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Free Writing Prospectus



Kiromic Bioharma, Inc. ("we" or "us") has filed a registration statement (including a preliminary prospectus) (the "Registration Statement") with the Securities and Exchange Commission (the "SEC") on Form S-1/A (SEC File No. 333-238153) for the offering to which this presentation relates.

Such registration statement has not yet become effective. Shares of our common stock may not be sold, nor may offers to buy be accepted, prior to the time the registration statement becomes effective. Before you invest, you should read the preliminary prospectus and other documents we file with the SEC for more complete information about our company and this offering. You should read the prospectus in the Registration Statement and other documents that we have filed with the SEC for more complete information about us.

You may access these documents for free by visiting EDGAR on the SEC web site at

www.sec.gov or by contacting Thinkequity, a Division of Fordham Financial Mgmt., Inc.,

17 State Street, 22nd Floor, New York, NY 10004, by telephone at (877) 436-3673 or by email at prospectus@think-equity.com.



Offering Summary

\$25,000,000
\$12.00 -14.00 per share
KRBP (NASDAQ Capital Markets)
1,923,100 Shares
6,083,000 Shares as converted (07/06/2020)
8,006,100 Shares
Advancing clinical development of PD-1, Iso-Mesothelin, our lead CAR-iNKT for the treatment of solid tumors, R&D working capital, general corporate
ThinkEquity, a division of Fordham Financial Management, Inc.





We are connecting the dots in cancer research by using Al and machine learning to connect silos of informations and arrive at cancer targets which will be more effective vs. classic development, saving man-years and billions in development dollars.



Non-Viral Genome edit and delivery

Our single-cut gene edits carry a lower mutagenesis risk vs. classic double-cut gene edits.

Our CAR receptors will also have higher safety with an on-demand cut-off switch vs. classic CAR therapies with no off-switch.

Kiromic at a Glance



Gamma Delta T-cell

Immune Cell Type Our CAR Therapy will be using off-the-shelf Gamma-Delta T-cells and will have a higher yield and significantly lower yield variability vs. classic CAR-T therapies.



Micro Tumor Environment

Our CAR Therapies will be able to access the micro tumor environment due to our PD-1 check-point inhibitor vs. classic CAR-T therapies. Classic CAR-T are limited to hematologic indications.

Solid Tumor



network ts for T ence and el surface bles and

Diamond is a computational platform and a **neural network** that can identify new cancer immunological targets for T cells and B cells. Diamond is an **artificial intelligence** and **machine learning** approach that can identify novel surface tumor targets. It uses public and proprietary samples and can expand into the tumor target space.

ADVANCING CAR through A.I.







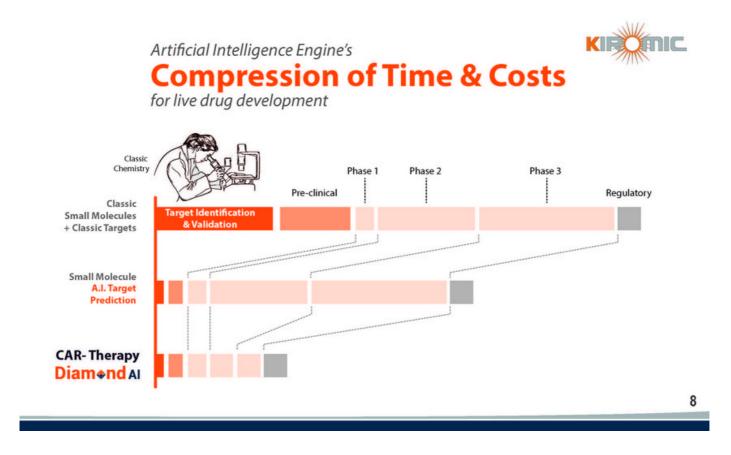
dramatically compressing

meets

Man-Years and Billions of Drug Development Dollars

to develop a live drug





Management



CEO Maurizio Chiriva-Internati, PhD CFO **Tony Tontat** Mr. Chiriva-Internati is an associate professor at MD Mr. Tontat brings to Kiromic over 2 decades of Director **COO** Anderson Cancer Center. He has spent the past 28 business experience from public (NASDAQ: SRNE, NK) Director years studying cancer targets and is the founder of and privately held biotechs. He had been healthcare Kiromic Artificial Intelligence Neural Network. He has analysts at specialist healthcare investment funds in published +160 articles (+peer reviews) on cancer New York, and Connecticut. He was also an targeting and on the use of AI to expedite the search investment banker at HSBC Securities in their New for these targets. He holds PhD in immunology (U of York, London, and Paris offices. Bachelor of Arts in Nottingham), PhD in morphological science (Milan), Economics - Harvard University. and a Certificate in Artificial Intelligence - M.I.T. CSIO CMO Gianluca Rotino Chief Strategy, Innovation Officer Scott Dalhbeck, MD, PharmD Director Mr. Rotino held CEO and Chairman roles in several Dr. Dalhbeck was a radiation oncologist and was an

