Precision Immunotherapy for Solid Tumors

Non-Confidential Corporate Presentation

January 2025

Notices and Disclaimers

This presentation has been prepared for use by Affini-T Therapeutics, Inc. (“we,” “us” or “our”). This presentation is for informational purposes only and may not be reproduced or redistributed, in whole or in part, without our express written consent. We do not make any representation or warranty as to the accuracy or completeness of the information contained in this presentation.

This presentation contains statements regarding our pipeline products. All Affini-T pipeline products are investigational agents and their safety and efficacy have not been established by any regulatory authority or otherwise. There is no guarantee that they will be approved for commercial use or will become commercially available.

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentation, including statements regarding our operations and financial position, business strategy, product candidate development, research and development activities and costs, timing and likelihood of success of our business plans, plans and objectives of management, future results and timing of clinical trials, plans for regulatory submissions, treatment potential of our product candidates, and the market potential of our product candidates, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “predict,” “project,” “target,” “potential,” “will,” “would,” “could,” “should,” “continue,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. The forward-looking statements contained in this presentation reflect our current views with respect to future events, and we assume no obligation to update any forward-looking statements except as may be required by applicable law.

This presentation also includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties as well as our own estimates of potential market opportunities. All of the market data used in this presentation involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. Industry publications and third party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Our estimates of the potential market opportunities for our product candidates include several key assumptions based on our industry knowledge, industry publications, third-party research and other surveys, which may be based on a small sample size and may fail to accurately reflect market opportunities. While we believe that our internal assumptions are reasonable, no independent source has verified such assumptions.

RIGHT TARGETS. RIGHT CELLS. RIGHT PLACE.

We target oncogenic driver mutations to deliver transformative therapies for patients with solid tumors

- Leader in Precision Immunotherapy - developing a deep pipeline of TCR-based therapies that have first-in-class / best-in-class potential
- Focus on targeting the most frequent oncogenic driver mutations in solid tumors; including KRAS, P53, and PIK3CA
- Proprietary platform technologies to build potent and persistent T cell therapies and generate bispecific T cell Engagers
- Science-driven team and founders focused on continued innovation to develop novel therapies with curative potential

Development Pipeline Milestones

AFNT-211
A11 KRAS G12V

- Lead KRAS targeting program
- Phase 1a data generation ongoing in 2L+ solid tumor indications
- Dose escalation proceeding on track across ~10 US sites with indication-specific expansions planned

Completion of Dose Escalation anticipated 2H25

AFNT-212
A11 KRAS G12D

- Doubles addressable KRAS population
- Introduces THRIVE non-viral gene-editing platform to enable future product development
- IND-enabling studies complete, IND submission planned 1H25

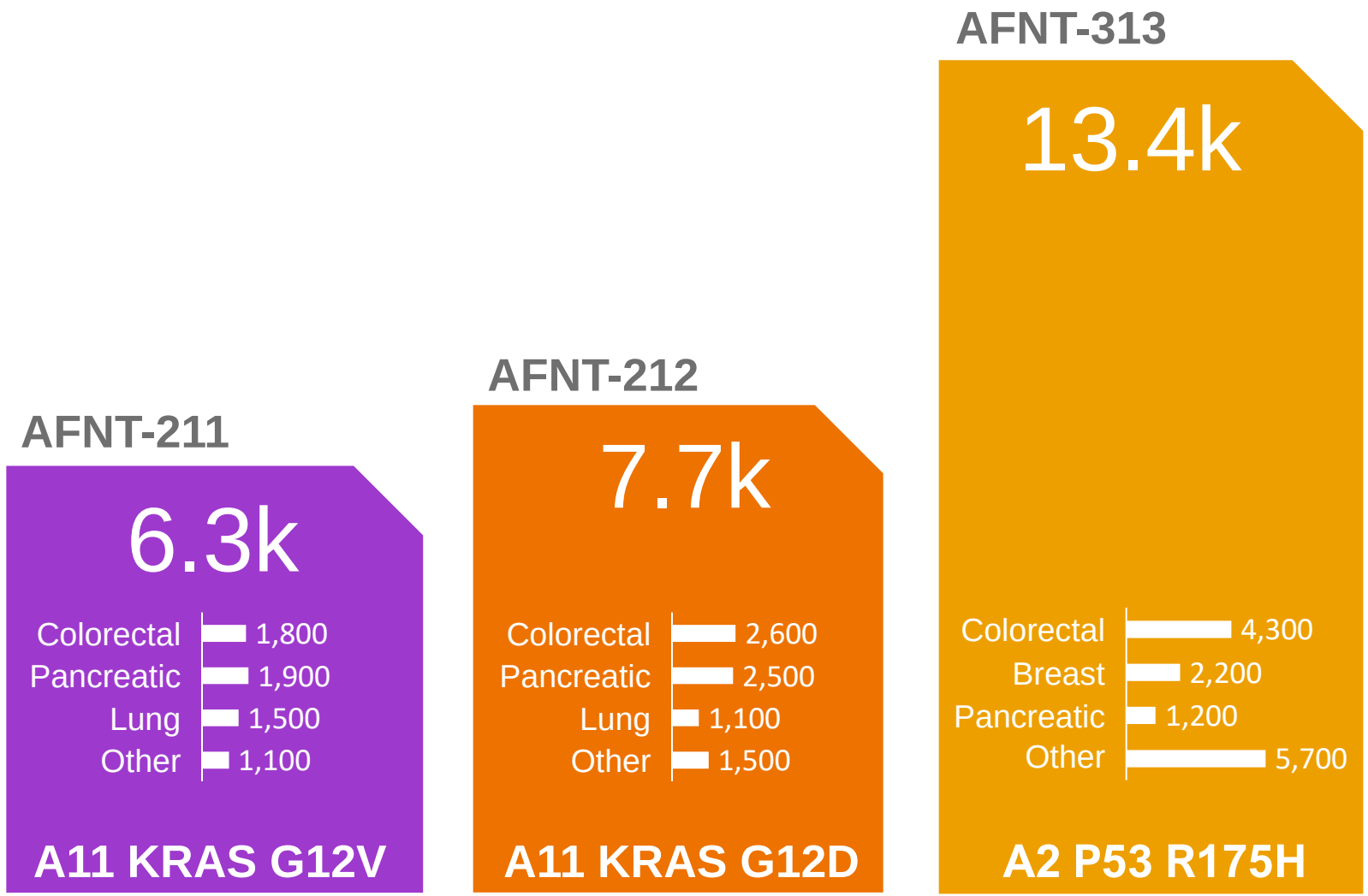
IND clearance anticipated 2025

AFNT-313
A2 P53 R175H

- Expands beyond KRAS to address largest P53 population
- Differentiated development candidate designed to integrate immunostimulatory signals for optimal T-cell activation
- IND-enabling studies underway

Pre-IND feedback anticipated 2025

Lead programs offer attractive US market opportunities with blockbuster potential



Cell therapies approved for solid tumors may benefit from an attractive development path

Tecelra® afamitresgene autoleucel suspension for IV infusion

- First TCR T cell (A2 MAGE A4)
- Single arm registrational study - **44 pts with synovial sarcoma**

