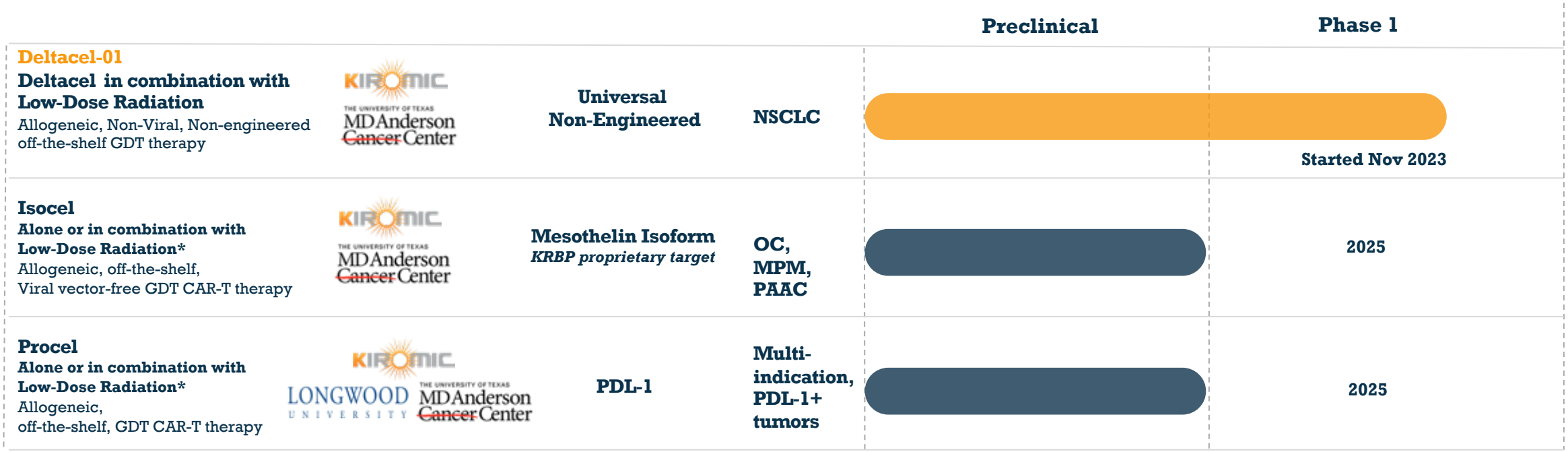
GDT chPD1 T-Cell Therapy (Procel)* Strong Safety

Procel does not lead to cytokine level increases modeled to cause severe CRS or CRS, with circulating cell numbers regulated by objective response.



*Preclinical models: nude mice with subcutaneous NCI-H226 cells injections

Clinical Development Strategy



* This program may result in two clinical trials, one with and one without low-dose radiation, depending on the pre-clinical evidence.

In-House cGMP Manufacturing Creates De-Risked Value

Contents

Deltacel-01 Phase 1 Clinical Trial

Evaluating Deltacel in Stage 4 Metastatic Non-small Cell Lung Cancer (NSCLC)

- Open-label, multicenter trial enrolling up to 48 patients
- Patients receive two IV Deltacel infusions with four courses of low-dose, localized radiation over a 10-day period

- **Primary objective:**
  - Safety of Deltacel in combination with low-dose radiation

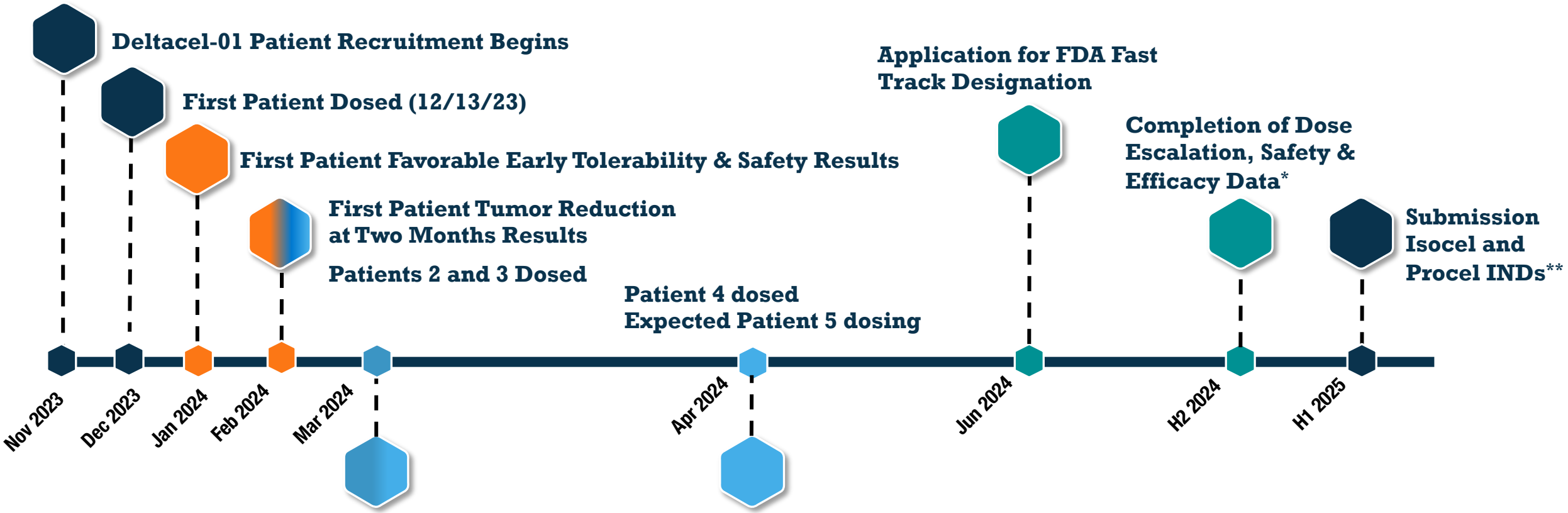
- **Secondary outcome measures:**
  - Objective response, progression-free survival, overall survival, time to progression, time to treatment response and disease control rates

