

## CORPORATE PRESENTATION

**NASDAQ: GNTA** 

May 2024

This presentation contains forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential" "intends" or "continue," or the negative of these terms or other comparable terminology. All statements other than statements of historical facts contained in the presentation, such as statements regarding our potential future results of operations and financial position, prospective product candidates, availability of future funding, anticipated clinical trial results, timing of possible product approvals and expected regulatory pathways, future potential collaborations and matters concerning the timing and likelihood of success of plans and objectives of management for future operations, are forward-looking statements. Any such forward-looking statements are based on our current expectations and beliefs, as well as assumptions concerning future events. These statements involve known and unknown risks, uncertainties and other factors that could cause such matters to differ materially from those discussed in such forward-looking statements. We discuss many of these risks in our filings from time to time with the U.S. Securities and Exchange Commission, including under the heading "Risk Factors" in such documents. 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 future results, levels of activity, performance, or achievements. Except as required by law, we are under no duty to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, after the date hereof.

## TURNING A COLD TUMOR TO HOT

## Leadership





## **Genenta Built on Strong Foundations**



PROPRIETARY PLATFORM TO PROVIDE DURABLE AND SAFE TREATMENTS FOR SOLID TUMORS

GENERATING CLINICAL PROOF OF CONCEPT FOR BREAKING IMMUNE TOLERANCE

ROBUST FUNDING AND PARTNERSHIPS TO TAKE TO NEXT STAGE

- One-time cell therapy designed to break tumor-induced immune suppression by enabling sustained targeted expression of therapeutic payload inside the TME<sup>1</sup> minimizing potential systemic toxicity
- Tumor and antigen agnostic
- Highly synergistic in **combination with I/O**
- Lead product candidate precisely delivers IFN-α to the tumor microenvironment aiming to break immune tolerance
- Phase 1/2a clinical data: favorable initial biological data with no drug limiting toxicities
- Expected cash runway to Q2 of 2025; ~\$10M Tax Credit accumulated to date
- Research engine through partnership with **SR-TIGET**<sup>2</sup>

1 TME: tumor microenvironment

2 SR-TIGET is a world leading cell and gene therapy institute founded by San Raffaele Research hospital, a co-founder and key shareholder of Genenta, and non-profit organization Telethon



#### Temferon<sup>™</sup> Designed to Address Three Major Challenges in I/O Treatment of Solid Tumors

#### TEMFERON

#### ACHIEVE DURABLE RESPONSES

#### ENABLE A DURABLE THERAPEUTIC POTENTIAL

Engineering of hematopoietic stem and progenitor cells (HSPCs) creates a **living drug stable reservoir** that may ensure a persistent response (HSCS ex-vivo Lentiviral strategy).

#### AGNOSTIC BUT SELECTIVE DELIVERY AND SWITCH COLD TO HOT

#### DELIVER TREATMENTS TO SOLID TUMOR AND BREAK TUMOR INDUCED TOLERANCE

Tie2+ expressing monocytes (TEMs), naturally recruited by growing tumors, **infiltrate and deliver the payload.** 

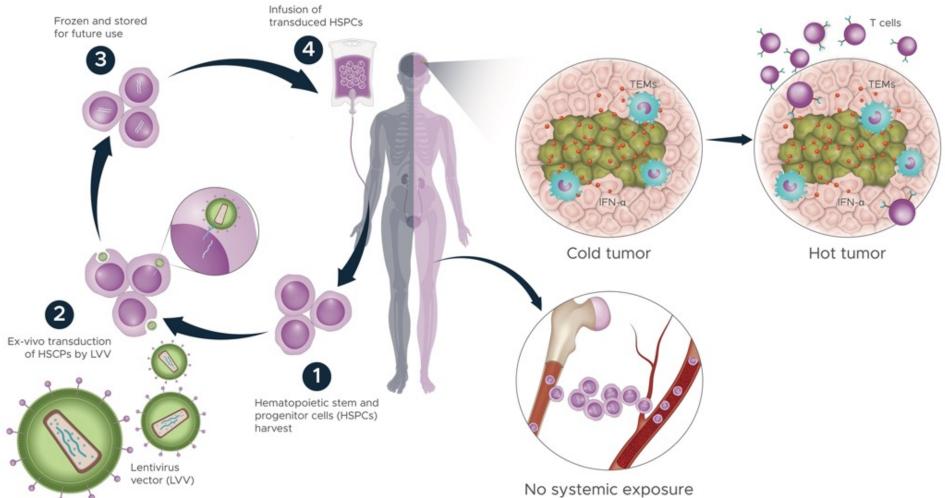
#### AVOID SYSTEMIC TOXICITY

#### LIMIT EXPRESSION OF THERAPEUTIC TO TUMOR MICROENVIRONMENT

Proprietary transgene expression technology designed to ensure **precise intra-tumor expression of payload therapy avoiding systemic toxicity** (microRNA regulation).



# Temferon: Hematopoietic stem cell-based single treatment for solid tumors





## Temferon Agnostic Efficacy Designed to Be Suitable For Treatment of Large Number Of Solid Tumors<sup>1</sup>

INDICATION	MARKET SIZE U.S. INCIDENCE <sup>2</sup>	UNMET NEED 5Y SURVIVAL <sup>3</sup>
Glioblastoma Multiforme	~3,7214	8.3% <sup>5</sup>
Renal cell carcinoma	~81,800	78%
Melanoma (Stage 4)	~4,880	35%
High Grade Osteosarcoma	3,970	69%
NSCLC (Stage 4)	~126,320	8%
Breast Cancers (Stage 4)	~17,867	30%
Squamous cell carcinoma (SCC) head and neck: (Stage IV)	~45,000	20-50%
Bladder cancer (Stage 4)	~4,114	8%
Liver & Intrahepatic Bile Duct Cancer	~41,210	22%
Gastroesophageal adenocarcinoma/SCC	~21,560	22%
Mesothelioma	~3,000	12%
Liver metastases (e.g., colorectal, breast, urothelial, melanoma)	~123,000	15% at 1 year
Epithelial ovarian cancer	~19,710	51%

