UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16
OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of June 6, 2024

(Commission File No. 001-40241)

LAVA Therapeutics N.V.
(Translation of registrant's name into English)

Yalelaan 62
3584 CM Utrecht, The Netherlands
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.
Form 20-F ☒ Form 40-F ☐

EXHIBIT LIST

Exhibit	Description
99.01	Corporate Presentation as of June 6, 2024

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

LAVA Therapeutics, N.V.

(Registrant)

Date: June 6, 2024

By: /s/ Fred Powell

Fred Powell

Chief Financial Officer

LAVA THERAPEUTICS

Gamma-delta T cell engagers for next-generation cancer therapeutics

Investor Presentation
June 2024

Legal Disclosure: Forward-looking Statements

This presentation contains statements that constitute forward-looking statements. Many of the forward-looking statements contained in this presentation can be identifie by the use of forward-looking words such as “anticipate,” “believe,” “could,” “expect,” “should,” “plan,” “intend,” “estimate” and “potential,” and similar terms and phrase Forward-looking statements appear in a number of places in this presentation and include, but are not limited to, statements regarding our intent, belief or curre expectations, including statements relating to the timing of the initiation of the clinical trials, including the expansion phase of the Phase 1/2a trial to evaluate LAVA 1207 combination with KEYTRUDA®, the timing of regulatory submissions, including an IND of LAVA-1266 in AML and LAVA's cash runway and the sufficiency of resources pursue development. Forward-looking statements are based on our management’s beliefs and assumptions and information currently available to our management. Suc statements are subject to risks and uncertainties, and actual results may differ materially from those expressed or implied in the forward-looking statements due to variou important factors. These risks and uncertainties include, among other things; the timing and results of our research and development programs, preclinical studies ar clinical trials, including the availability of data therefrom, expectations regarding enrollment in clinical trials, the timing of our clinical trial for LAVA-1207, and the submissio of INDs or CTAs for our other product candidates; the expected safety profile of LAVA’s product candidates; our ability to develop and obtain regulatory approval for ar commercialize any of our product candidates; potential uses of LAVA’s product candidates to treat various tumor targets, including AML, MDS, mCRPC, CRC, NSCLC, ar HNSCC, and improve patient outcomes, the ability of low-dose interleukin-2 to increase the number of Vγ9Vδ2 T cells available for engagement by LAVA’s product candidate the relationship between Vδ2 T cells and antitumor activity; the potential synergies between LAVA’s product candidates and other immuno-oncology approaches; th potential market opportunity our product candidates seek to address; our intellectual property position; the ability of LAVA’s collaborators to support or advanc collaborations or our product candidates; any payments to us under our license agreement with LAVA’s collaborators or our agreements with our collaborators and our cas runway; our ability to leverage our initial programs to develop additional product candidates using our Gammabody® platform; and the risk that positive results in preclinical study or clinical trial may not be replicated in subsequent trials or success in early stage clinical trials may not be predictive of results in later stage clinical trials. addition, there may be adverse effects on our business condition and results of operations from general economic and market conditions and overall fluctuations in th United States and international equity markets, including deteriorating market conditions due to investor concerns regarding inflation, interest rates, the Russian invasion Ukraine and the Israel-Hamas war. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ fro those contained in the forward-looking statements, see the "Risk Factors" section, as well as discussions of potential risks, uncertainties and other important factors, in th filings we make with the Securities and Exchange Commission from time to time.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond o control, you should not rely on these forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forwar looking statement contained in this presentation, the events and circumstances reflected in our forward-looking statements may not be achieved or occur, and actual resul could differ materially from those projected in the forward-looking statements. We qualify all of our forward-looking statements by these cautionary statements.

Any forward-looking statements represent the Company’s views only as of the date of this presentation and do not represent its views as of any subsequent date. Th Company explicitly disclaims any obligation to update any forward-looking statements.

Investment Highlights

Proprietary Gammabody® Platform

Potential first-in-class Platform maximizing the unique anticancer potential of Gamma-Delta T cells[1]
Engineered to selectively activate Vδ2 T cells upon cross-linking with tumor-associated antigen
Designed to drive larger therapeutic window with low incidence of high-grade CRS and limited on-target/ off-tumor toxicities while maintaining anticancer activity

Progressing mCRPC Study in Phase 1

Lead program LAVA-1207 in mCRPC currently enrolling dose level 10 monotherapy cohort
Enrollment in combination arm with KEYTRUDA® (pembrolizumab) expected to start Q2 2024[2]

Growing Pipeline

Pre-IND package submitted to FDA for LAVA-1266 in AML; IND submission expected in Q2 2024
IND enabling studies and CMC work ongoing for 2 pre-clinical programs

Validating Strategic Partners

Pfizer worldwide license agreement for PF-08046052[3] for EGFR+ tumors, in Phase 1
Received $7 million Phase 1 enrollment milestone
Johnson & Johnson Innovative Medicine collaboration has selected a lead candidate, in preclinical developm

Strong Team, IP and Cash Position

Experienced management team, with diverse portfolio of product and platform IP and a cash balance of $95 million[4], with an expected runway into 2026

1. Gamma-delta T cells are abbreviated as Vγ9Vδ2 or Vδ2 in this deck. 2. LAVA announced a clinical collaboration with Merck & Co., on January 25, 2024. 3. Formerly LAVA-1223, 4. Based on cash, cash equivalents and investments as of March 31, 2024, mCRPC = Metastatic Castration-Resistant Prostate Cancer, CRS = Cytokine Release Syndrome, IL-2 = Interleukin-2.

