

Corporate Presentation

NASDAQ: GNTA

January 2025

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Leadership



Genenta: Developing a First in Class Cell Therapy

PROPRIETARY PLATFORM TO PROVIDE DURABLE AND SAFE TREATMENTS FOR SOLID TUMORS

Temferon [™] is a one-time cell therapy designed to break the tumor-induced immune
suppression by enabling sustained targeted expression of therapeutic payload inside the tumor microenvironment (TME).

GENERATING CLINICAL PROOF OF CONCEPT FOR BREAKING IMMUNE TOLERANCE

PARTNERSHIPS TO TAKE TO NEXT STAGE **TEM GBM** Phase 1/2a study:

- Phase 1 dosing completed;
- Favorable initial evidence of reprogramming of the tumor microenvironment;
- Potential ability to activate T cells which could then be enhanced by the use of immune checkpoint inhibitors.
- TEM GU Phase 1 study:
 - Enrollment started in Q4 2024, combination treatment option with immune checkpoint inhibitors and TKIs.

Research engine through partnership with SR-TIGET a world leading cell and gene therapy
institute founded by San Raffaele Research Hospital, a co-founder and key shareholder of Genenta.



Harnessing the power of Stem Cells while incorporating miRNA

Tie2-Expressing Monocytes (TEMs)



Recruited into tumors

De Palma et al. Nature Med 2003; De Palma et al. Cancer Cell 2005 & 2008; Pucci et al. Blood 2009 Mazzieri et. al. Cancer Cell 2011

- Pro tumoral associated macrophage subset.
- Perivascular localization.
- Angiogenic & tissue remodeling function.
- Genetic ablation curbs tumor growth.

Use TEMs as vehicles to deliver IFN- α into the TME





Temferon delivers IFN- α within the Tumor Microenvironment

Single Temferon treatment potentially renders solid tumors visible to the immune system





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Temferon designed to address some major challenges in Immuno-Oncology



Pipeline



1 Orphan Drug Designation status in U.S. and EU

²Combination study





Harnessing the Power of Stem Cells

• Phase 1/2a uMGMT GBM Study

• Clinical Data

Immune Activation Data



Preliminary clinical data in uMGMT GBM: well tolerated and biologically active

SAFETY AND TOLERABILITY

- Detectable and as expected at very low level of IFN- α (pg/ml range) in the plasma;
- Manageable adverse events and serious adverse events generally commonly associated with autologous stem cell transplantation and glioblastoma;
- No dose limiting toxicities observed to date;
- Rapid engraftment and hematological recovery observed in all patients treated (n=24).

BIOLOGICAL ACTIVITY

- Temferon-derived cells were detectable at more than 24 months post infusion;
- Temferon progeny found inside the GBM tumor;
- Intra tumor IFN-α release;
- Evidence of a pro-inflammatory state in recurrent tumors from patients that required second surgery;
- **Reprogramming** of the myeloid compartment.



Phase 1/2a Study in Glioblastoma Multiforme, 1st line



- Histologically confirmed, newly diagnosed supratentorial glioblastoma with unmethylated MGMT gene promoter;
- Patients have undergone complete or partial tumor resection and are eligible for adjuvant radiotherapy.

Temferon single dose observed to be durable and well tolerated

Engineered myeloid cells stabilize by day +90 and persist in blood with tightly regulated IFN-a expression (as shown by barely detectable IFN-a levels in the blood plasma in the pg/ml range).

2 years Survival in TEM-GBM and in INCB Registry¹

		20 June 2024
Numb	er of Treated Patients	24
	Number of Patients survival > 2 years	6
Numb (consid	er of deceased Patients or with FU > 1 year lered for the % calculation)	22 Patients (2 patients excluded ³)
	% of Patients surviving beyond 2 years ^{2,4}	27% (6 out 22)
	% of Patients with progression free survival >8.3 months ²	41% (9 out 22)

INCB GBM registry

159 Patients included with the following criteria

- 18-70 age
- KPS > 70
- Complete or partial tumor resection

Clinical outcome

• 14.4% of Patients alive at 2 years⁴

1 - Istituto Neurologico Carlo Besta, Milan

2 - % of long-term survival patients calculated since 1st surgery

3 - FU < 1 year

4 – the data from TEM-GBM study includes only patients who completed radiotherapy, whereas the INCB registry data include patients who did not complete radiotherapy.