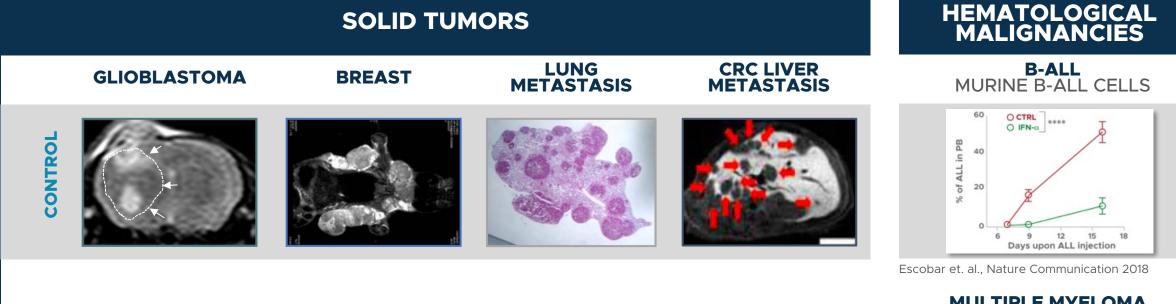
1 – Combo with Immune Checkpoint Inhibitors - I/O, Tie2+ Expressing Monocytes Presence, Tumor Microenvironment access pre- & post-treatment

2 - SEER Database – Estimated new cases in 2023 ; 3 – SEER Database 5-year survival rate 2013-2019;

4 – SEER Estimated New cases in 2023 adjusted on Glioblastoma frequency (15%) over all the primary brain tumor (Omstrom et al., 2019 - <u>https://doi.org/10.1093/neuonc/noz150</u>); 5- Stupp et al, 2009 SCC: Squamous Cell Carcinoma

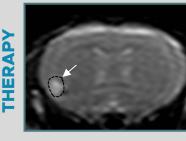


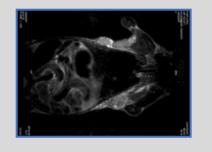
## **Temferon Agnostic Efficacy** in Treating Solid and Hematologic Tumors

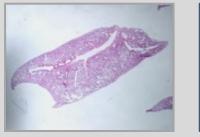


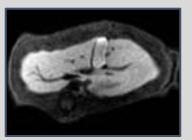
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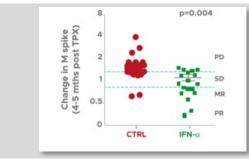








#### **MULTIPLE MYELOMA VK\*MYC MICE**

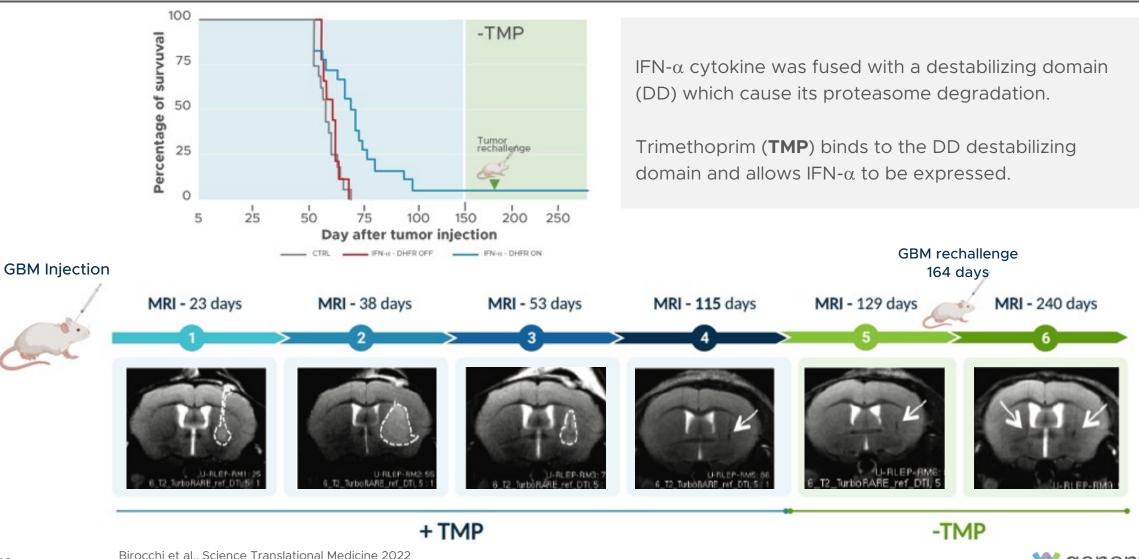


B. Gentner Unpublished



De Palma et al., Cancer Cell 2008; Escobar et al., Sci Transl Med 2014; Catarinella et al., EMBO Mol Med 2016; Escobar et al., Nature Communication 2018

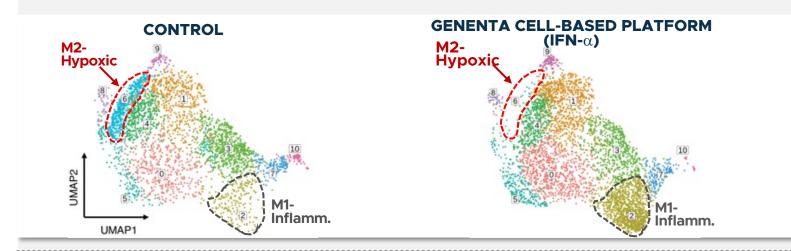
## The Temferon Triggered Hot TME Status Results in a Long-Term Immunoprotection



#### Temferon reprograms the TME and Switches Tumor State from Cold to Hot

OVA-ALL

20



OVA-ALL

100

20

## SWITCH the TME MYELOID CELL COMPARTMENT...

- imposes an ISG-driven immunostimulatory
- programs to non-classical monocytes associated with M1 skewing of the myeloid populations
- activates tumor-infiltrating DCs