AMTAGVI™ (lifileucel) Suspension for IV infusion

- First TIL therapy
- Single arm registrational study - **73 pts with advanced melanoma**

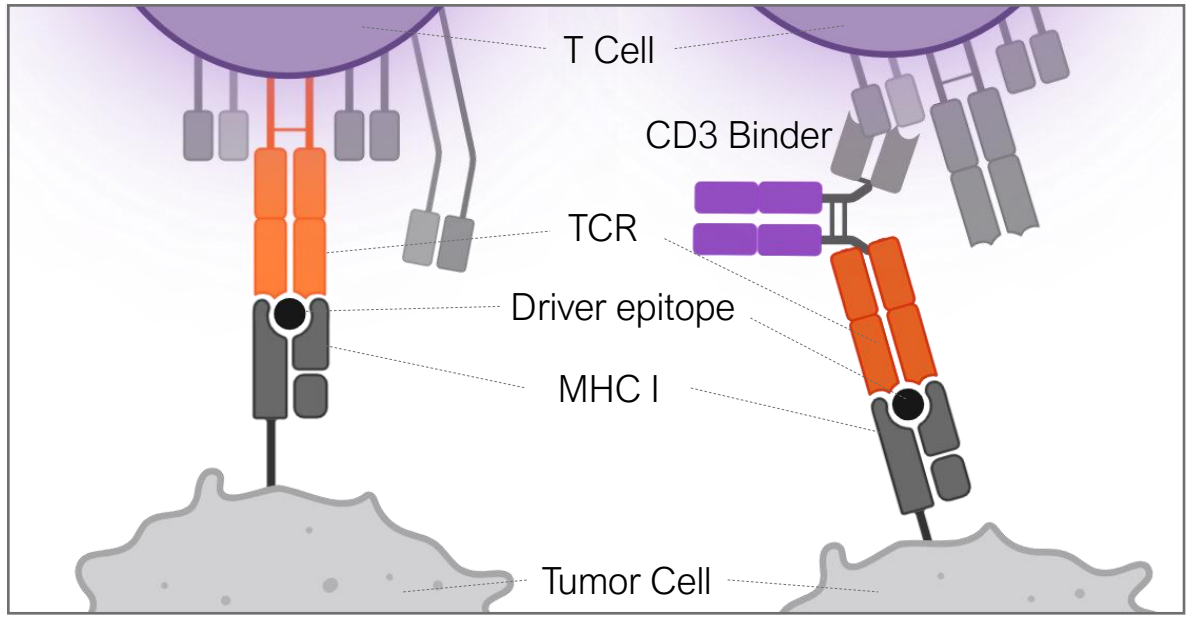
2030 US Incidence (World Health Organization) adjusted for mutation frequency (AACR Genie) and HLA frequency (BeTheMatch).

affini

Affini-T is Developing Two TCR-Based Therapeutic Modalities

TCR-T Cell Therapies

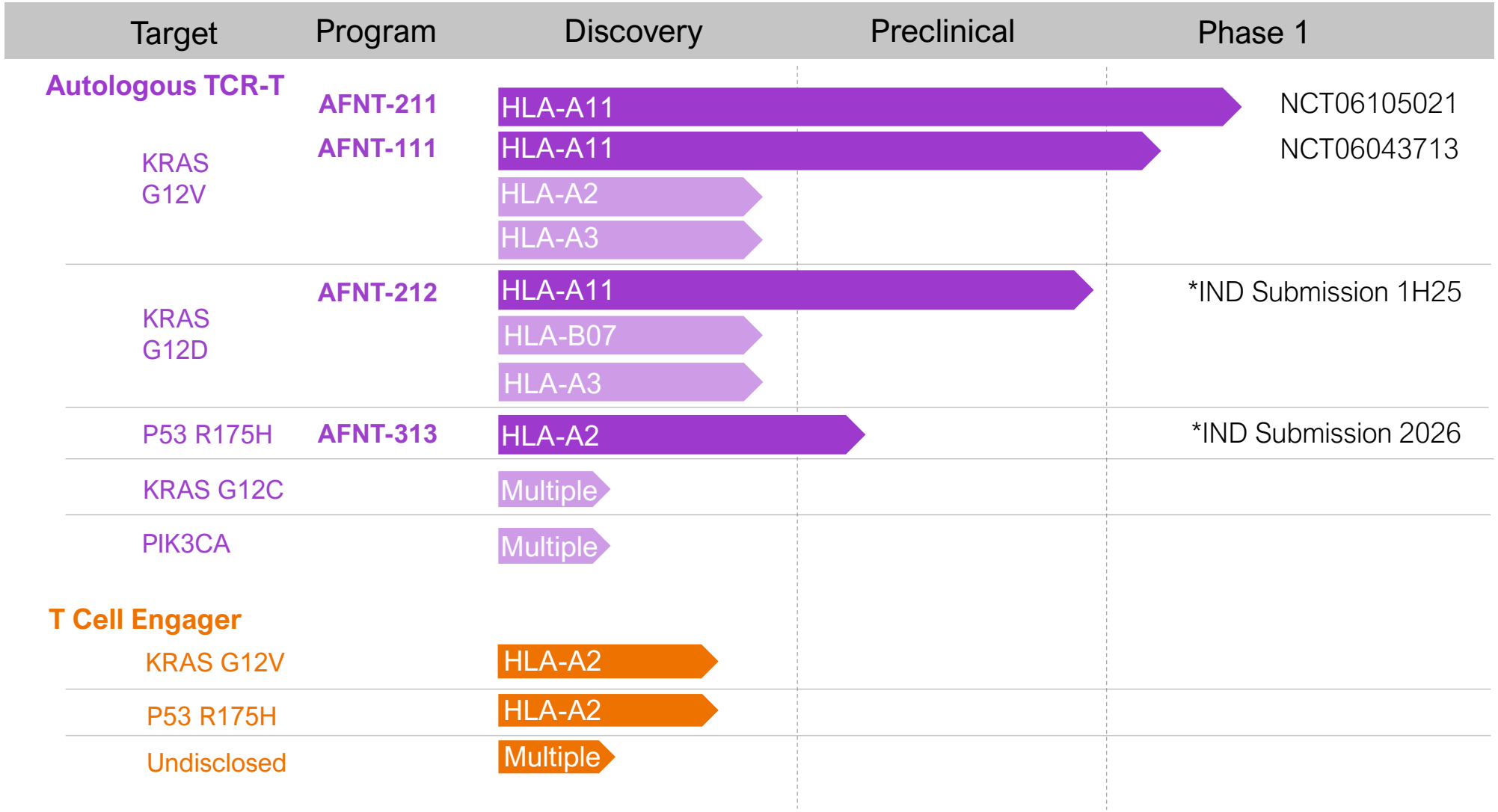
T cells engineered with a transgenic TCR that allows recognition of specific driver mutant epitopes