Italian companies specializing in high-tech, and corporate consulting. He also worked at law firms in Milan where he specialized in M&A, intellectual property prosecution and corporate law. He holds a business development degree and bachelor of science (Pharma focus) - EBD Academy in London, and completed the drug discovery, develop. and commercialization - U.C. San Diego. Scott Dalhbeck, MD, PharmD Dr. Dalhbeck was a radiation oncologist and was an adjunct professor of internal medicine, pathology, and urology at Texas Tech. He has also patented, manufactured, and commercialized IP and has more than a decade of experience in medical and oncology commerce. He holds an MD - Texas Health Science Center, and a PharmD - U of Nebraska. His residency was at Kaiser Permanente of Los Angeles.

Diam and AI Processes



non-exhaustive list of functions being applied by A.I. Engine

Prioritizing T and B Cell Targets

Diamond generates a prioritized list of cancer immunological targets for T cells and B cells.

These targets can be used to create therapies such as antibody therapies, T cell therapies, T cell receptor therapies, CAR T cell therapies and vaccine therapies.

Identify Highly Expressed Genes

Diamond's cognitive and deep learning capabilities extract information from our extensive digital library consisting of clinical studies, genomic and proteomic datasets.

Diamond harmonizes all the raw data and creates datasets which allows us to screen for cancer targets.

Diamond will identify and prioritize lists of genes (biomarkers, wild type, mutant, isoform, neoepitope, etc.) that are highly and specifically expressed in the disease of interest while providing its distribution and methylation status across the entire patient population.

It also maps out the exact portion of the gene that will elicit an immune response.

Perform Meta Analysis

Diamond performs meta-analysis and convolution studies while standardizing and normalizing data across multiple and variable experimental platforms, then allows for the visualization of consistent and accurate results in a user-friendly fashion.

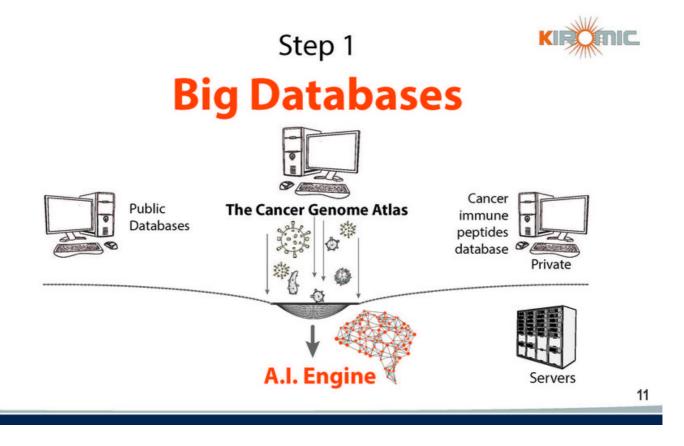
Predict Isoform Targets

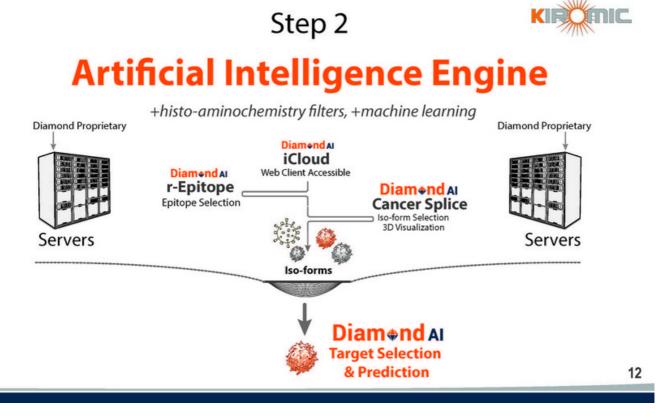
Cancer cells will down regulate or shed targets in order to avoid detection and destruction by T cells (the immune system).