#### ...TO GET a HOT T CELL COMPARTMENT

- increases active CD8+ T cells infiltration
- Induces T cells clonal expansion including cytotoxic CD8+ T cells and tumor-reactive T cell clones
- reduces percentage of exhausted CD8+ T cells
- increases the central memory T cells

Graphs have been faithfully reproduced by the original article

Days upon ALL injection

OVA-ALL

2nd challenge

p= 0.03

100

80

20

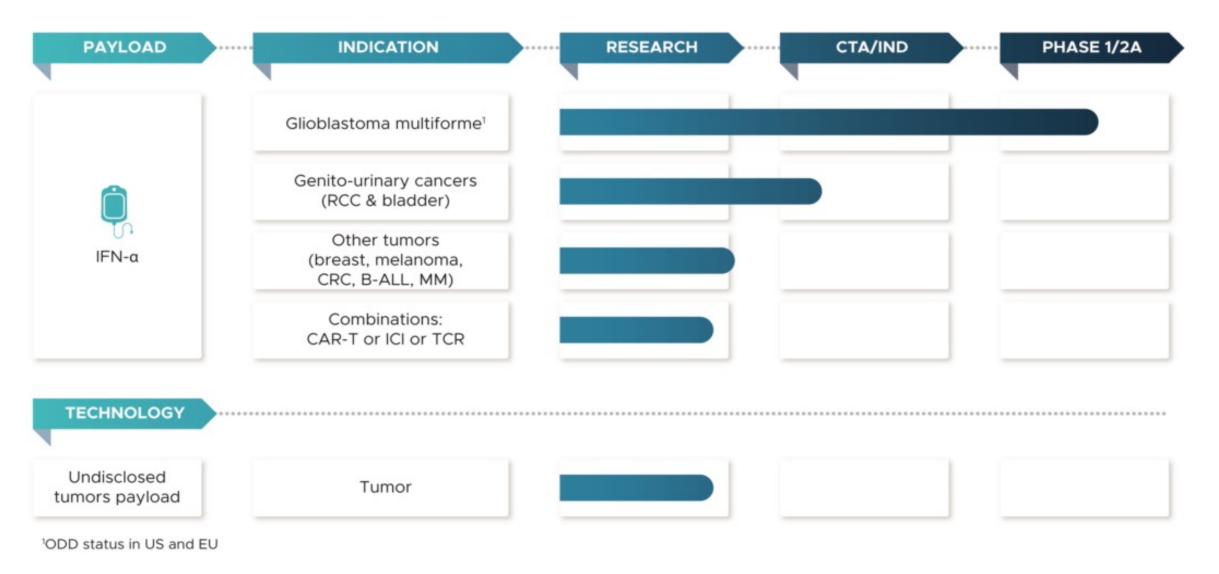
De Palma et al., Cancer Cell, 2008; Escobar et al., Sci Transl Med, 2014; Catarinella et al., EMBO Mol Med, 2016; Escobar et al., Nature Communication 2018; Birocchi et al., Sci Transl Med, 2022



survival 0

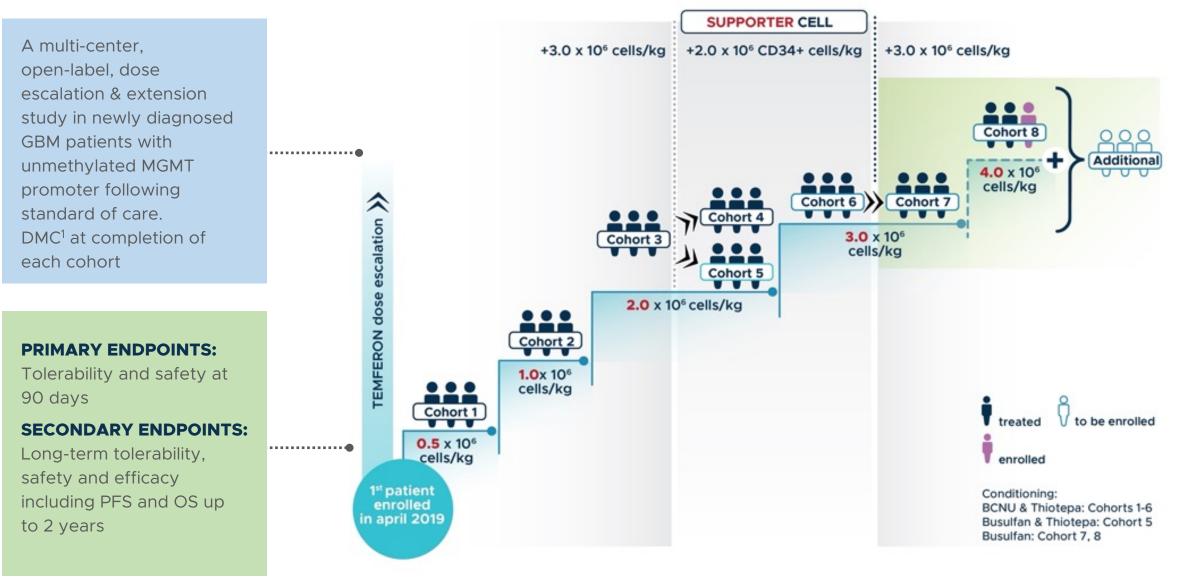
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## Pipeline