Bispecific T Cell Engagers

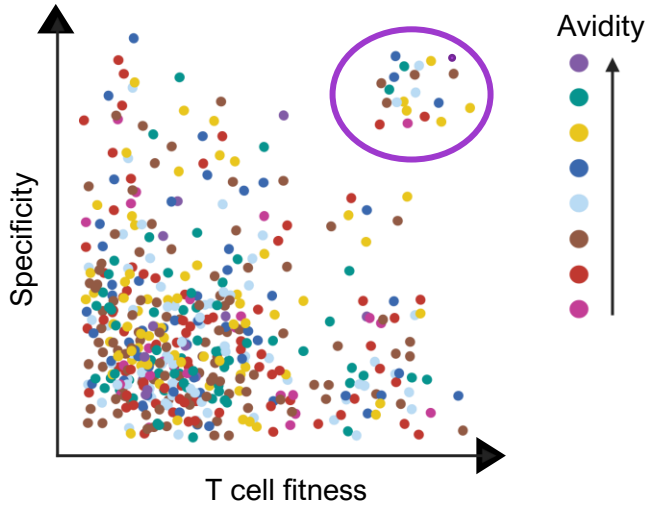
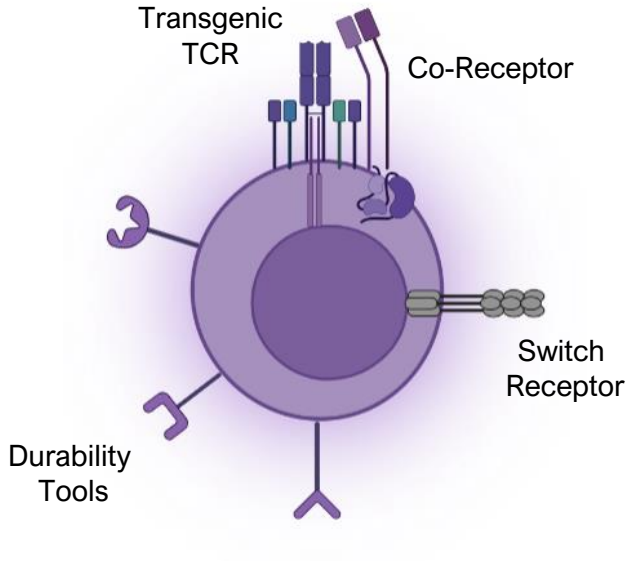
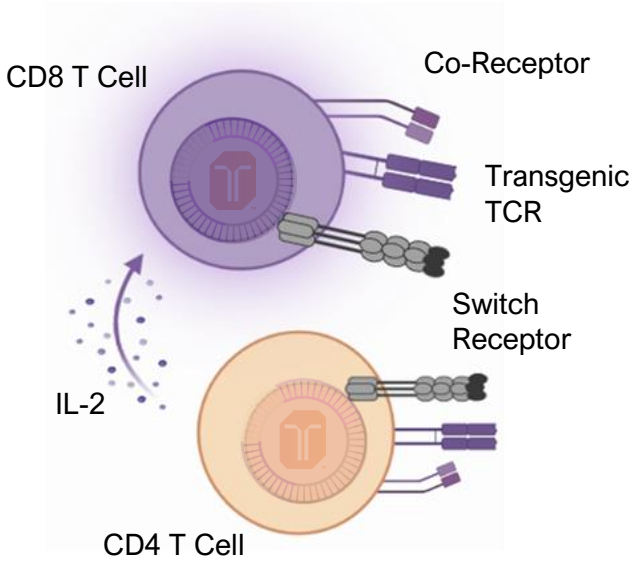
Bispecific biologics combining a TCR moiety to recognize the driver mutant epitope with a CD3 binding moiety to recruit endogenous T Cells

First-In-Class Potential for Multiple Products Targeting Oncogenic Drivers in Solid Tumors



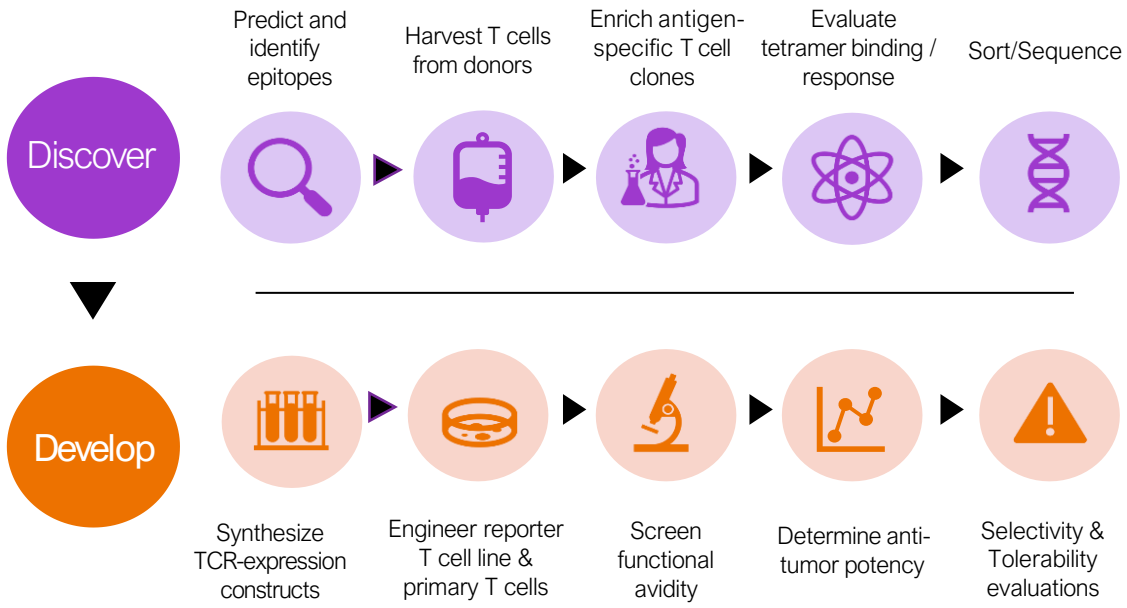
*Planned submission dates

Affini-T Platform Technologies Designed To Generate Potent & Tolerable TCR-T Cells

TAILOR™ TCR Discovery	TUNE™ Synthetic Biology	THRIVE™ Engineering and Manufacturing
		
Optimized system that integrates decades of learning with predictive algorithms to identify highly functional & specific TCRs against diverse targets	Program cell persistence in the TME to enhance durability with switch receptors (eg Fas-41BB), co-receptor and other armoring technologies	Scalable manufacturing with gene editing technologies to generate a robust engineered product with high stemness phenotype