Gammabody® Platform Pipeline: Potential in Hematologic Malignancies and Solid Tumor Indications

Pipeline			Preclinical	Phase 1	Phase 2
Candidate	**Target**	**Indication(s)**			
LAVA-1207	PSMA	mCRPC Monotherapy			
		+ IL-2			
		+ Pembrolizumab[1]			
LAVA-1266	CD123	Hematologic Malignancies			
LAVA-1427		Undisclosed			
LAVA-1433		Undisclosed			
Strategic Partnerships					
PF-08046052	EGFR	Solid Tumors		Pfizer	
Johnson & Johnson Innovative Medicine		Undisclosed		Johnson&Johnson Innovative Medicine	

Solid Tumor Hematologic malignancy Undisclosed

1. LAVA announced a clinical collaboration with Merck & Co., on January 25, 2024 for LAVA-1207. PSMA: prostate-specific membrane antigen; EGFR: epidermal growth factor receptor; mCRPC: metastatic castration-resistant prostate cancer

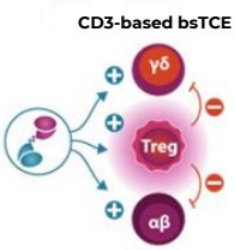
Gammabody® Platform

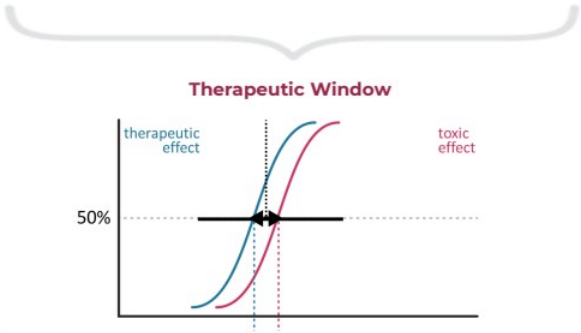
Overview

LAVA's Bispecific T Cell Engager Strategy is Focused on Recruiting Vδ2 Cells

1st generation T cell engagers

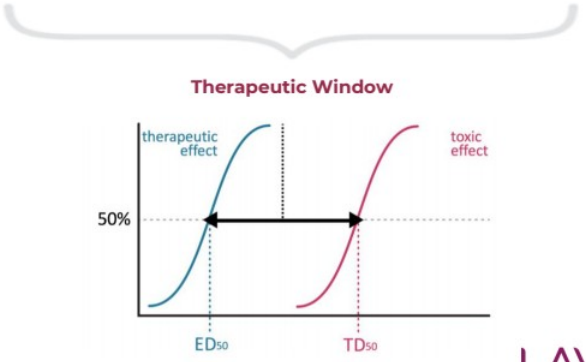
- CD3 (pan) T cell activators
- High grade cytokine release syndrome (CRS) toxicities
- On-target/off-tumor toxicities
- Co-activation of Tregs
- Sporadic efficacy in solid tumors





LAVA's next-generation approach

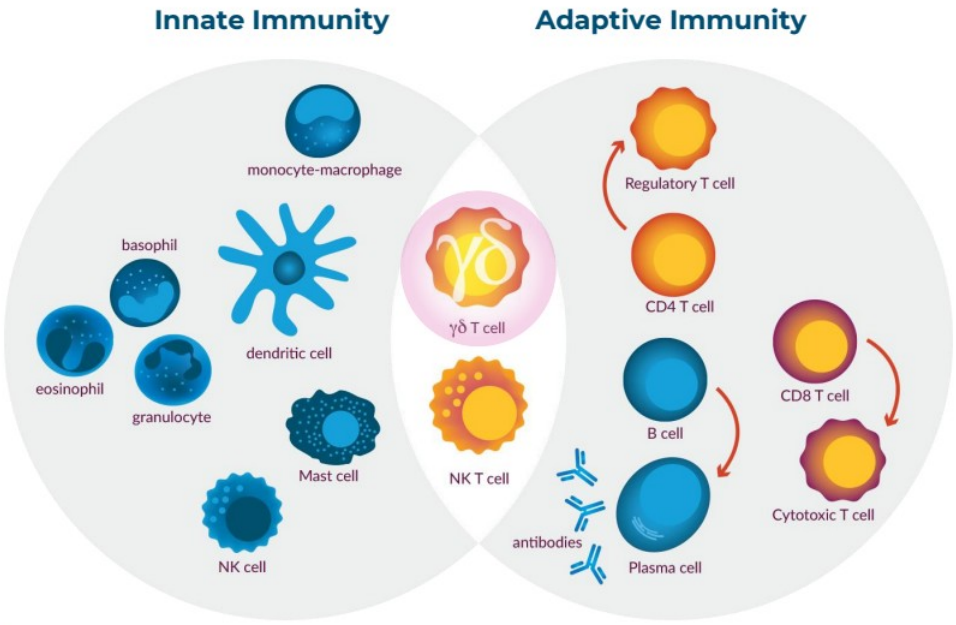
- Recruitment of Vδ2 T cells
- Homogeneous population of antitumor immune effector cells
- Avoids co-activation of Tregs
- Anticipated low incidence of high-grade CRS and on-target/off-tumor toxicity
- Unique antigen presenting function