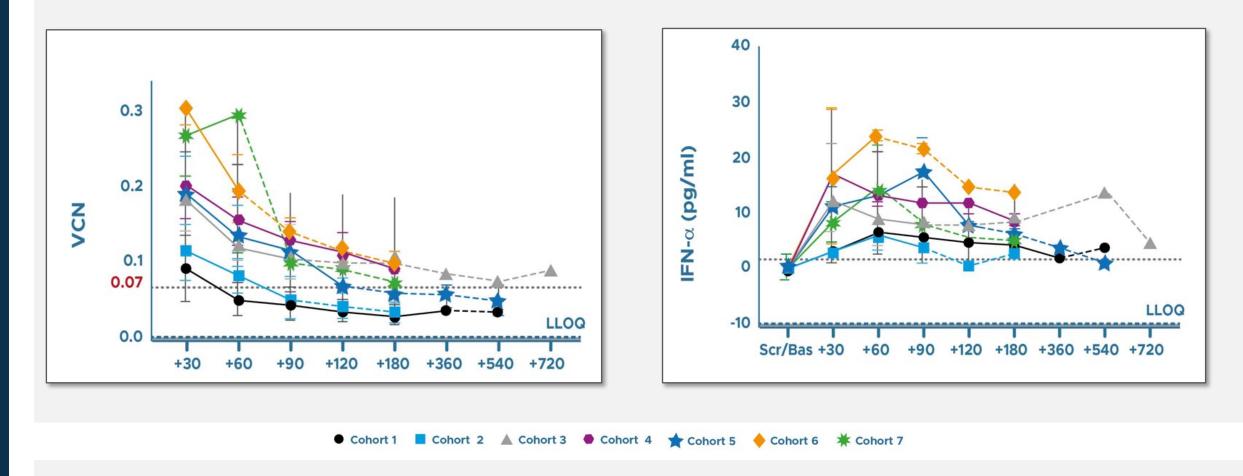
## Temferon Dose Ranging Phase 1/2a Trial in uMGMT GBM





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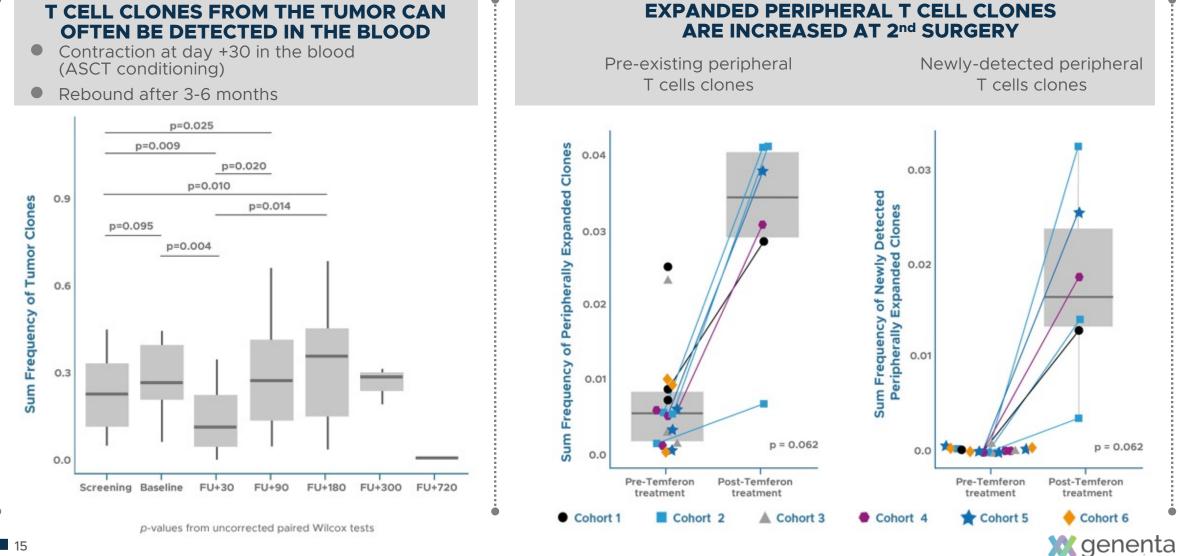
#### **Temferon Single Dose is Durable and Well Tolerated**



Dashes line connect timepoints with less than 3 measurements



#### **Temferon Breaks Tolerance** Allowing Intra Tumor Infiltration of T Cell Clones



## **Preliminary Clinical Data in uMGMT GBM:** Safe, Well Tolerated and Biologically Active



Detectable but very **low level of IFN-** $\alpha$  (pg/ml range) in the plasma. Expected and manageable adverse events and serious adverse events<sup>1</sup> associated with autologous stem cell transplantation and glioblastoma.

#### No dose limiting toxicities to date.

Rapid engraftment and **hematological recovery** observed in all patients treated (n=22).

#### BIOLOGICAL **ACTIVITY**

SAFETY

Current data shows median overall survival of 17 months<sup>2</sup> with an interim<sup>2</sup> 2-year survival rate higher than what is historically reported. Temferon-derived differentiated cells were evident within the peripheral blood 14 days after infusion and were still detectable at more than 24 months.

Evidence of a **pro-inflammatory state** in patients that required a second surgery.

1 - The reported serious adverse events (SAEs) for Cohorts 1 to 6 were of the type typically associated with transplant procedures (pneumonia, pulmonary embolism, febrile neutropenia, fatigue, C.diff infection, CMV reactivation, sepsis, anemia due to CMV reactivation) or underlying disease GBM (worsening left hemiparesis, seizure, brain abscess, sudden death). A suspected unexpected serious adverse reaction (SUSAR) of elevated gamma glutamyl transferase was also reported (spontaneously resolved).

2 - Cutoff date – December 21, 2023



## Temferon 2<sup>nd</sup> Solid Tumor Indication Urinary Cancers

Genenta selected **metastatic clear cell renal cell carcinoma** (mRCC) and **metastatic urothelial carcinoma** (mUC) as additional solid tumor indications for Temferon clinical development

#### RATIONALE

Strong historical evidence to support potential Temferon efficacy

Targeted IFN-a delivery as an innovative and clinically relevant approach

Until 2005, systemic administration of IFN- $\alpha$ and IL-2 were
SOC treatment for mRCC.