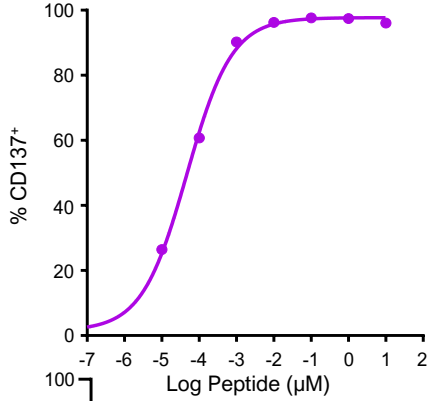
TME: Tumor Microenvironment

TAILOR™ TCR Discovery Platform Validated Across Multiple Programs



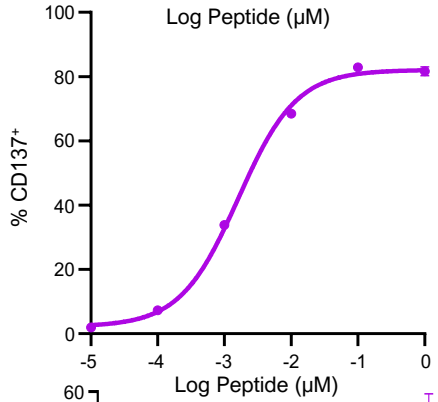
- High-throughput method identifies rare, high-affinity, thymus-vetted TCRs for clinical translation
- Selection based on avidity and preclinical tolerability profile: No cross-reactive self-peptides by XScan, and no allo-reactive responses by B-LCL screening

KRAS A11 G12V TCR
AFNT-111
AFNT-211



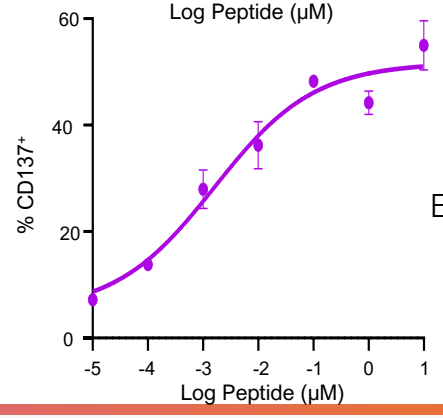
EC_{50} = 47 pM

KRAS A11 G12D TCR
AFNT-212



EC_{50} = 1.6 nM

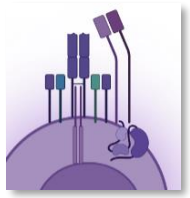
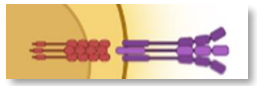
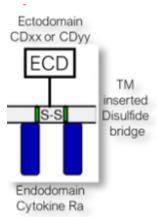
P53 A2 R175H TCR
AFNT-313



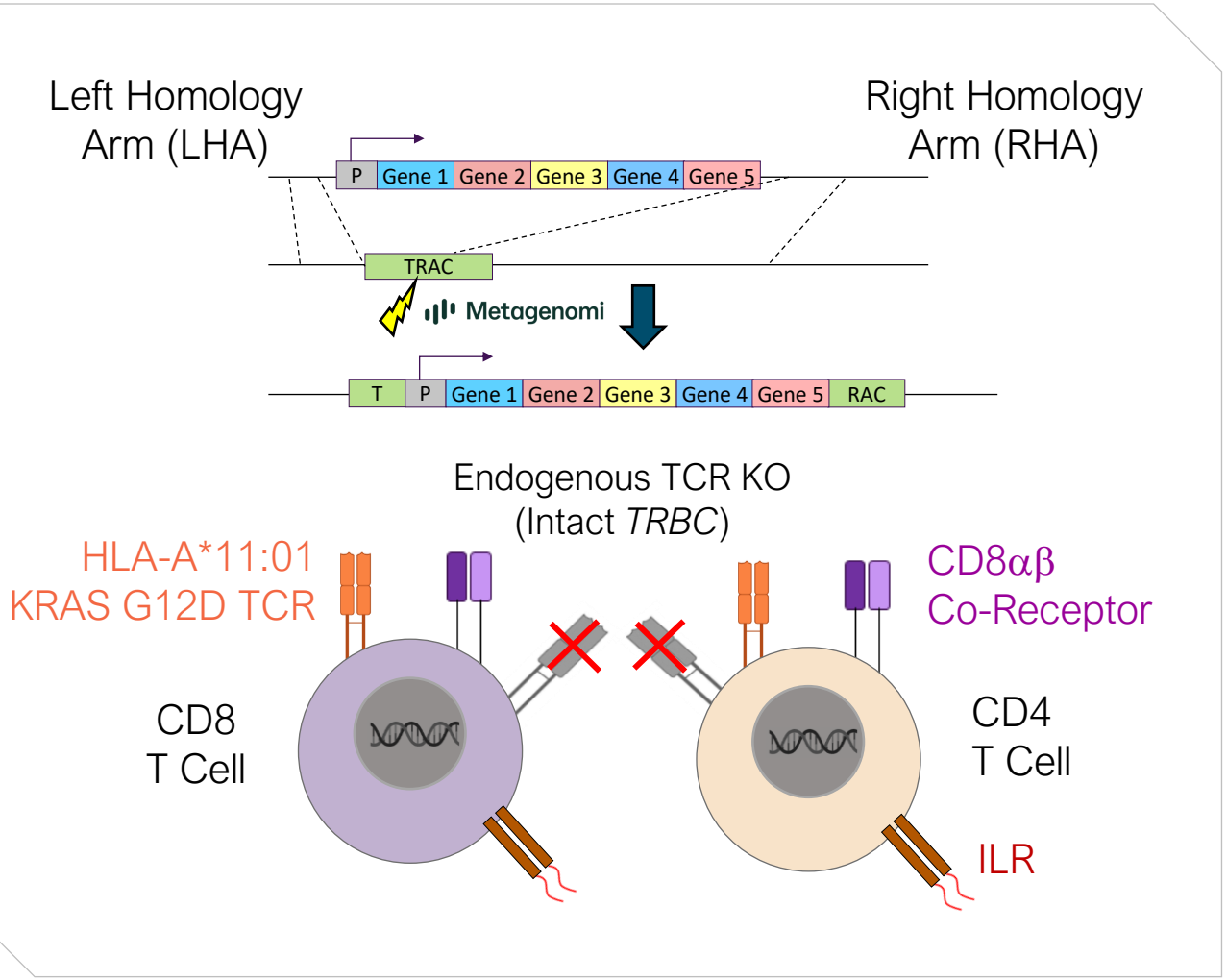
EC_{50} = 1.6 nM

affini

TUNE™ Enhancing T Cell Fitness and Persistence with Novel Synthetic Biology

Syn-Bio Component		Purpose	Product	Development Stage
				Discovery / Preclinical / Clinical
CD8α/β coreceptor		• Signal 1 (TCR targeting) in CD4+ T cells • Coordinated immune response	AFNT-111 AFNT-211 AFNT-212 AFNT-313	
FAS-41BB		• Signal 2 (co-stimulation) upon FASL binding: proliferation, memory, and enhanced metabolic function • Prevention of T cell death mediated by apoptosis in the TME	AFNT-211 AFNT-313	
ILR (undisclosed)		• Signal 3: Constitutive cytokine support • Proliferation, survival in the TME	AFNT-212 AFNT-313	

THRIVE™ Non-Viral Knock-In (KI) Provides Advantages over Vector Based Platforms



Larger cargo size

Enables engineering with multiple syn-bio components (up to 10kb)