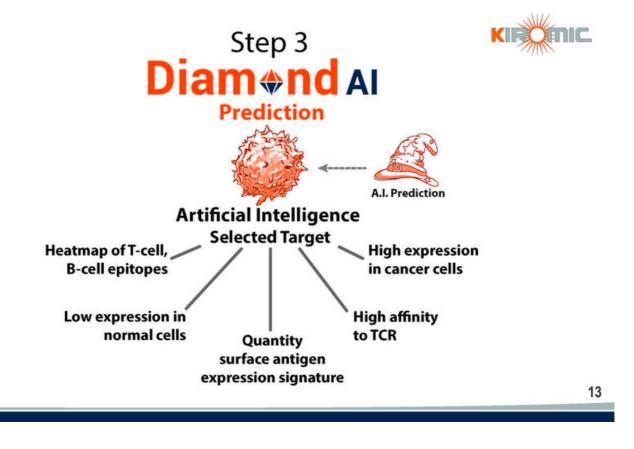
These variations are known as isoforms.

CancerSplice also shows a box plot by tissue of expression of the isoform in normal cancer genome atlas tissues and a box plot of the matching isoform in genotype-tissue expression program normal data.

The sequence of amino acids that are specific for the selected cancer isoforms are then directly fed to Diamond's artificial neural capsule network for peptide design and prioritization.









Step 4 Target Validation

We rigorously validate all targets from our A.I. Prediction Engine Internal validations and then external validation



MD ANDERSON CANCER CENTER

Baylor University University of Rome



Algorithm Validation







A key A.I. Engine

Target isoforms are protein variants of the same targets that occur during the normal processing of immature gene transcripts to the mature form.

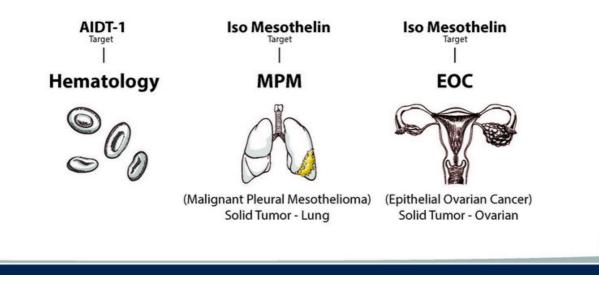
Target isoforms include variations in their primary amino acid sequence that can change both the final folded form of the target plus their ability to be recognized by modified T cells (autologous/allogeneic) and other cells, such as NK or invariant NKT cells (often used in the allogeneic setting). If they are the predominate form on the cell surface, these isoforms can make it impossible for T cells to outright bind the targets on cancer cells.

No binding or insufficient binding to the isoform results in no killing of cancer cells.

Our CancerSplice accurately predicts the most appropriate isoforms for T cells to bind and destroy cancer cells.

Targets Which We Have Identified

How our identified targets are developed into therapies for live drugs to treat cancer



Indications: By the Numbers





Ovarian Cancer

300,000 Worldwide number of patients American Cancer Society

21,750 2018 new cases in the USA American Cancer Society 2018

S1.2 BLN in 2018 Grand View Research (July 2019)



MPM - Lung Cancer

43,000 Worldwide number of patients American Cancer Society

3,000 Annually in the USA American Cancer Society 2018

\$300 M by 2025 Persistent Market Research, Jul 2017



Hematological Cancers

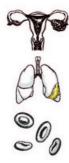
200,000 Worldwide number of patients American Cancer Society

30,000 Annual Diagnosis in the USA American Cancer Society 2018

\$4.6 BLN by 2025 BIS Research, Nov 2019

Our Pipeline





	In vitro validation	Pre clinical	IND	Phase 1	Phase 2	Phase 3
Alexis (γδ-T cells) Allogenic / Iso-Mesothelin EOC (Solid, Ovarian)						
Alexis (γδ-T cells) Allogenic / Iso-Mesothelin MPM /Pleural mets (Solid, Pleural)						
Alexis (γδ-T cells) Allogenic / AIDT-1 (Hematologic Indications)						
PD-1 check point inhibitor (Solid Tumors)						