Early Results

Patient	Safety	Six Weeks Post-treatment	Two Months Post-treatment	Four Months Post-treatment
1	✓ No dose limiting toxicities	✓ Stable disease	✓ Tumor size reduction by 6.6% ✓ Tumor metabolism reduction by 20%	✓ Stable disease (compared with two-month follow-up)
2	✓ No dose limiting toxicities	✓ Stable disease ✓ Complete resolution of brain lesions	✓ Stable disease ✓ Confirmed clean brain imaging ✓ No new brain lesions	❑ Expected in June 2024
3	✓ No dose limiting toxicities	✓ Stable disease	✓ Stable disease	❑ Expected in June 2024

✓ Patient 4 completed treatment in April 2024
✓ Patient 5 expected to complete treatment in April 2024
❑ Early efficacy evaluation for both patients expected in May 2024

Recent and Upcoming Milestones



Patients 2 and 3 six-week visits

- ✓ Confirmed safety
- ✓ Stable disease
- ✓ Complete response in Patient 2 brain metastases

Patient 1 four-month visit
Patients 2 and 3 two-month visit

- ✓ Confirmed safety
- ✓ Stable disease
- ✓ Clean brain MRI for Patient 2

* The milestones and timing of completion are based on the company's current expectations in consultation with its partners and vendors.
** Subject to obtaining sufficient financing to support the progression of the development of those additional clinical trial candidates.

Leadership Team

Pietro Bersani
CPA, CGMA

CEO

A&M

B2B CFO SINCE 1987

Fuel Systems Solutions

Deloitte.

ARTHUR ANDERSEN

Leonardo Mirandola
Ph.D.

CSO/INTERIM COO

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

UNIVERSITÀ DEGLI STUDI DI MILANO

SEMM European School of Molecular Medicine

Scott Dahlbeck
M.D., Pharm.D.

COSO

Texas Tech Univ Health Science Center

aurora

ASA Ambulatory Services of America

UMC HEALTH SYSTEM

University of TX Health Science Center Houston

KAISER PERMANENTE

Hennepin Healthcare

Nebraska Medical Center College of Pharmacy

Brian Hungerford
CPA,CGMA

CFO

Deloitte.

MERRILL A BANK OF AMERICA COMPANY

accenture

Constellation.

DYNEGY

Board of Directors

Michael Nagel

Chairperson

Pietro Bersani
CPA, CGMA

Director

Pam Misajon

Independent Director

Michael Catlin

Independent Director

Summary Balance Sheet & Cap Table

Balance Sheet Data (As of December 31, 2023)	**As Reported ($ in 000s)**
Cash and Cash Equivalents	**$3,204**
Working Capital	**($15,948)**
Total Assets	**$12,169**
Total Stockholders' Deficit	**($9,121)**

Cap Table (As of December 31, 2023)	**Common Stock Equivalents**
Common Stock	1,258,460
Restricted Stock Units ($4.13 Weighted average grant date fair value)	30,167
Options ($101.04 Weighted average exercise price)	18,093
Warrants	15,416
Convertible Preferred Share Shares ($14MM principal & $6.50 share conversion)	2,493,151
Convertible Notes ($4.8MM principal & $6.50 share conversion) ($4.8MM principal & $5.00 share conversion) ($2.0MM principal & $2.50 share conversion)	3,670,030
Fully Diluted Common Shares	7,485,316

Value Proposition Summary

1
Diamond AI™ Neural Network

2
Gamma Delta CAR-T Cell Therapy Platform

3
Allogeneic, Off-the-Shelf Cellular Therapy

Cells from healthy donors, not ill cancer patients, for maximum efficacy

4
Solid Malignancies

(~90% of all cancers1)

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In-House cGMP Manufacturing

[1]American Cancer Society, Cancer Facts & Figures, 2022. https://www.cancer.org/research/cancer-facts-statistics.html.

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