Targeted integration

Reduces potential risk compared to random virus integration

Consistent expression

Defined vs. variable copy number

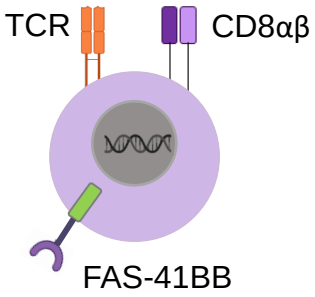
Lower COGS

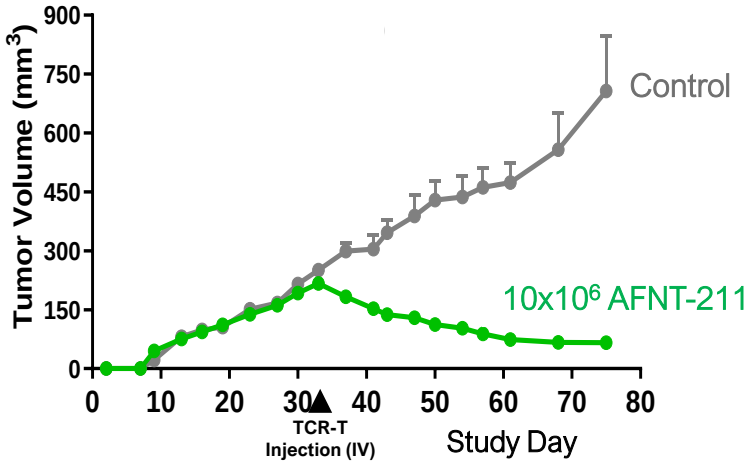
And faster development timelines

Innovative pipeline leverages TAILOR™, TUNE™ & THRIVE™, designed to eradicate difficult-to-treat solid tumors

Enhanced survival in TME

AFNT-211
Integrates
Signal 1+2

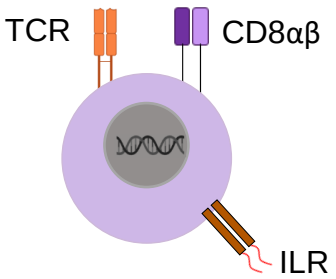


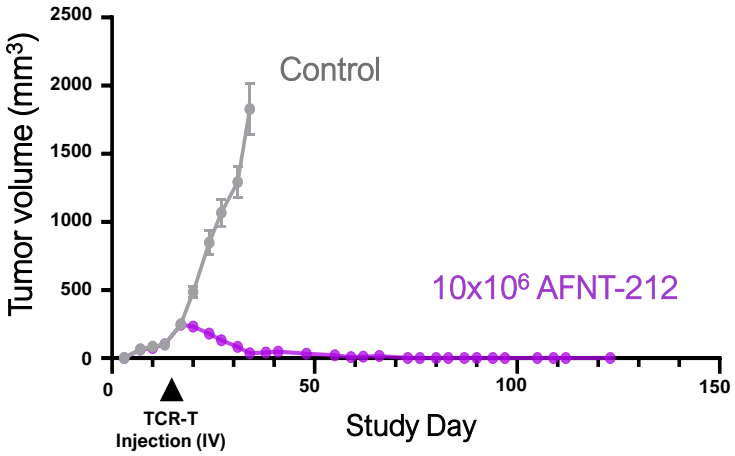


AFNT-211 induced tumor regression in established Breast (SW527) tumors with mut. KRAS G12V

Enhanced proliferation in periphery

AFNT-212
Integrates
Signal 1+3

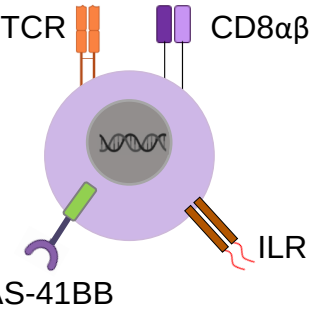


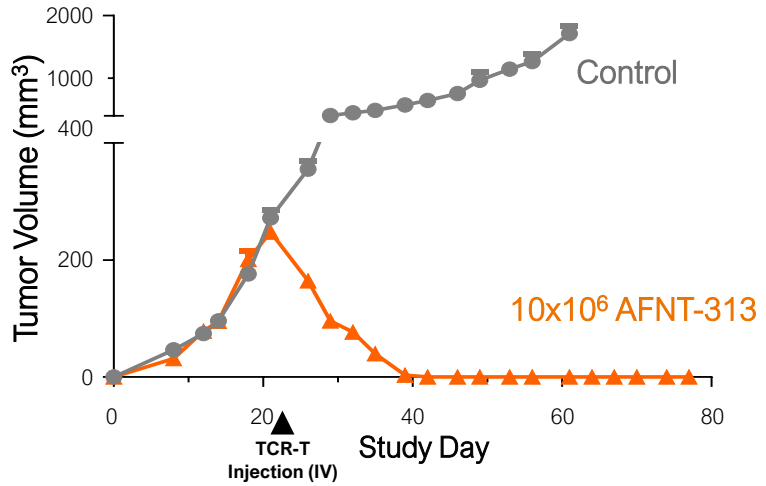


AFNT-212 induced tumor eradication in established Colorectal (CL40) tumors with mut. KRAS G12D