LAVA

Vδ2 T Cells

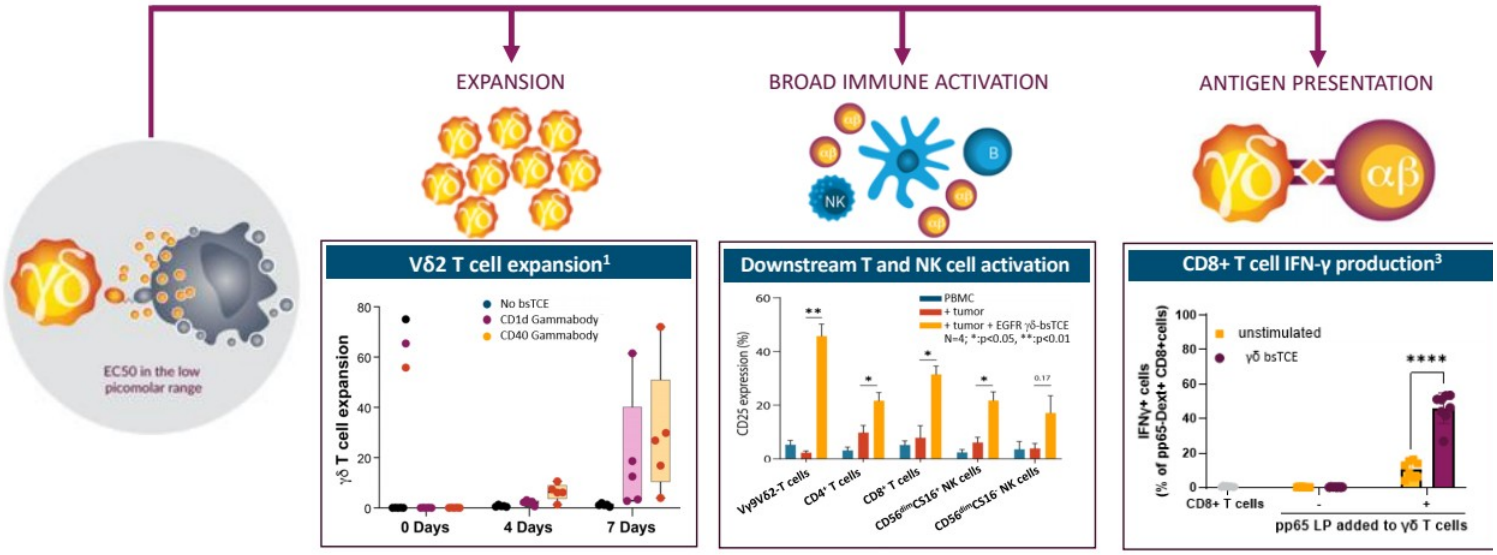
Positioned at the interface between innate and adaptive immunity



- Largest γδ T cell subset blood: (~90-95% of tota cells)
- Natural ability to recog and kill tumor cells
- Presence of Vδ2 T cells associated with improv outcomes in cancer pa
- Recognize tumors thro phosphoantigen-BTN2 complex
- Consistent pro-inflamm cytotoxic effector T cell population

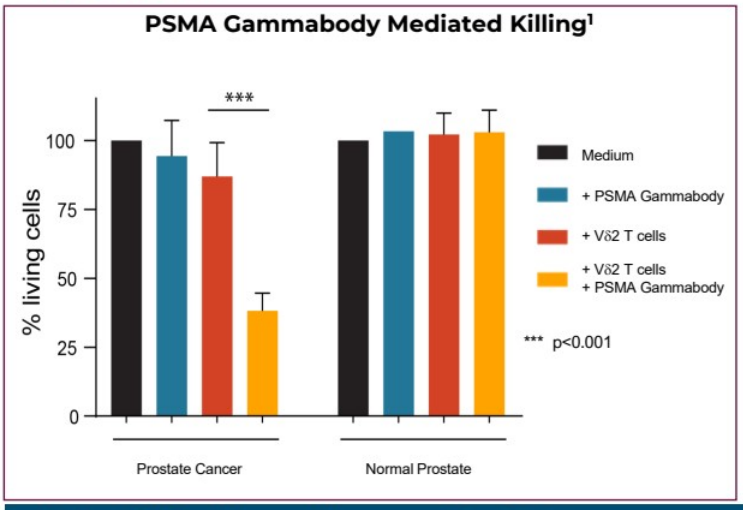
 Adapted from Dranoff G, Nature Rev Cancer 2004; 4: 11-22 Kabelitz D et al., Cell Mol Immunol 2020; 17: 925–939

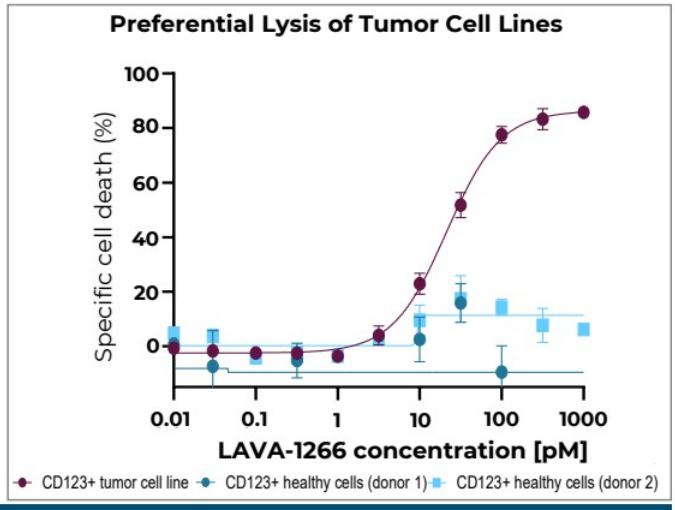
Selective Activation of Vδ2 T Cells has the Potential to Coordinate th Immune Response Against Tumors