Temferon TME reprogramming may favor PD-1 activity

Broad induction of Interferon responses across GBM/TME components

Temferon and standard of care Initial data suggests:

- Widespread IFN and immuneactivating response;
- Reduced proliferation, oxidative metabolism down;
- Hypoxia response up;

2

1

0

-1

-2

- Apoptosis, stress response up;
- Many expected consequences of interferon exposure.

Pre-clinical and clinical data suggest TME reprogramming induced by the pro inflammatory state created by Temferon

Inflamm.

nflamm.

Temferon may break tolerance allowing intra tumor infiltration of T Cell Clones

Initial evidence of increased CD8 effector cells in the TME of Temferon treated patients

The Temferon group suggests more activated, effector and effector memory CD8 T cells

High expression of PD-1 in CD8+ effector cells of Temferon treated patients

- Higher expression of PD-1 in CD8-Effector and CD8-IFNα populations, in Temferon;
- Temferon treated patients exert a 2-fold enriched PD1+ vs CTLA4+ median ratio;
- Strong enrichment of PD1+ CD8 TILs tumor reactive T-cells, not shared with peripheral blood clones, in stable lesion compared to progressed one, mostly characterized by putatively by-standers and shared with PB CD8-CTLs.

Temferon Cell Therapy for Cancer

Feasibility, safety and tolerability

- Successful engraftment of Temferon, consistently and durably above pre-defined threshold (VCN >0.07) in DL3 patients;
- Temferon well tolerated, no dose limiting toxicities. Expected very low systemic exposure to IFNα;
- Rapid hematologic recovery observed in all patients;
- Adverse events compatible with autologous stem cell transplantation and glioblastoma.

Immune activation

- Temferon progeny found inside the GBM tumor at second surgery (n=6 out of 7 patients);
- Local IFNα release inside the tumor;
- Genetic reprogramming of tumor-associated myeloid cells to awaken anti-cancer immunity;
- Temferon **TME reprogramming** may favor PD-1 activity.

Immune activation data supports immuno-oncology combination approaches

Metastatic Renal Cell Carcinoma

• Phase 1/2a Program

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Temferon 2nd solid tumor indication mRCC

Testing IFN α GT in mRCC mouse model (ongoing work)

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TEM-GU Study Design

*Patients will start to receive pembrolizumab providing they have not received ICI in the six months prior to entry into the study. Patients allocated to pembrolizumab will receive pembrolizumab 400mg IV every six weeks commencing at D+30.

Future Development & &

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Combination of Temferon with immuno oncology treatments may increase overall survival and tumor control

Temferon may enhance other I/O therapies

- Our research partner SR-TiGET has explored in preclinical models Temferon with CAR-T demonstrating:
 - Improved survival versus CAR-T alone;
 - Enhanced durability of CAR-T response (i.e. Temferon reduces T cell exhaustion).
- Ongoing pre-clinical work, evaluation of CAR-T therapies administered in combination with Temferon in solid tumors.

Graphs have been faithfully reproduced by the original articles Escobar et al., Nature Communication 2018

• 26

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Anticipated Pipeline Development Milestones

Up to 27 Drug Products expected to be manufactured in 2025

Summary: Temferon Harnessing the Power of Stem Cells

- In 2023, the U.S. Food and Drug Administration (FDA) and the European Commission granted Orphan Drug Designation to Temferon for the treatment of glioblastoma multiforme.
- Temferon harnesses the power of stem cells while incorporating miRNA and a well characterized cytokine.

• uMGMT GBM Phase 1 study enrollment completed:

- Demonstrated durability, targeted expression and no observed dose limiting toxicity;
- Evidence of reprogramming of the tumor microenvironment to awaken anti-cancer immunity;
- Immune activation data supports combination regimens with other immuno-oncology targets, potential to reduce T Cell exhaustion.
- mRCC Phase 1/2a study; patient enrollment in Q4 2024. First patient dosed in Q1 2025:
 - Reprogramming may favor PD-1 activity, strong rationale for immune checkpoint inhibitor combination.
- Opportunities to expand Temferon pipeline programs:
 - Agnostic efficacy designed to be suitable for a large number of solid tumors with high unmet need;
 - Ongoing preclinical work on immuno-oncology combinations including CAR-T across a broad range of solid tumors.