Support in TME & Periphery

AFNT-313
Integrates
Signal 1+2+3

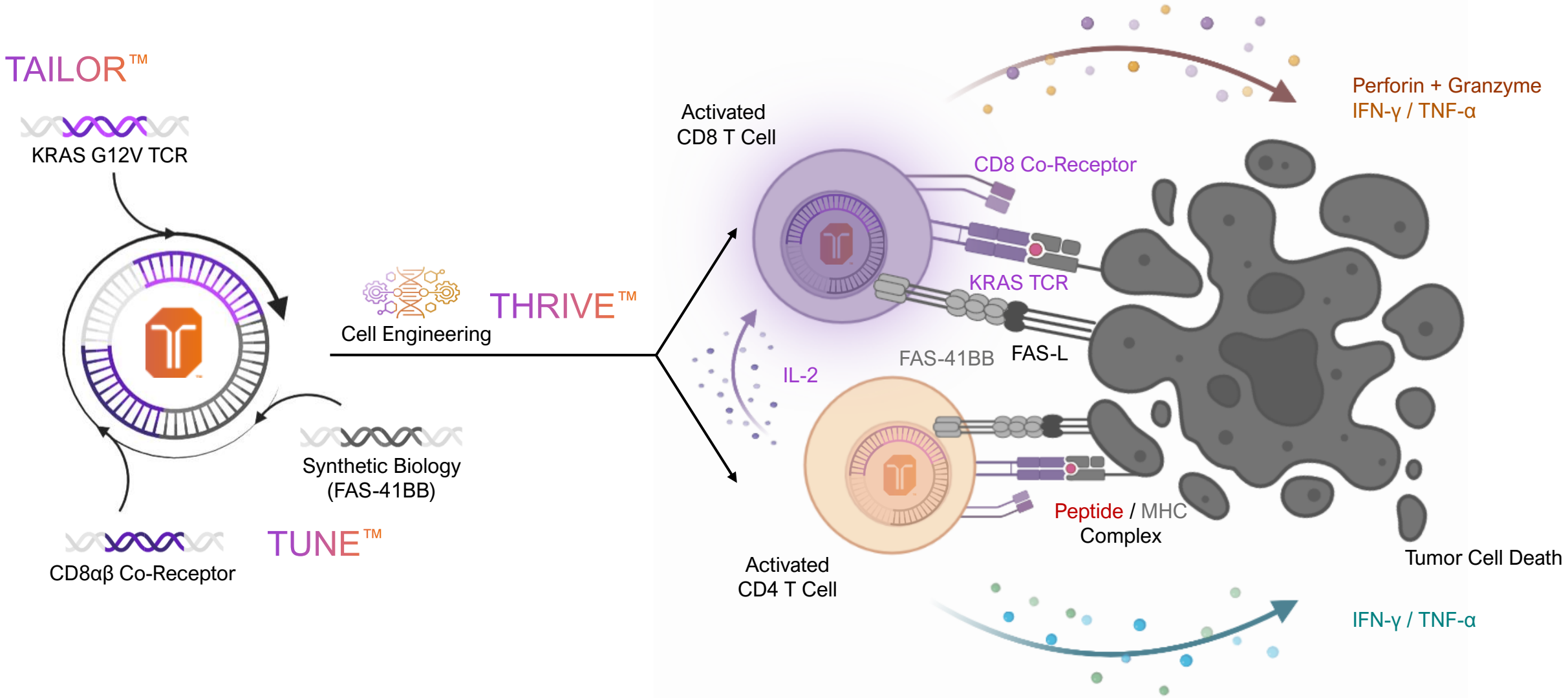




AFNT-313 induced tumor eradication in established Ovarian (TYK-nu) tumors with mut. p53 R175H

affini

AFNT-211: A11 KRAS G12V TCR Engineered T Cells + FAS-41BB Durability Switch Receptor



AFNT-211: Patient Journey

Pre-screen

Leukapheresis

Lymphodepletion

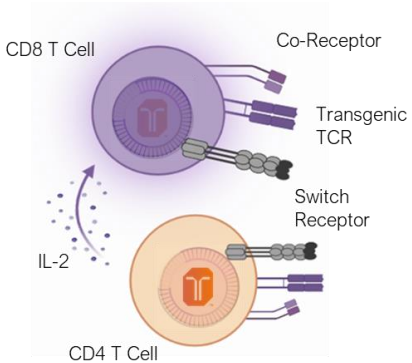
AFNT-211 product infusion

Transition to long term follow up

Patient Monitoring

KRAS G12V
HLA-A*11:01

THRIVE™ Manufacturing



elevatebio

~10-day manufacturing
~6-day QC testing

Flu / Cy**

Targeting ~22-day vein-to-vein time

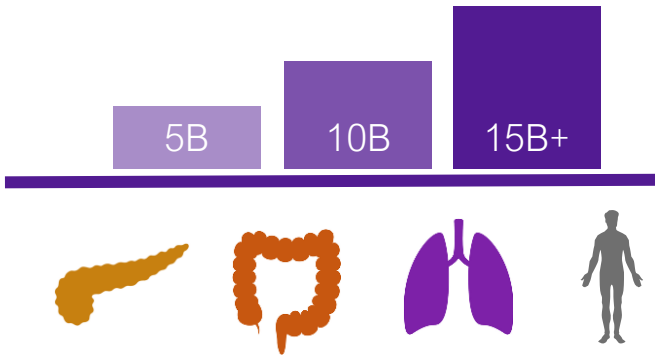
**Lymphodepleting chemotherapy (LDC) with cyclophosphamide 500mg/m2/day and fludarabine 30mg/m2/day intravenously (I.V.) on Days -6 to -3, (4 days),

affini

AFNT-211: Clinical Development Plan

Phase 1a Basket Trial Dose Finding | Phase 1b/2 Expansion Cohorts | Registration Study

KRAS G12V-mutated tumors
& HLA-A*11:01 allele
2nd+ Line



Sample size N=15-20
~10 US clinical trial sites

- PDAC → 2nd/3rd line
- CRC → 2nd/3rd line
- NSCLC → 2nd/3rd line
- Tissue-agnostic → 2nd/3rd line

Sample size up to N=20 per indication

Registrational trial design based on data and FDA interaction (e.g. single-arm)

Target N=~80 for potential indication
Expand to 35-40 sites US/EU5/CAN

Optimal Biological Dose / Proof of Clinical Concept

Interim Analysis

Aim for approval on ORR & DoR

**Excluding primary brain tumors*

ORR – Overall Response Rate
DoR – Duration of Response

affini

AFNT-211: Patient Selection & Biomarker Strategy

I. Patient Selection

- **KRAS G12V** mutation – routinely reported by PCR, NGS, and CGP; by tumor or liquid biopsy (ctDNA)
- **HLA A*11:01** – via standard typing assays (Histogenetics – ASHI accredited) or CGP
- **2L+,** Upside: frontline consolidation

II. Monitoring - Peripheral Blood

- **PK:** TCR-T expansion (VCN and/or CK), C_{max}, T_{last}, AUC
- **PD:** TBNK depletion and reconstitution; cytokines, e.g. IL7, IL15, IFNγ
- **MRD:** ctDNA
- **TCR-T phenotyping:** TCR-T cell differentiation, activation, and exhaustion
- **Safety:** Replication-competent lentivirus, insertion site analysis

III. Phenotyping - Tumor

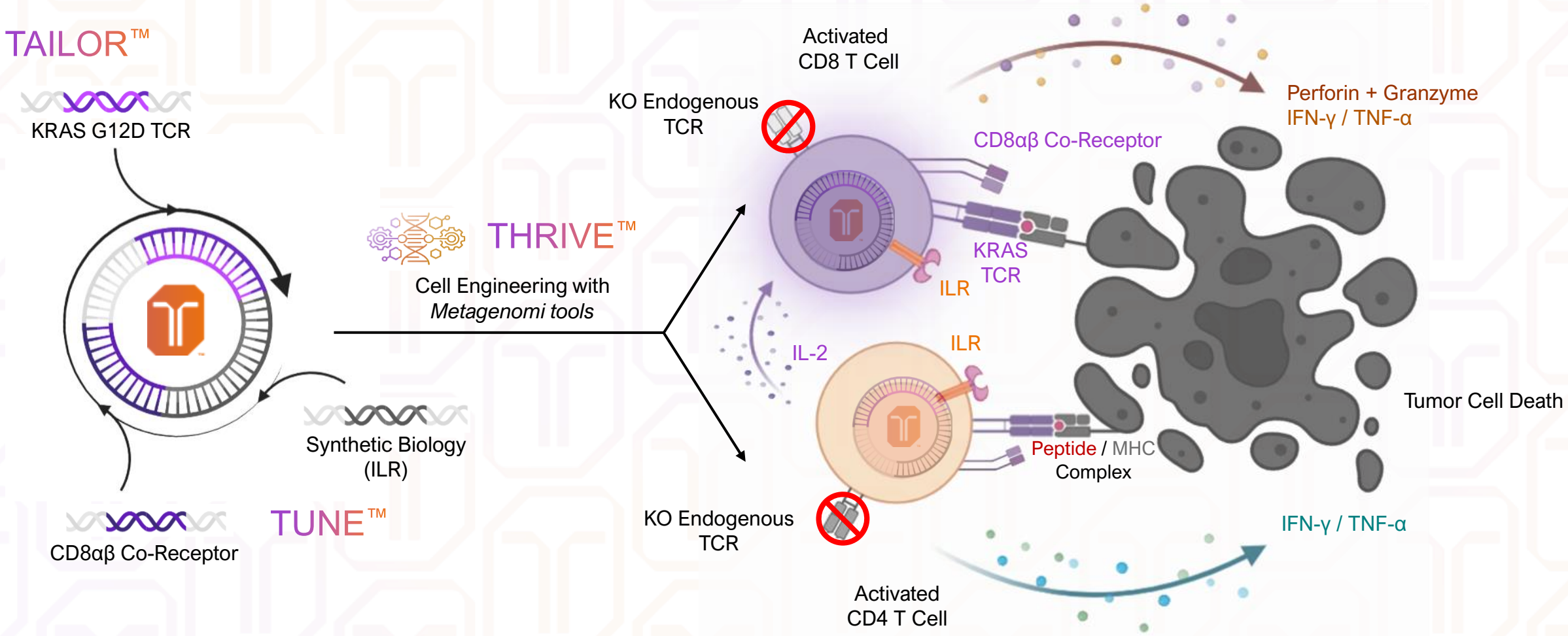
- **RECIST:** Imaging response assessment
- **TME:** AFNT-211 TCR-T cell infiltration and phenotyping, Host immune infiltration (including CD4 and CD8)
- **Tumor characterization:** TMB, MSI, PD1, FasL, IFNγ and APM