 1 Lameris R et al. Cell Reports Med 2023, Data on file, 2 King L, et al, Cancer Immunol Res 2023; 11:1237-1252, 3 King L, et al. in preparation

Sparing of Normal Tissue is a Key Differentiator of the Gammabody® Platform[1]

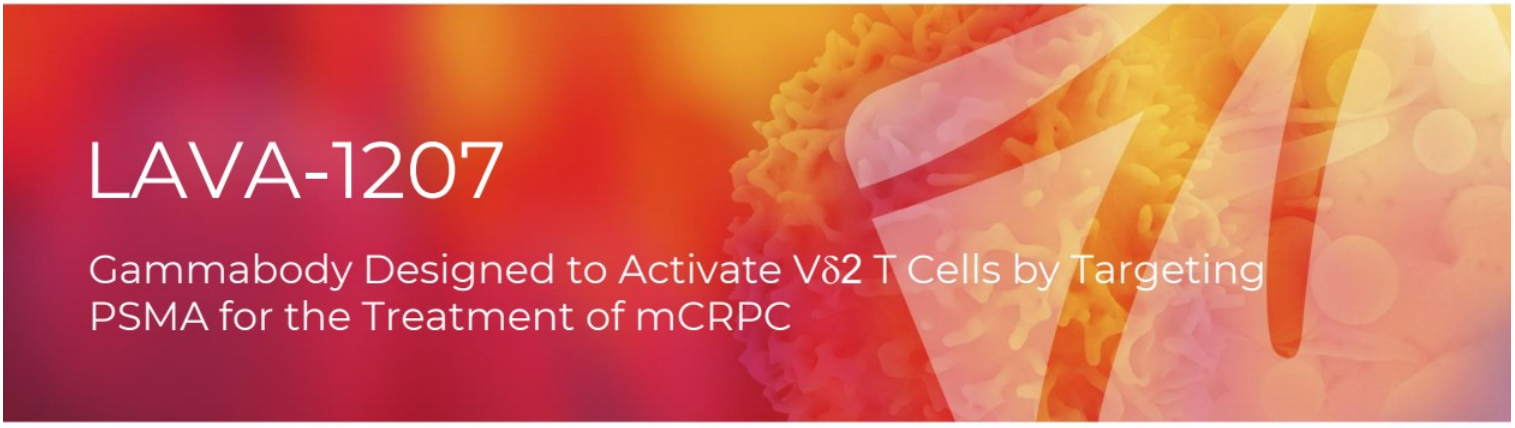




- **Potential for larger therapeutic window**
- **Preferential killing of cancer versus healthy cells demonstrated *in vitro* and *ex vivo***
- **Allows for targeting of widely expressed tumor-associated antigens**

 | 1. In preclinical models, LAVA Therapeutics, data on file

LAVA


LAVA-1207
Gammabody Designed to Activate Vδ2 T Cells by Targeting PSMA for the Treatment of mCRPC

LAVA-1207 Targets PSMA: Enrolling in Phase 1/2a Global Study

Update expected H2 2024

PSMA is a clinically validated target

Highly-expressed in >90% prostate cancers[1]. Higher levels negatively correlated with survival[2]
FDA approval of Pluvicto, a PSMA-targeted radiopharmaceutical, provides clinical validation

High unmet need

While early-stage outcomes are good, mCRPC prevalence is 50,000 in the U.S.[3]
With ~35,000 prostate-cancer related deaths annually in the U.S.[4], 5-year survival for mCRPC is ~30%[5]

Strong scientific rationale

Reported relative abundance of Vδ2 T cells correlates with improved patient prognosis and makes mCRPC an attractive indication for Gammabody® Platform[6]

Phase 1 enrollment

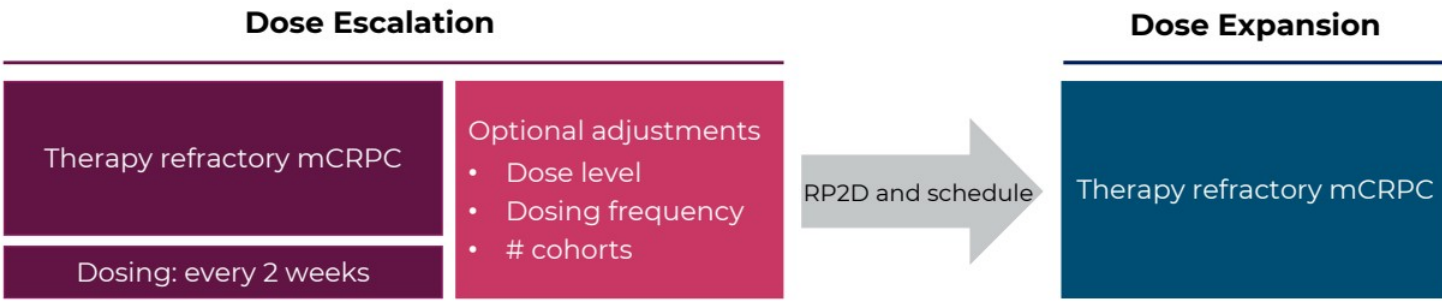
Enrollment is ongoing in the U.S. and Europe (NCT05369000) for dose level 10 monotherapy
Clinical collaboration with Merck & Co., Inc.[7] adding a combination cohort with KEYTRUDA® (pembrolizumab)

Study update

Preliminary signs of clinical activity observed with disease stabilization and PSA reduction during early Phase 1 dose escalation
To minimize the risk of CRS events >grade 2 we have introduced premedication and step-dosing
Next update is planned for H2 2024, targeting a medical conference

Sources: Items 1-5: based on information from Cancer.Net® and FMI (Future Market Insights); 6. Tosolini M et al. Oncoimmunology 2017, vol 6, e128472;
7. LAVA announced a clinical collaboration with Merck & Co., on January 25, 2024.