- IFN-α in mRCC was associated with a survival benefit compared to controls [644 mRCC pts: OR for death at 1 year=0.56 (95%Cl 0.40 to 0.77)<sup>1</sup>]
- Systemic IFN-a use limited in the past by the systemic toxicities
- IFN-α as an intravesical therapy for UC has been evaluated over many decades with variable results.
   Short drug exposure time rather than inherent lack of antitumour activity<sup>2</sup>



BCG-unresponsive non-muscle invasive bladder

• CR in 51% of patients with *in situ* carcinoma by three months<sup>3</sup>

Temferon reprograms the TME and acts directly on tumors cells and neo-angiogenesis

SOLUTION

Temferon has been

systemic toxicity

designed to attenuate

associated with IFN- $\alpha$ 

therapeutic benefit

within the TME

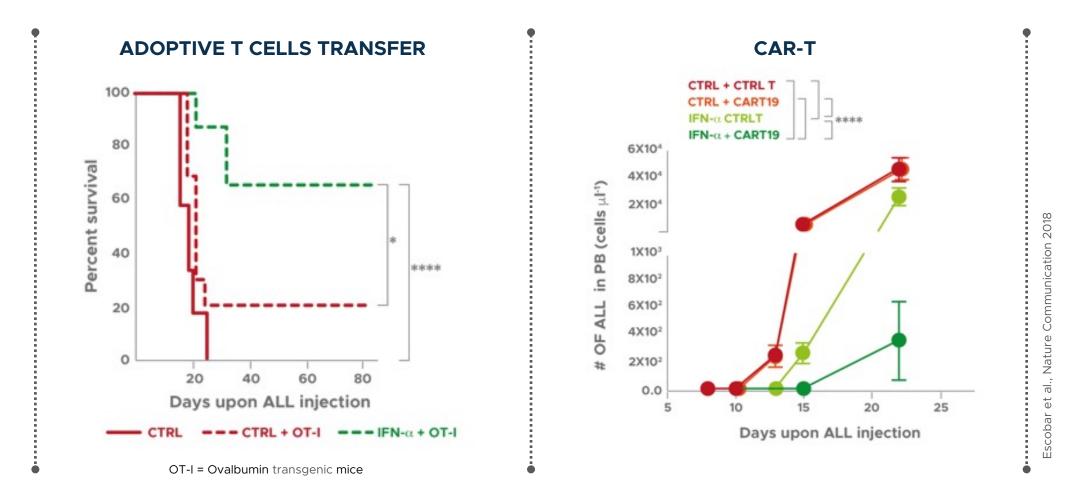
and to achieve greater



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#### Combination of Temferon with I/O Treatments Increases OS and Tumor Control

Temferon boosts/rescues other I/O therapies





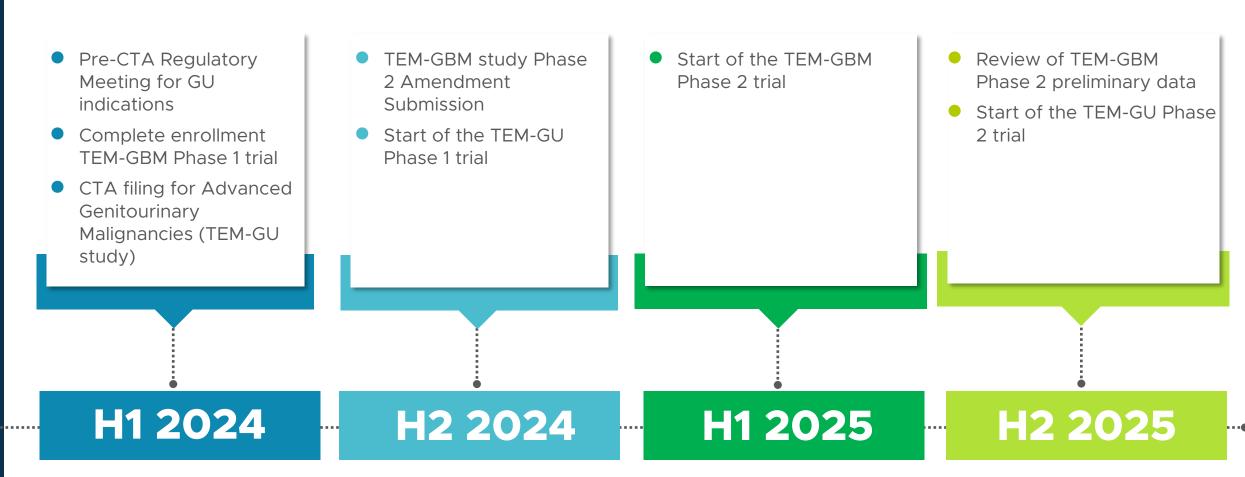
## Summary: Working Towards a Transformative Single and Permanent Treatment of a Broad Range of Solid Tumors



- Transformative proprietary platform designed to overcome the challenges of immunooncology therapy: infiltrating solid tumors, limiting toxicity and achieving a durable response
- Supported by preclinical and initial clinical data including engineered cells in patients from 14 days until 18 months+ after treatment, and payload expression without systemic toxicity
- Tumor and antigen agnostic; potential for broad combination use
- Combination use with I/O confirmed in preclinical animal models
- Upcoming catalysts:
  - Part 1 of Phase 1/2a for GBM completed enrollment in 1Q'24
  - Amendment Submission for the Phase 2 GBM study in H2'24
- Expected cash runway to Q2 of 2025, with no debt or warrants<sup>1</sup>
- In 1H 2023, the U.S. Food and Drug Administration (FDA) and the European Commission have granted Orphan Drug Designation (ODD) to Temferon for the treatment of glioblastoma multiforme.
- Refractory Advanced Genitourinary Malignancies have been selected as the additional solid tumor indications for Temferon clinical development
- 1 Except normal payables, accruals and underwriters' warrants



## **Anticipated Pipeline Development Milestones** \*



\* Our anticipated pipeline development milestones constitute forward-looking statements as discussed in greater detail on slide 2.

You should not rely upon forward-looking statements as predictions of future events.