PD-1 Check-Point Inhibition

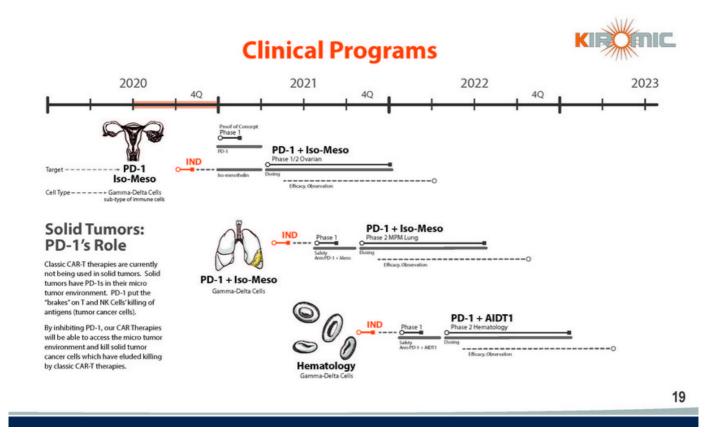
A protein found on T cells (a type of immune cell) that helps keep the body's immune responses in check. When PD-1 is bound to another protein called PD-L1 (tumor), it helps keep T cells from killing other cells, including cancer cells. Some anticancer drugs, called immune checkpoint inhibitors, are used to block PD-1.

When this protein is blocked, the "brakes" on the immune system are released and the ability of T cells to kill cancer cells is increased.

Isoform Mesothelin

This is our lead target candidate which came out of our Artificial Intelligence Prediction Engine.

Isoform targets are highly expressed on cancer cells while very lighly expressed on normal (healthy) cells.





ADVANCING CAR through A.I.

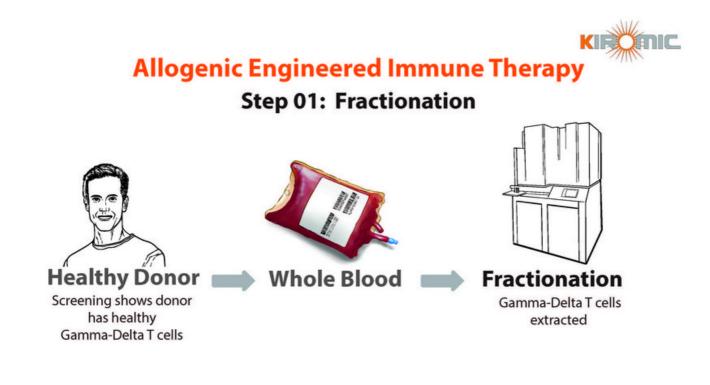
Our Therapeutic Products

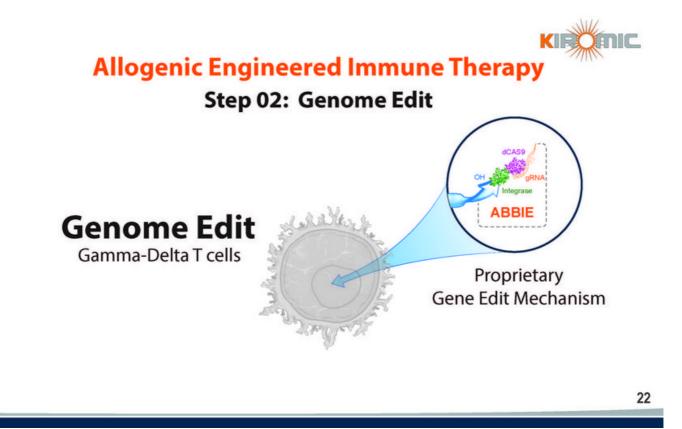


Immuno CAR-GD-T Therapy

in solid tumors

CAR = chimeric antigen receptors







ABBIE: Non-Viral Genome Editing Mechanism

ABBIE is a novel gene-editing system for inserting therapeutic genes safely into the genome of a host cell.

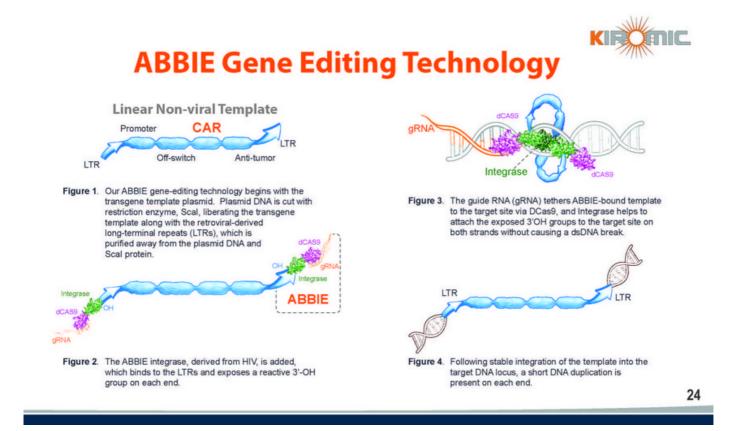
ABBIE technology comprises two main components,