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Appendix

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CD8 subsets overrepresented in Temferon are putative tumor reactive clones with the NeoTCR signature

0.3 0.2 0.1 0.0 -0.1

5

Clonotype abundance increases with T cell differentiation towards a CD8 effector state

• 31

Temferon agnostic efficacy designed to be suitable for treatment of large number of solid tumors¹

INDICATION	 MARKET SIZE U.S. INCIDENCE ²	 UNMET NEED 5Y SURVIVAL ³
Glioblastoma Multiforme	~3,721 ⁴	8.3% ⁵
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 Gioblastoma 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.

Intellectual Property

Patent	Expiration
miRNA Regulated Vectors *	4/30/2026
Gene vector compromising miRNA	5/26/2030
Type 1 IFN Gene Therapy	4/20/2038
Combination Immunotherapy of Solid Tumors (provisional)**	TBD
Combination of Immunotherapy of Renal Cell Carcinoma (provisional)**	TBD

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

** Provisional patents filed in April and September 2024 respectively

Serious adverse events

COHORT	CONDITIONING REGIMEN	NUMBER OF PATIENTS	NUMBER OF SAES	START DATE ≤90 DAYS A	FTER TEMFERON	START DATE >90 DAYS AFTER TEMFERON		
				CTCAE ≤3	CTCAE >3	CTCAE ≤3	CTCAE >3	
1-4, 6	BCNU + thiotepa	15	22	Pneumonia (x3), C.Diff infection, CMV infection, Seizure (x2), PE, ECOG deterioration, Anaemia, GGT increase [†]	Graft failure, Febrile neutropenia (x2), Pneumonia*, Septic shock*, Respiratory failure*	Status epilepticus, Cerebral abscess, Seizure, Hemiparesis	Sudden death*	
5	Busulfan + thiotepa	3	6		Status epilepticus		Hypoglycaemia, Thrombocytopenia, Myocardial fibrosis*, Cardiac thrombosis*, Pneumonia*	
7, 8	Busulfan only	6	3			Asthenia (D+333)	Pneumonia (D+115) Pulmonary embolism (D+115)	

[‡] Reported as SUSAR

*Grade 5 SAEs (NB multiple SAEs listed as contributing to a single death)

• 34 4 patients died as a result of SAEs (1 patient each from Cohort 3 and 6, ≤60 days post Temferon; 1 patient Cohort 5 at D+122; 1 patient Cohort 1 at D+402)

Board of Directors

Scientific Advisory Board

LUIGI NALDINI Professor, M.D., Ph.D.,		Co-founder Genenta. Naldini is Professor of Cell and Tissue Biology and of Gene and Cell Therapy at the San Raffaele University School of Medicine and Scientific Director of the San Raffaele Telethon Institute for Gene Therapy (Milan, Italy). He has pioneered the development and the applications of lentiviral vectors for gene therapy and he has continued to investigate new strategies to overcome the major hurdles to safe and effective gene transfer, bringing about innovative solutions that are not only being translated into new therapeutic strategies for genetic disease and cancer, but have also allowed novel insights into hematopoietic stem cell function, induction of immunological tolerance, and tumor angiogenesis.
BERNHARD GENTNER Professor, M.D., Ph.D.,	•••••	Co-founder Genenta. 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 the author of more than 60 scientific publications and the recipient of the Young Investigator Award of ESGCT.
KENNETH C. ANDERSON Professor, M.D.		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, M.D., Ph.D., FAACR		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, Ph.D.,	•••••	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.
RICHARD FLAVELL Professor, Ph.D., FRS	•••••	Sterling Professor of Immunobiology at Yale University School of Medicine, and an Investigator of the Howard Hughes Medical Institute.
WOLF-HERVÉ FRIDMAN Professor, M.D., Ph.D.,	•••••	Professor Emeritus of Immunology at the Paris Descartes University Medical School in Paris, France. Former head of the Immunology Lab. of European.
MIRIAM MERAD	•••••	Director of the Precision Immunology Institute at Mount Sinai School of Medicine NYC and Director of the Mount Sinai Human Immune MonitoringCenter . 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.
PATRICK Y. WEN	•••••	Professor, Neurology, Harvard Medical School Director, Center for Neuro-Oncology, Dana-Farber Cancer Institute, Boston.

Financial Profile

Cash & cash equivalents and marketable securities¹

Expected cash runway

Debt and warrants²

Number of shares outstanding³

Average volume³

As of June 30, 2024
Except normal payables, accruals and underwriters' warrants
As of October 29, 2024

Stock Ownership Info

Founders and Leadership

San Raffaele Hospital⁴

Institutions/Large FOs/Sovereign Funds

4 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