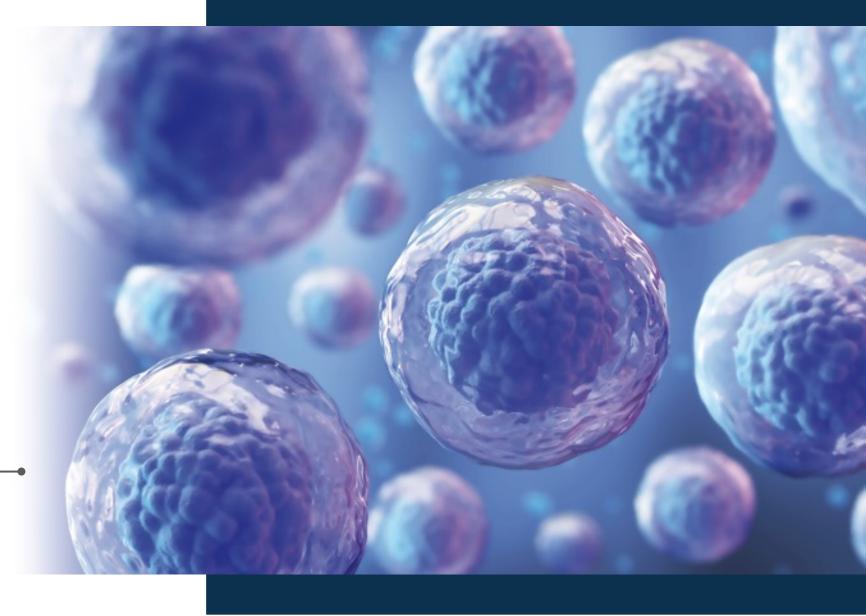
#### Pierluigi Paracchi, CEO

pierluigi.paracchi@genenta.com

www.genenta.com

Dibit 1 - San Raffaele Hospital, via Olgettina 58 - 20132 Milano, Italy

LaunchLabs - Alexandria Center, 14th Floor - 430 East 29th Street New York, NY 10016, USA



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## **APPENDIX**



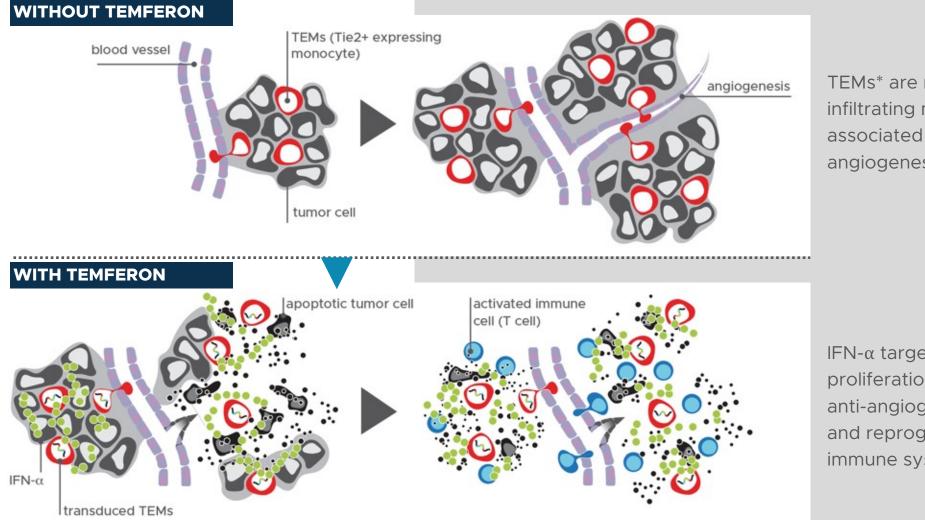
## **MECHANISM OF ACTION**



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# Temferon Designed to Deliver IFN- $\alpha$ in the Tumor Microenvironment to Break Immune Tolerance

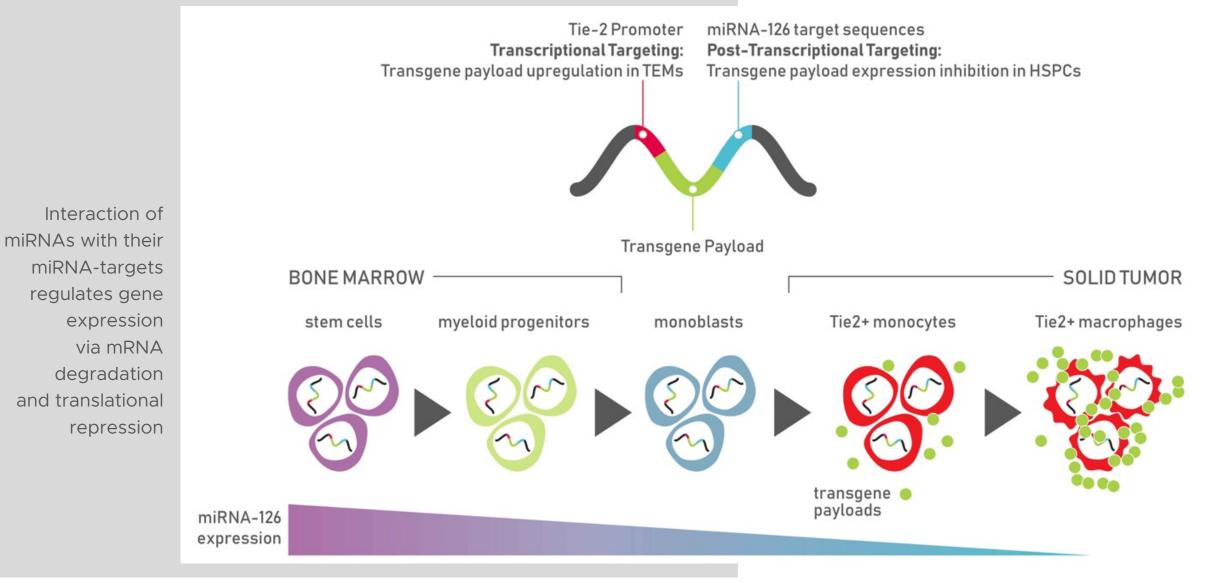


TEMs\* are natural tumor infiltrating monocytes associated with angiogenesis in tumors

IFN-α targets tumor proliferation via anti-angiogenic impact and reprogramming the immune system



## **Proprietary mRNA Mediated Control of Payload Expression**



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### **Clear Development Rationale for Temferon in GBM**