(i) a genome template (extracted from the ALEXIS plasmid), containing the therapeutic genes needed to retrain tumor-killing cells, and

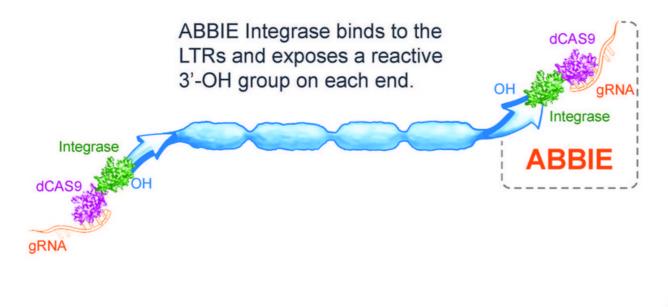
(ii) the gene-editing machinery required to safely insert this template into the genome of the therapeutic cells. The ABBIE protein accompanies the CAR-containing genome template as it passes through the cell membrane into the nucleus and guides the template-flanking sequences (the "glue") safely into the target genome.

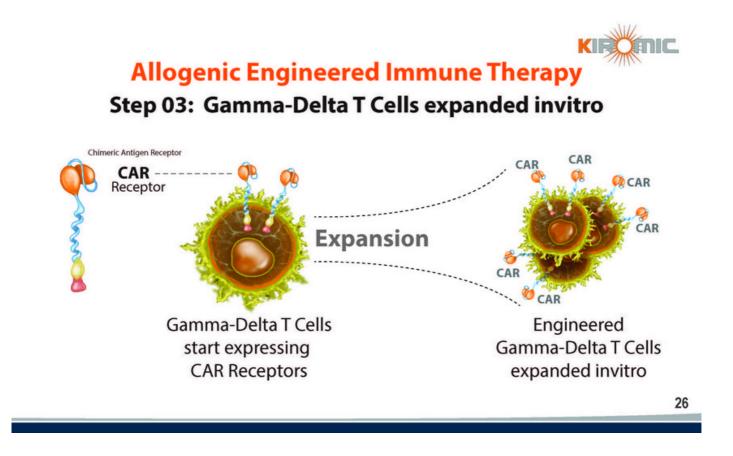
Due to this targeting ability, ABBIE can also be used to remove unwanted, inhibitory genes. CAR expression on the Gamma-Delta T cells allows them to detect and destroy the antigen-expressing targeted cells.

The OFF switch permits fast shutdown in the event of an unexpected toxicity. Additional Anti-tumor factors can help neutralize the toxic tumor microenvironment.



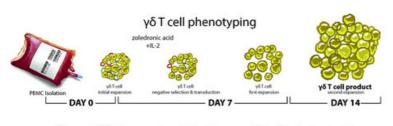




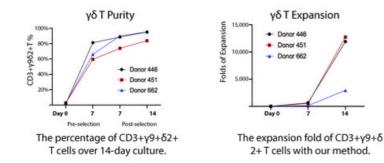


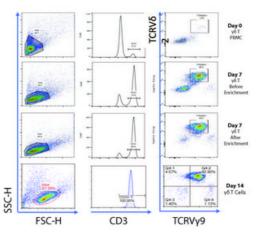
How We Know: GD-T cell Expansion Works





A large fold of expansion of highly pure $\gamma\delta$ T cells during in vitro stimulation, culture, isolation and expansion process.

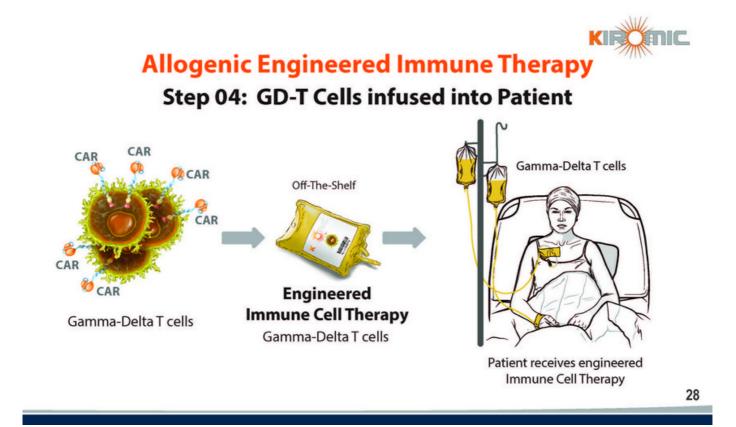




CONCLUSION

Our method of $\gamma\delta$ T expansion yield highest 12,000-fold expansion of $\gamma\delta$ T cells, which is over 95% purity for positive for CD3, V γ 9, and V δ 2.