ctDNA – circulating tumor DNA; NGS – next generation sequencing; ASHI – American Society for Histocompatibility and Immunogenetics; LOH – loss of heterozygosity; CGP – comprehensive genomic profiling, PK – pharmacokinetics; PD – pharmacodynamics; VCN – vectory copy number

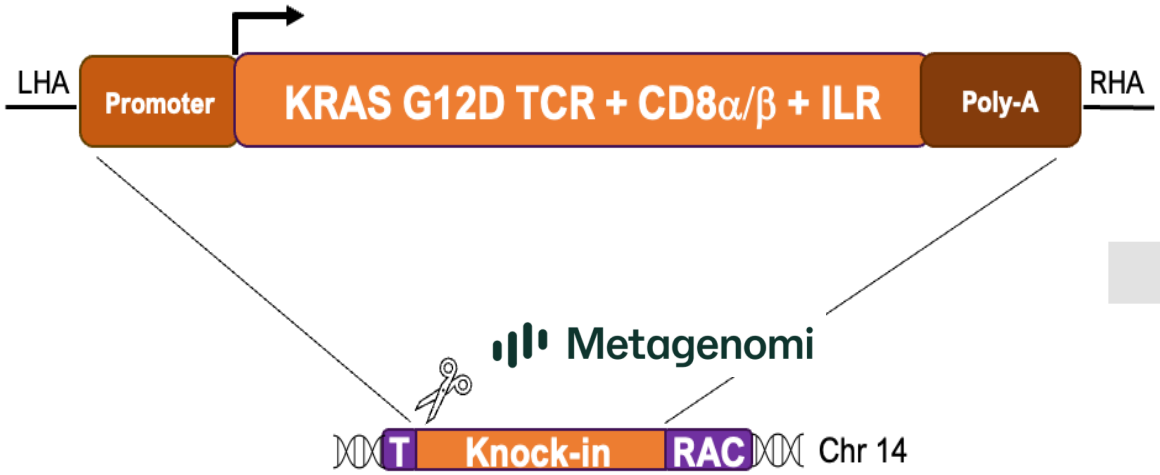
CK – cellular kinetics; TBNK – T, B, and natural killer cells; MRD – minimal residual disease; TME – tumor microenvironment; TMB – tumor mutational burden; MSI – microsatellite instability; APM – antigen presenting machinery

affini

AFNT-212: A11 KRAS G12D TCR Engineered T Cells + Durability Switch Receptor + Gene Editing



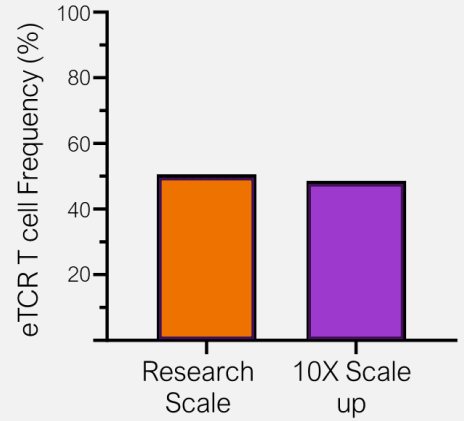
THRIVE™ High Efficiency Non-viral Delivery of Large Transgenes at cGMP Scale



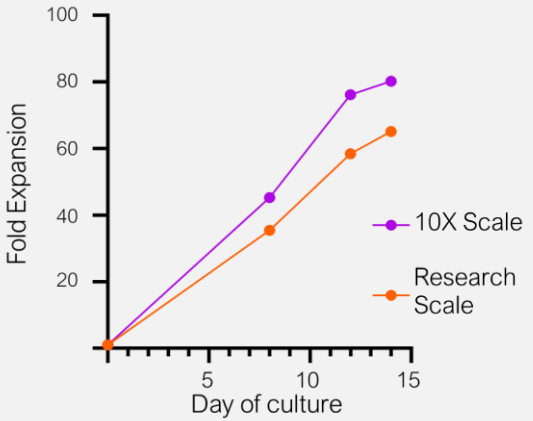
Transgenes inserted within the endogenous TRAC gene via CRISPR/Cas driven homology mediated repair