#### ROBUST SCIENTIFIC GROUNDING

- Characterized by a highly suppressive tumor microenvironment induced by a subset of tumor associated macrophages
- Temferon is designed to break immunosuppression

#### LIMITED AVAILABLE TREATMENTS

- Temferon may be offered as 1st line monotherapy after 1<sup>st</sup> surgery enabling patient's uncompromised immune system to be harnessed
- Enables impact of Temferon to be seen in isolation
- Temferon **ODD status in US and EU**

#### FAVORABLE PRECLINICAL DATA

- Temferon demonstrates control of GBM pathology despite its aggressive nature
- T emferon creates a proinflammatory state that induces an immune system reset, breaking tumor tolerance

#### **ABOUT GBM**

Estimated market size by 2032: \$3.4B<sup>1</sup>

Annual incidence: 3 per 100,000 adults<sup>2</sup>, ~60% with uMGMT

promoter status<sup>3</sup> (target population)

Median survival: ~ $\leq$  15 months<sup>3</sup>; 5-year survival: 5.5%<sup>4</sup>

1- Glioblastoma Multiforme (GBM) Market Insight, Epidemiology and Market Forecast-2032; 2 - https://www.ncbi.nlm.nih.gov/books/NBK470003/; 3 - https://www.futuremedicine.com/doi/10.2217/cns-2021-0007; 4 - https://www.statpearls.com/ArticleLibrary/viewarticle/22272



## **Intellectual Property**

- Potential 12-year market exclusivity for new biological products (U.S.)
- Key patents already granted

	US	EU	China	Japan	ROW	Expiration
Gene vector comprising mi-RNA					Ø	4/30/2030
mi-RNA regulated vectors	ø	ø	ø	ø	ø	5/26/2026*
Monocyte cell (Tie-2) activation process	ø	<b>Ø</b>	ø	ý	<b>S</b>	10/5/2027
Method for Genetic Modification		ø	ø	ø		10/24/2034*
Vector Production	<b>S</b>	pending	pending	ø	pending	7/13/2035
Type 1 IFN gene therapy	pending	pending	pending	pending	pending	4/20/2038**

\*Later expiration for certain U.S. patents pursuant to patent term adjustment (35 U.S.C. §154(b))

\*\* Application pending, anticipated expiration based on 20 years patent term.



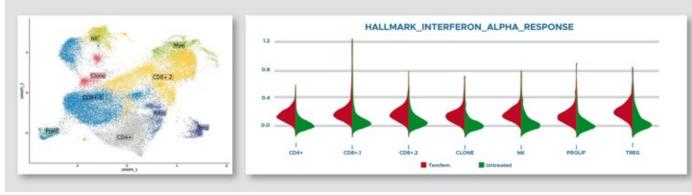
#### scRNAseq of GBM TME in Temferon and SOC Treated Patients

#### scRNAseq of GBM TME: Comparison of 5 Temferon patients and 6 SOC control relapses pts

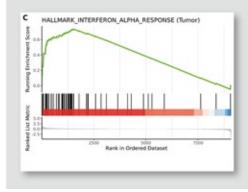
- Temferon patients who underwent second were compared to six recurrent glioblastoma patients treated as per the current first line standard of care (SOC – Temozolomide + Radiotherapy).
- Patients who received Temferon showed a general upregulation of IFN-α response hallmarks in the myeloid and T cells compartment of hematopoietic origin (CD45+ cells) and in the tumor cells (CD45-).

# $\begin{array}{c} \mathsf{MYELOID COMPARTMENT} \\ \mathsf{MYELOID COMPARTMENT} \\ \mathsf{MYELOID COMPARTMENT} \\ \mathsf{MYELOID COMPARTMENT} \\ \mathsf{MYELOID COMPARTMENT \\ \mathsf{MYELOID COMPARTMENT} \\ \mathsf{MYELOID COMPARTMENT \\ \mathsf{MYELOID COMPARTM$

#### T CELL COMPARTMENT



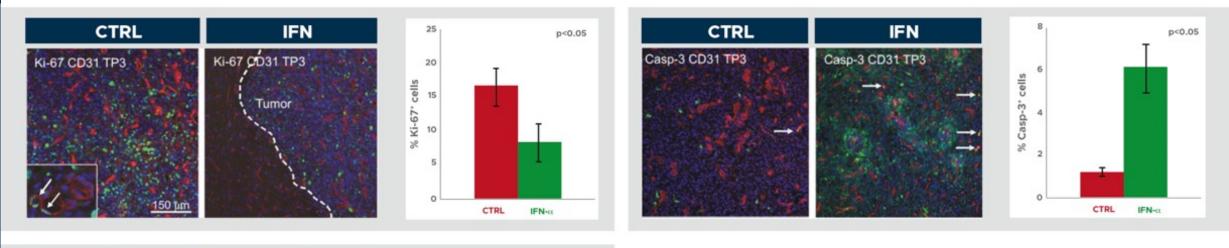
#### TUMOR CELLS

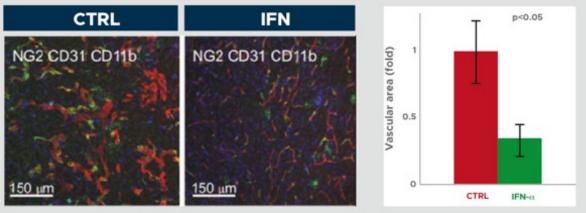




## TEMs Cells Therapy Counteract Tumor Growth by Acting on Proliferation and on Vascularization

Tumor growth inhibition by TEMs IFN cell therapy in immunocompromised mice demonstrated the direct targeting at host-derived components like tumor cells and vessels