This has potential to produce enough number $\gamma\delta\,T$ for clinical use.

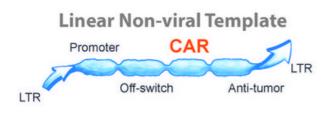




Up-Armoring

Accessory proteins can "up-armor" cellular therapies

Strategic choice of proteins to improve cellular function and neutralize anti-immune responses



- * Activated signaling molecules chosen to enhance cell persistence by stimulating cytokine pathways
- * Targeting the immunosuppressive "reactive" stroma can enable tumor targeting by therapeutic cells while increasing anti-tumor efficacy







ACTIVATION Switch

A rapidly deployed activation switch can provide a survival and proliferation signal to the therapeutic cells to enhance their efficacy and persistence in vivo.

ATTENUATION Switch

A rapidly deployed attenuation switch can intercept activation signals transiently to minimize toxicity following successful anti-tumor interactions. Choice of two non-mutually exclusive Attenuation Switch approaches:

- (a) a protein-based switch that rapidly triggers attenuation of target cells in a dose-dependent fashion.
- (b) a small molecule-based approach to rapidly and reversibly attenuate cell signaling.



SAFETY Switch

A rapidly deployed, protein-based safety switch can eliminate therapeutic cells in case of acute toxicity. The safety switch is designed to eliminate either:

- (a) essentially all active therapeutic cells.
- (b) only the most active cells, preserving a cohort of backup therapeutic cells for long-term control of residual relapsing tumor cells.

The Safety Switch will be co-expressed along with the bioactive chimeric activation receptor (CAR), the Activation Switch, and the Attenuation Switch.





Clinical

\$5,600,000

Initiation of clinical trials for ALEXIS Isoform Mesothelin EOC and PD-1 product candidates

> **IP** \$240,000

R&D Working Capital & General Corporate \$16,100,000



Comparables

A.I. Targets + Small Molecules		CAR-T and CAR-NK	
SCHRÖDINGER	\$6.02 BLN IPO Feb 2020	THERAPEUTICS	\$3.06 BLN Public
BLACK DIAMOND THERAPEUTICS	\$1.18 BLN IPO Jan 2020	NEKT	\$4.36 BLN Public
therapeutics	\$1.08 BLN IPO Mar 2018	Kite Pharma	\$11.9 BLN Acquired
Lantern [®] Pharma	\$79 M IPO Jun 2020		\$9.0 BLN Acquired

Market data as of 07/13/2020, Yahoo Finance intraday

Cap Table

Capitalization (07/13/2020)	
Common Stock	* 6,083,000
Option (WAEP \$11.84)	617,999
RSU (WAVG GDFV \$19.00)	709,334
Fully Diluted Common	7,410,332

.....

*Includes conversion of 21,822,301 Shares of Series A-1 Preferred Stock into 624,594 shares of common stock; 16,391,397 shares of Series B Preferred Stock into 469,136 shares of common stock

Valuation



Valuation drivers are blended values from the following:

Artificial Intelligence Predicted Targets (vs. classic targets)

CAR Therapies (vs. classic small molecule)

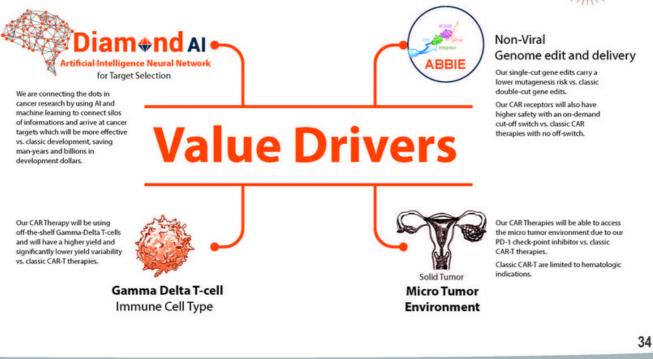
(vs. classic sinali molecule)

CAR Allogenic (Gamma-Delta T cells) (vs. classic CAR-T autologous)

Solid Tumor (PD-1 checkpoint inhibition) (vs. classic CAR-T liquid cancers)

Company's info as Tuesday, 07/13/2020









ttontat@kiromic.com

Intellectual Property





Platform for Identification of Tumor- Associated Cancer/Testis Antigens (15/731,143 Utility Application) –