LAVA-1207 Phase 1 mCRPC



GOAL

Determine recommended dose and schedule based on optimal biological dose and/or maximum tolerated dose

GOAL

Confirm safety and determine preliminary anti-tumor activity

Patient Population

- Adult males with mCRPC
- At least 1 prior taxane
- At least 1 AR targeted therapy
- ECOG 0-1

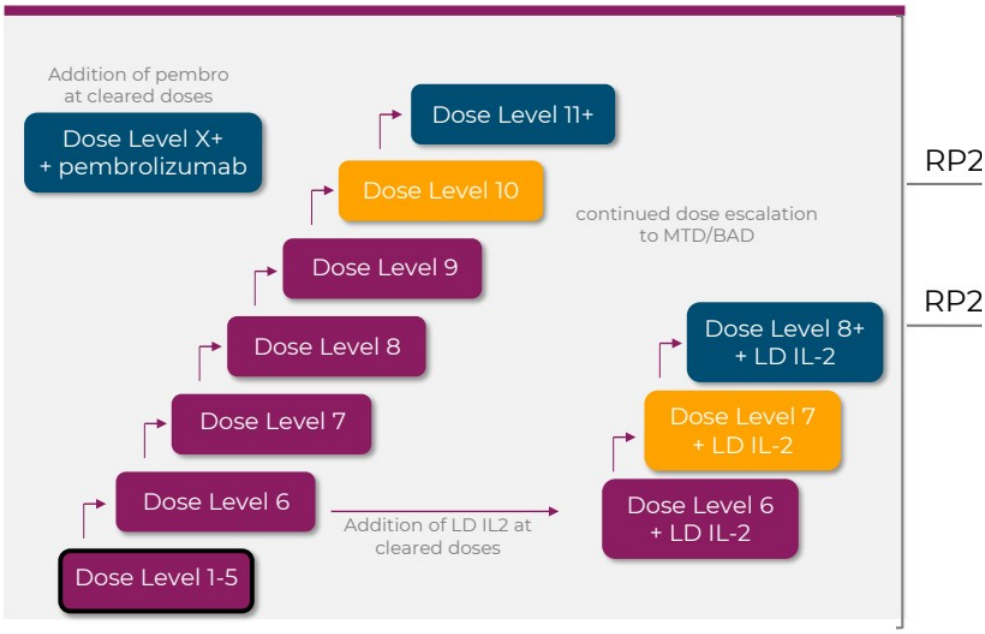
 Study Design =3+3, AR = Androgen receptor

LAVA-1207 Study Schema – Phase 1

Current Step Dosing Schedule

- Priming Dose 1 on Day 1: 120ug (outpatient visit)
- Priming Dose 2 on Day 8: 360ug (outpatient visit)
- Target Dose on Day 15 and q2w thereafter (only first target dose has mandatory hospitalization of 24h; flexibility to extend beyond 24h based on investigator discretion)

Dose Level Cleared – ASCO GU 2023 Update
Dose Level Cleared
Ongoing
Additional dose levels Phase 1



 LD IL2 = Low Dose Interleukin-2

Why explore the combination of LAVA-1207 and PD-1 mAb

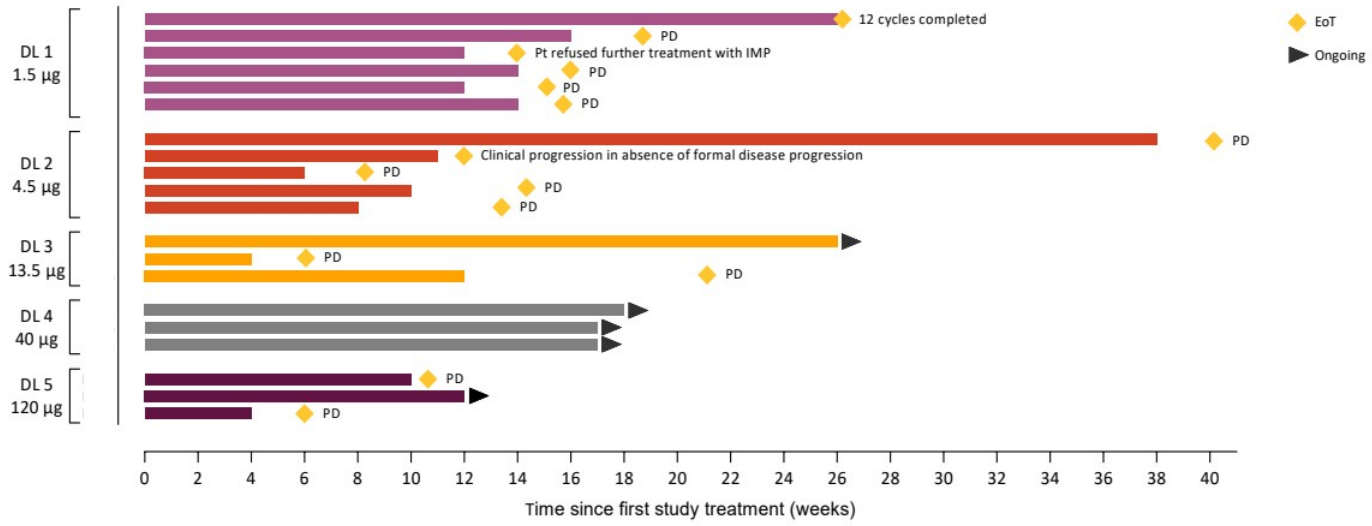
- PD-1 can be expressed by Vδ2-T cells (in patient Tumor-Infiltrating Lymphocyte (TIL), PBMC) an is upregulated after exposure to bispecific γδ-TCE
  - This has the potential to dampen the antitumor effect of LAVA-1207 (and could be released by anti-PD1 mAb)
- bsTCE induced Vγ9Vδ2-T cell activation triggers downstream activation of NK and T cells via proinflammatory cytokine secretion and can induce naive CD4 and CD8 T cell responses through their unique Ag presenting ability
  - This may broaden the immune response that could be promoted by anti-PD1 mAb
- Anti-PD1 mAb therapy may therefore facilitate/potentiate the antitumor effect of LAVA-1207