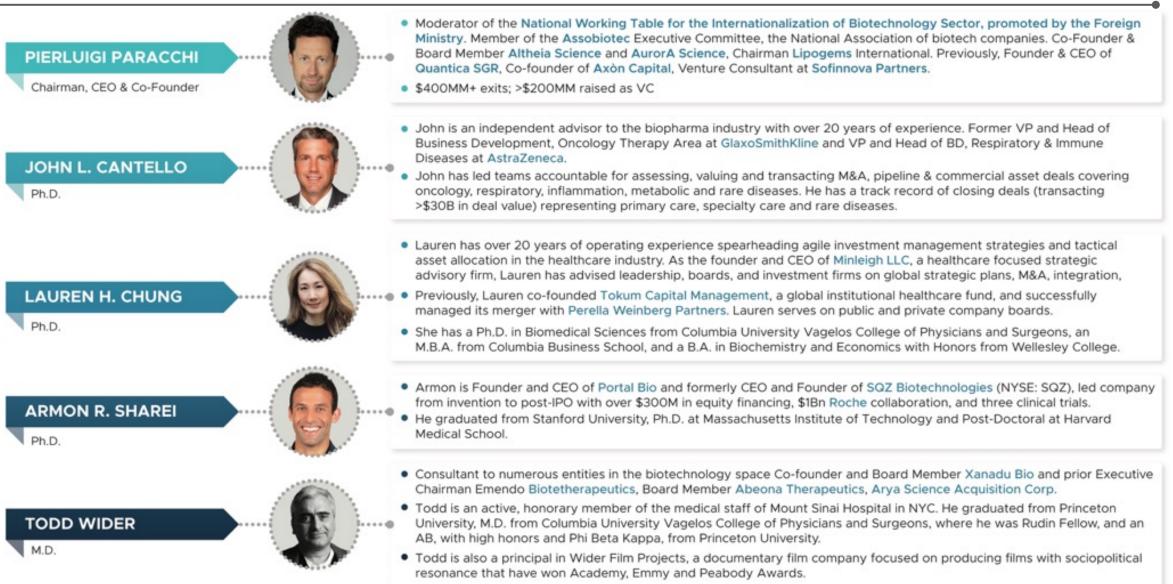




- Reduction of proliferative index (Ki67)
- Reduction of vascularization and vessels normalization (CD31)
- Increase apoptosis (Casp-3)



## **Board of Directors**





## **Scientific Advisory Board**

LUIGI NALDINI Professor, M.D., Ph.D.	He has pioneered the development of lentiviral vectors for gene therapy. With over 280 scientific papers, he has a SCOPUS Author h-index of 101. He has won numerous awards: the Outstanding Achievement Award from the American Society of Gene and Cell Therapy (ASGCT) in 2014, President of ESGCT in 2015, the Beutler Prize from the American Society of Hematology (ASH) in 2017, the Jeantet-Collen Prize for Translational Medicine in 2019. He was nominated as "Grande Ufficiale" dell'Ordine "Al Merito della Repubblica Italiana", one of the highest ranking honors in Italy, by the President of the Republic in 2019 and he is "Socio Corrispondente – Classe di Scienze Fisiche, Matematiche e Naturali" at Accademia Nazionale dei Lincei.
BERNHARD GENTNER Professor, M.D., Ph.D.	Co-Founder. He is Professor in Immuno-Oncology, attending physician in the Oncology Department at Lausanne University Hospital, Medical Director for the T cell therapy platform and heads of HSC engineering within the Lausanne branch of the Ludwig Institute. He was Group Leader at SR-TIGET and Staff Hematologist at the San Raffaele Hospital. Received a MD from the University of Heidelberg and trained at MD Anderson Cancer Center and Baylor College of Medicine, Houston, Erlangen University Hospital and at San Raffaele Vita-Salute University. He is Author of more than 60 scientific publications and the recipient of the Young Investigator Award of ESGCT.
KENNETH C. ANDERSON	Kraft Family Professor of Medicine at Harvard Medical School and Director of the Lebow Institute for Myeloma Therapeutics and Jerome Lipper Multiple Myeloma Center at Dana-Farber Cancer Institute. He is a Doris Duke Distinguished Clinical Research Scientist and American Cancer Society Clinical Research Professor.
LISA COUSSENS	Professor and Chairwoman, Cell, Developmental & Cancer Biology Department at Oregon Health & Science University. She also serves as Hildegard Lamfrom Endowed Chair in Basic Science and Associate Director for Basic Science, Knight Cancer Institute.
MICHELE DE PALMA	Professor at EPFL (École Polytechnique Federal de Lausanne). He is known for his work on the role of macrophages in cancer progression and the discovery of Tie2-expressing angiogenic monocytes.
Professor, Ph.D. RICHARD FLAVELL	Sterling Professor of Immunobiology at Yale University School of Medicine, and an Investigator of the Howard Hughes Medical Institute.
Professor, Ph.D., FRS WOLF-HERVÉ FRIDMAN	Professor Emeritus of Immunology at the Paris Descartes University Medical School in Paris, France. Former head of the Immunology Lab. of European.
Professor, M.D., Ph.D. MIRIAM MERAD Professor, M.D., Ph.D.	Director of the Precision Immunology Institute at Mount Sinai School of Medicine NYC and Director of the Mount Sinai Human Immune Monitoring Center. Elected member of the American Society of Clinical Investigation and the recipient of the William B. Coley Award for Distinguished Research in Basic and Tumor Immunology.
TRICK Y. WEN	Professor, Neurology, Harvard Medical School Director, Center for Neuro-Oncology, Dana-Farber Cancer Institute, Boston.
Professor, M.D. 31	<b>XX genenta</b>

## **Financial Profile**

Cash & cash equivalents and marketable securities<sup>1</sup>

Expected cash runway

Debt and warrant<sup>2</sup>

Number of shares outstanding<sup>3</sup>

Average volume<sup>3</sup>

As of December 31, 2023
 Except normal payables, accruals and underwriters' warrants
 As of March 31, 2024

#### **Stock Ownership Info**

Founders and Leadership

San Raffaele Hospital<sup>1</sup>

Institutions/Large	FOs/Sovereign	Fund
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1 - San Raffaele Research hospital is a co-founder and key shareholder of Genenta; ongoing relationship through service contract for clinical research. San Raffaele in alliance with non-profit organization Telethon runs the leading gene therapy institute SR-TIGET



29%

10%

19%