Claims: Composition of matter, use and process for a method of identifying cancer/testes antigens (CTAs) useful as cancer treatment targets; the method comprising: identifying human sperm proteins to which patients diagnosed with solid or hematological malignancies have established a humoral immune response

Method for the identification and use of hot-spot mutations and tumor-associated splice isoforms in cancer immunotherapy (62/921,127 Provisional Application) – No claims filed

Anti-Human/Mouse Sperm Protein 17 (SP17) Antibody and Derivatives Thereof (15/530,964 Utility Application) -

Claims: Composition of matter, use, and method for a novel monoclonal antibody, designated as GD6, and various derivatives thereof, which target an epitope of human and murine Sperm Protein 17 (SP17) which possesse broad expression on cells derived from numerous solid malignancies



PD1-Specific Chimeric Antigen Receptor as an Immunotherapy (PCT/US2018/052799 US Application and PCT Application) –

Claims: Composition of matter claims for a chimeric antigen receptor (CAR) polypeptide; a vector comprising the CAR polypeptide; and a T lymphocyte genetically modified to express the CAR polypeptide. The claims in the patent application also contain a method of treating cancer using the T lymphocyte genetically modified to express the CAR polypeptide.

CAS 9 Retroviral Integrase and CAS 9 Recombinase Systems for Targeted Incorporation of a DNA Sequence into a Genome of a Cell or Organism (PCT/US2016/025426) – Claims: Composition of matter claims for nucleic acid constructs; organisms comprising nucleic acid construct; fusion proteins; and nucleic acid vectors. The claims in this patent family also contain methods of inserting a DNA sequence into genomic DNA and inhibiting gene expression.

NK-engineered cell lines for the treatment of cancer (62/921,537 Provisional Application) – No claims filed

Directors



Tony Tontat

Independent

Jerry Schneider, JD, MBA

He currently serves on the board of directors and audit committee for Cognex, a provider of vision systems, software, sensors, and industrial barcode readers used in manufacturing automation since 2016. Cognex (CGNO) is publicly traded on the Nasdag stock exchange. He serves on other for-profit and non-profit boards. Mr. Schneider received his Juris Doctor from Loyola Lue experience of being a "financial expert" applicated by the UC. Regents which oversee the University of California's budget of over \$30M.

Independent Michael Nagel

Mr. Nagel has served as a member of our board of directors since June 2020. He has cover 30 years of sales and marketing experience in the medical device industry. Since 2012, Mr. Nagel has served as the President and CED of Vonauris Innovations, Inc, which specializes in wireless microcurrent-generating technologies that are focused on regeneration, healing, and recovery, Previously, Mr. Nagel served as the Chief Commercial Officer of Neomend, a biomaterial company that developed ProGel, a PMA approved using al sealant for lung surgery. From 1997 to 2005, Mr. Nagel also served as Con-Founder and Vice Previder and Worldwide Sales and Marketing at Vascular Solutions (VASC).

In addition to Mr. Nagel's executive experience, he also serves as a director for Franklin Mountain Medical, LLC an early stage company in the structural heart market. Mr. Nagel holds both a B.A. in Business and a M.B.A. from the University of Sc. Thomas.

Maurizio Chiriva-Internati, PhD

Independent Americo Cicchetti, PhD

Americo Cicchetti, PhD Dr. Cicchetti has served as a member of our board of directors since March 2020. De Cicchetti has served as a Profensor of Management at Universit a Cattolica del Sacio Cuore, Faculty of Economics, Rome since 2025. He is also currently the Director of the Graduate School of Health Economics and Management at Universit a Cattolica del Sacio Cuore. In addition to this academic experience, Dr. Cicchetti was a member of the Price and Beinburssmert Committee of the Hallan National Drug Agency from 2009-2015. He is a member of the Lutopean Network of Health Econology Assessment Member of the Innovoticin Steering Group of the National HTA Program for Medical Devices (Ministry of Health, taby): Member of the National Immunization rechnical Advisory Group at the Ministry of Health, taby since 2018: Member of the Health and Research Commission of the Rome Foundation since 2007; and a Member of Health and Research Gemmission of the Board of Directors of the Health and Research Foundation since 2017.

Furthermore, Dr. Cicchetti is the Chief Executive Officer and Director for Molpharma, whose core business is the research and development of new drugs and diagnostics aimed at predicting, detecting and treating female oncological disease. He also serves as an independent board member for Foundation Health and Research, and Leonida SCAF, a fixed capital investment company. He obtained his PLD in Management from University of Bologna, and his B.A. from University of Rome.