Phase 1/2a Snapshot from ASCO GU 2023

Dose Levels 1-5 20 patients	Median patient was 68 years old, had received 4 rounds of prior therapy and was median 9 years from diagnosis Metastases were primarily located in bone, lymph nodes and visceral tissues
Encouraging safety profile	No occurrence of high-grade CRS (>2) No increase in severity/frequency of TEAEs (grade 1 and 2) with increasing doses, or treatment discontinuations due to adverse events One grade 4 AE occurred (spinal cord compression, DL5) which was non-related
Established data on pharmacokinetics	Observed linear pharmacokinetics (PK)
Attractive early data on pharmacodynamics	Pharmacodynamics (PD) reflect changes expected per MOA Vδ2 T cell receptor occupancy increased with escalating dose
Activity and treatment duration	PSA reductions observed Stable disease observed in 8 of 14 evaluable patients, as of ASCO GU 2023 Data cutoff: 12/8/2022

1. All data on this slide are based on the ASCO GU 2023; Data cutoff: December 8, 2022, **data on file,** TEAE = treatment-emergent adverse events;

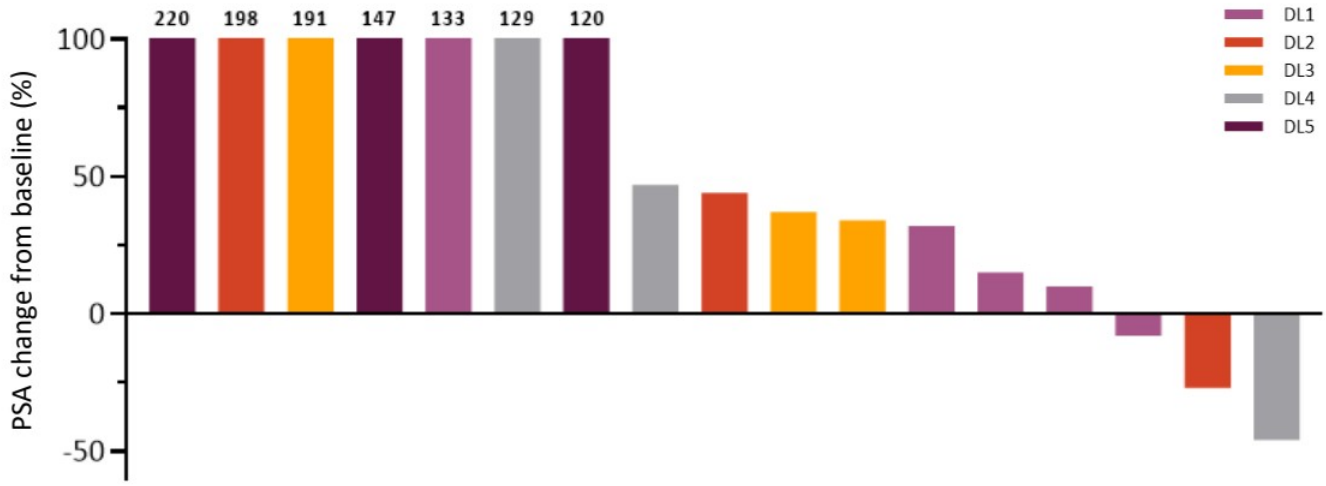
ASCO GU 2023: Time on Treatment



Subsequent to ASCO GU:

- Currently enrolling dose level 10 for monotherapy

ASCO GU 2023: Best PSA Response



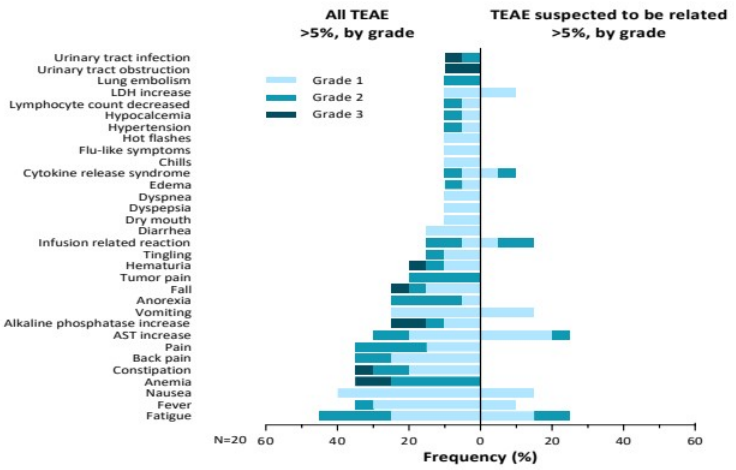
Subsequent to ASCO GU:

- Continue to see PSA reductions and other signs of potential antitumor activity

 Data cutoff: December 8, 2022, ASCO GU 2023

ASCO GU 2023: Initial Phase 1 Safety Data

- Favorable safety profile with no occurrence of high-grade (>2) CRS
- TEAEs that were suspected to be related were grade 1 or 2
- No increase in severity or frequency of TEAEs with increasing doses
- One grade 4 AE occurred (spinal cord compression, DL 5), which was non-related

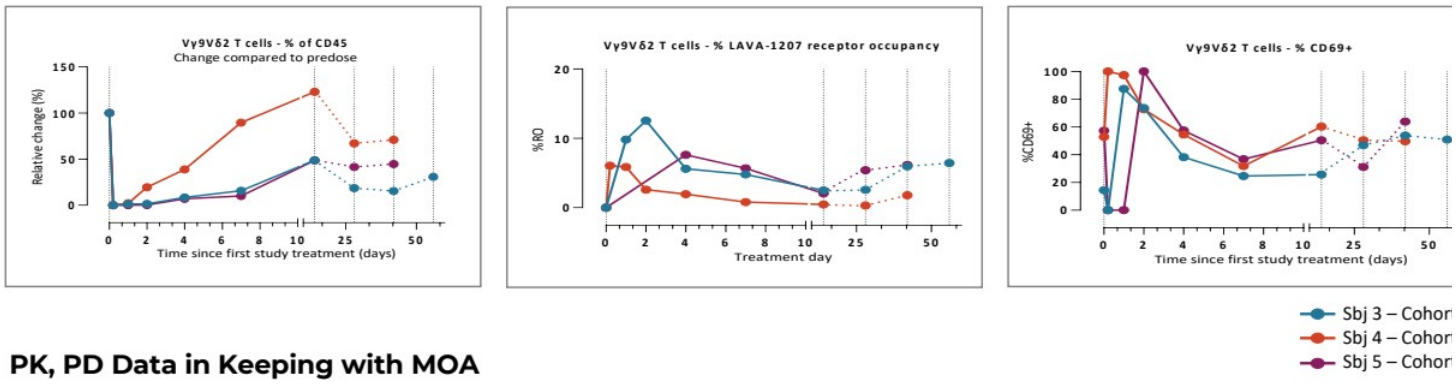


Subsequent to ASCO GU:

- Single dose-limiting toxicity (DLT) in cohort 6 noted in the monotherapy arm
- Three dose-limiting toxicities (DLTs) were observed in patients receiving IL-2 in addition to LAVA-1207 in a cohort with multiple doses of IL-2 per cycle
- Step-dosing introduced to minimize risk of high grade CRS
- No grade >2 CRS observed before or since introduction of step-dosing

ASCO GU 2023: Pharmacokinetics and Pharmacodynamics

Continuing to see Vδ2 T cell receptor occupancy with increasing doses



PK, PD Data in Keeping with MOA

- PK appears to be linear
- Pronounced drop in circulating Vδ2 T cell frequency 2 hr after dosing, suggesting Vδ2 T cell re-distribution, with subsequent recovery
- Vδ2 T cell activation markers (CD25 and CD69) upregulated following dosing
- Receptor occupancy detectable up to day 14 after EOI, with peak levels ranging from 6.1% to 12.6%

 Data cutoff: December 8, 2022, ASCO GU 2023; EOI = end of infusion; Sbj = subject

LAVA-1266

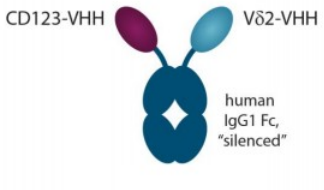
Gammabody Designed to Activate Vδ2 T Cells by Targeting CD123 for the Treatment of Hematologic Malignancies

LAVA-1266 Targets CD123 for AML & MDS

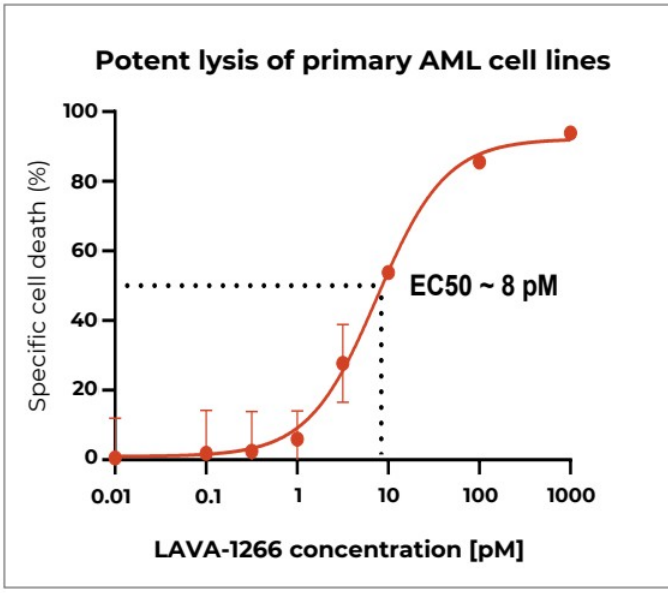
Strong scientific rationale	Relative abundance of Vδ2 T cells in AML suggests this disease could be an attractive target for Gammabody therapies
High unmet need	Estimated new diagnoses in US in 2024: 62,770[1] Estimated Deaths in US in 2024: 23,670[1]
Multiple levels of de-risking	Vδ2 T cell engaging arm partially derisked by LAVA-1207 CD123 clinically validated as a cancer target Over-expressed in a wide range of hematologic malignancies
Promising preclinical data	LAVA-1266 induced preferential lysis of CD123-expressing tumor cells while relatively sparing CD123-expressing normal cells
Program status	Clinical trial enabling activities are underway, in support of an expected Q2 2024 IND filing

 1. Source: https://seer.cancer.gov/statfacts/html/leuks.html; AML = acute myeloid leukemia, MDS = myelodysplastic syndromes

LAVA-1266: CD123-Targeting Bispecific Vδ2 T Cell Engager



- pM potency and activity at low effector to target cell ratios
- Increased survival in AML xenograft model
- No co-activation of immunosuppressive regulatory T cells
- Does not interfere with IL-3 induced proliferation (relevant for HPSC)
- Results in very limited *in vitro* cytokine release (incl. IL-6, TNF, IFN-γ)
- Preferentially targets CD123⁺ tumor cells to reduce the potential for on-target off-tumor toxicity



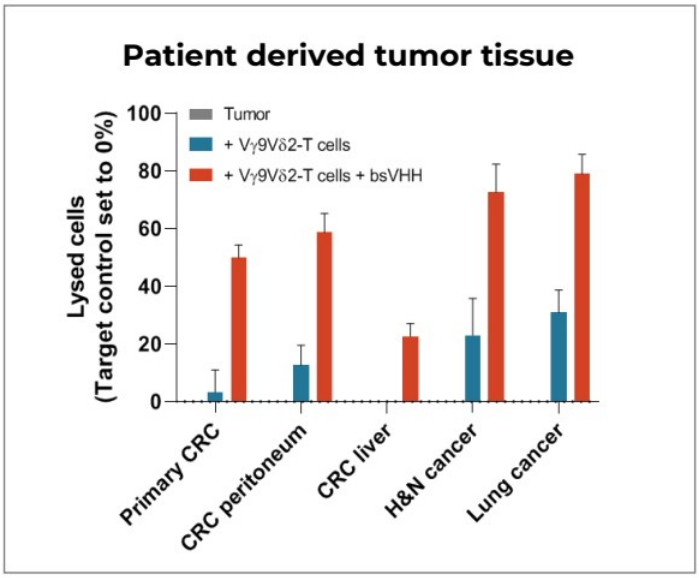
Strategic Partnerships

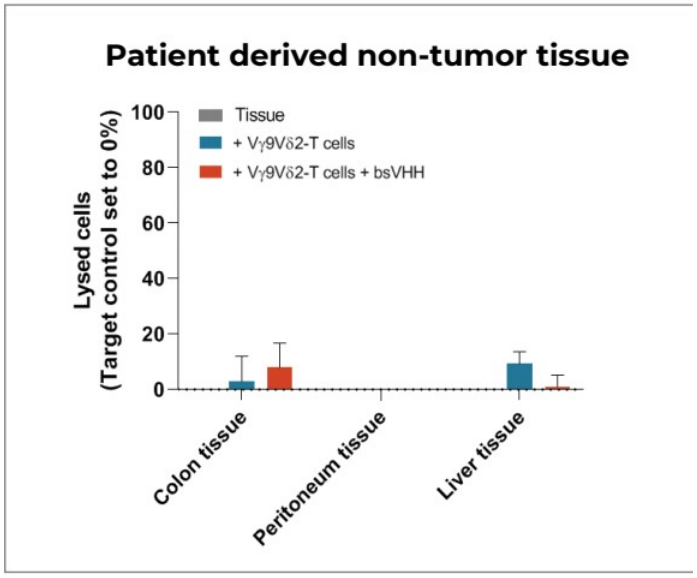
PF-08046052 for Solid Tumors: Phase 1 Underway[1]

Mechanism of action	Designed to induce preferential lysis of EGFR-expressing tumor cells while relatively sparing EGFR-expressing normal cells
Strategic partner	Pfizer
Agreement	Exclusive worldwide license agreement with Pfizer entered into Q3 2022 Pfizer to develop and commercialize PF-08046052 Potential for milestones of up to approximately $650 million and royalties
Payments to date	$50 million upfront received with the signing, Sept 2022 Received $7 million Phase 1 enrollment milestone, March 2024
Program status	Phase 1 Clinical Trial (NCT05983133) initiated in Q4 2023 Program highlighted during Pfizer Oncology Innovation Day[1]

1. Link: Pfizer Oncology Innovation Day

PF-08046052 – EGFR-Targeting Gammabody





 King L, et al. Cancer Immunol Res 2023 LAVA Therapeutics, data on file

Johnson & Johnson Innovative Medicine Collaboration: Lead Candidate Selected

Mechanism of action	Undisclosed tumor associated antigen
Strategic partner	Johnson&Johnson Innovative Medicine
Agreement	LAVA entered into a research collaboration and license agreement with J&J Innovative Medicine (Ma 2020) for the discovery and development of a novel bispecific gamma-delta T cell engager for the treatment of cancer J&J Innovative Medicine is responsible for the future clinical development, manufacture, and commercialization of the candidate at J&J Innovative Medicine's sole cost and expense
Payments	Upfront payment received in July 2023 LAVA is eligible to receive development, regulatory and commercialization milestone payments and royalties
Program status	Product candidate onboarded June 2023

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LAVA THERAPEUTICS

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