Gianluca Rotino

Independent Pietro Bersani, JD, CPA

Pretro bersani, JDJ, CLPA Mr. Bersani has served as a member of our board of directors since June 2020. Since April 2020, Mr. Bersani is a Partner with 828 CFO Partners, LLC, which provides strategic management advices yservices to eveness of privately held companies. During October 2016 and July 2018, he served as the President, and Chef Executive Officer at KP. Damood Eagle, Inc., a consulting firm specialized in development of innovative commercial and private availon business models. He dais beld the same positions at KP. Diamood Eagle, Inc., between November 2019 and Mach 2020. He later served as a Senior Director within Alvance & Marsal's Private Equity Performance Improvement Practice, LLP between August 2018 and October 2019. Prior to those professional experiences, Mr. Bersains served as the Chief Financial Officer of Fuel Systems Solutions. Inc. between April 2011 and October 2016.

Mr. Bessani is a Certified Public Accountar and is also a Certified Public Auditor and a Chartered Certified Accountant in Italy where he developed a significant knowledge of US GARP and IRS, Mr. Bersani esmed a BA and Ma in Business Economics from L. Boccori University, Italy, Mr. Bersani was designated by certain holders of our Series B Phefered Stock. Except for the foregoing, there is no arrangement or understanding between any director or executive affore and any other person pursuant to which he was or is to be selected as a director.



Artificial Intelligence Neural Network **162 Internal Publications**



Chiriva-Internati M, Cobos E, Cannon MJ. Editorial: Prospects and Challenges for Immunotherapy of Ovarian Cancer-What Can We Learn from the Tumor Microenvironment? International Reviews of Immunology. 2011;30(2-3):67-70.



Cannon MJ, Goyne H, Stone PJB, Chiriva-Internati M. Dendritic cell vaccination against ovarian cancer - tipping the Treg/T(H)17 balance to therapeutic advantage? Expert Opinion on Biological Therapy. 2011;11(4):441-445.

Wachtel MS, Zhang Y, Xu T, Chiriva-Internati M, Frezza EE. Combined Pathol 1 43-7 2008



hepatocellular cholangiocarcinomas; analysis of a large database Clin Med

Mirandola L, J Cannon M, Cobos E, Bernardini G, Jenkins MR, Kast WM, Chiriva-Internati M. Cancer testis antigens: novel biomarkers and targetable proteins for ovarian cancer. Int Rev Immunol. Apr-Jun;30(2-3):127-37. doi: 10.3109/08830185.2011.572504.2011

Bumm K, Zheng M, Bailey C, Zhan F, Chiriva-Internati M, Eddlemon P, Terry J, Barlogie B, Shaughnessy JD Jr. CGO: utilizing and integrating gene expression microarray data in clinical research and data management. Bioinformatics 2002 Feb; 18(2) 327-8 2002

Source: Pubmed gov search Chiriva-Internati (162 publications from 1997 to 2020)

Maurizio Chiriva-Internati, Leonardo Mirandola, Franco Marincola, Gianluca Rotino, Jose A. Figueroa, Fabio Grizzi, and Robert Bresalier The Quest for the Next-Generation of Tumor Targets Discovery and Prioritization in the Genomics Era. Springer, Published 2019 (chapter for a book "immune-Oncology: Cellular and Translational Approaches" 2019

Maurizio Chiriva-Internati & Adrian Bot. New Era in Cancer Immunotherapy. Discovering Novel Targets and Reprogramming the Immune System. International Reviews of Immunology, 342, 101-103.2015

Grizzi F, Gaetani P, Tancioni F, Di leva A, Bollati A, Baena R, Dioguardi N, and Chiriva-Internati M. From Discovery to the Clinical Application In Nervo System Neoplasia. In: Tumor Associated Antigens, 2004

Figueroa AJ ,Pena C ,Mirandola L, Reidy A , Payne D, Hosinluck N, Suvorava N, Rahman LR , Whitlow AR , Verma R , Cobos E and Chiriva-Internati M. "Therapeutic Monoclonal Antibodies and Their Targets' by Wiley Production_Biosimilars of Monoclonal Antibodies. A Practical Guide to Manufacturing, Preclinical and Clinical Development, First Edition Edited by Cheng Liu and K. John Morrow Jr. @ 2017 John Wiley & Sons, Inc. Published 2017.

Grizzi F, Russo C, Portinaro N, Hermonat PL, Chiriva-Internati M, Complexity and cancer. Gastroenterology. 2004 Feb;126(2):630-1; author reply 631-2. PubMed PMID: 14765401 2004