TRAC-inserted knock-in of 6.3kb 5 gene cassette

Transgene Integration Frequency



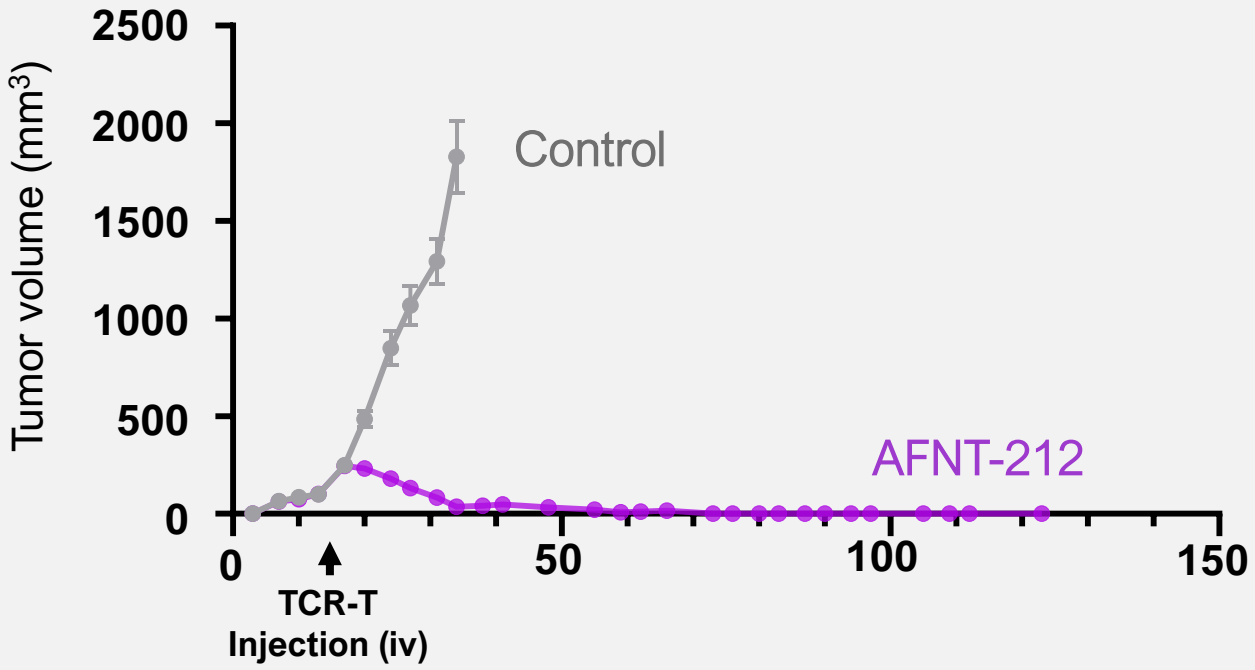
Expansion Kinetics



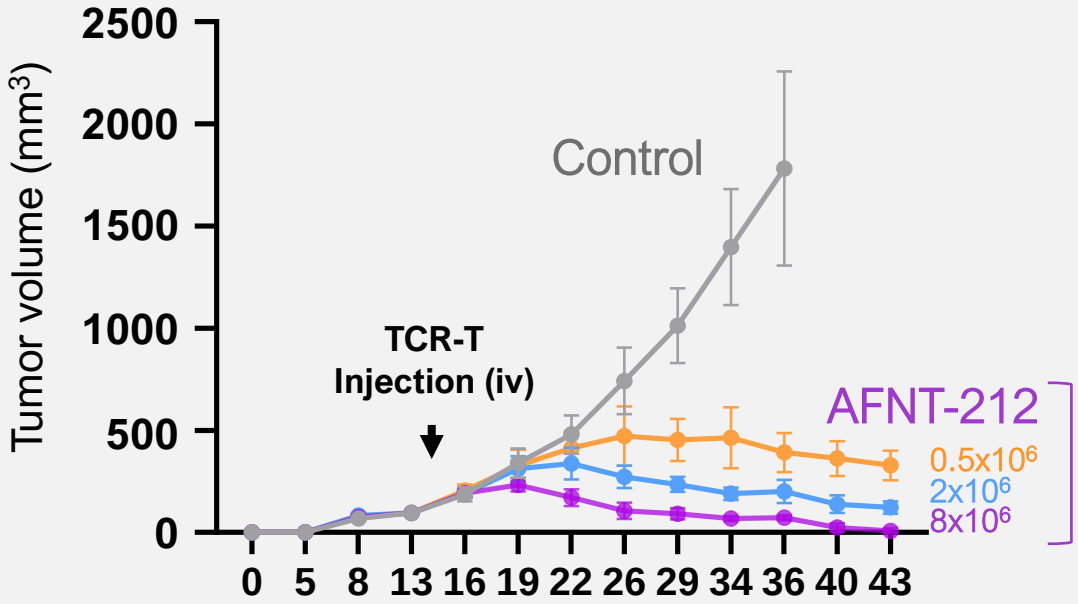
KI = Knock-In

AFNT-212 Showed Robust Anti-tumor Activity in Established Tumor Mouse Models *in vivo*

AFNT-212 T cells induced complete remission for over 120 days

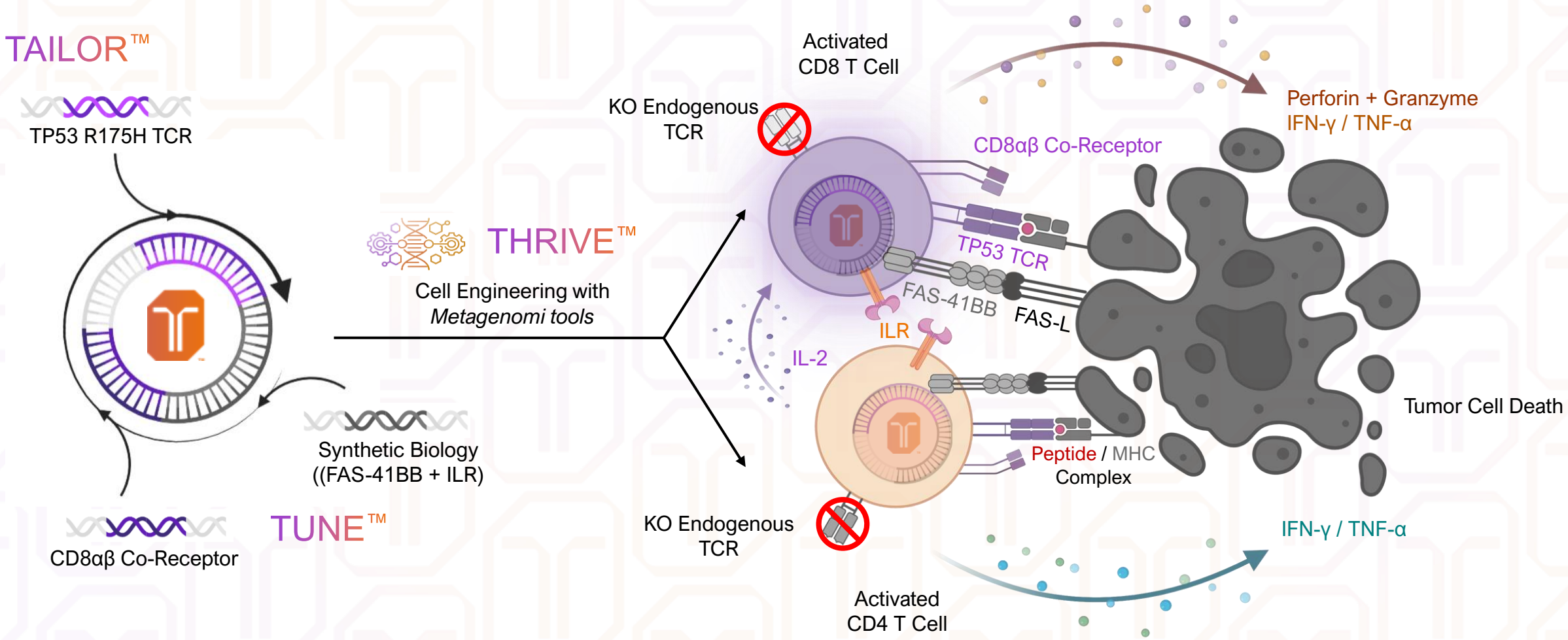


AFNT-212 T cells drove a dose-dependent anti-tumor response



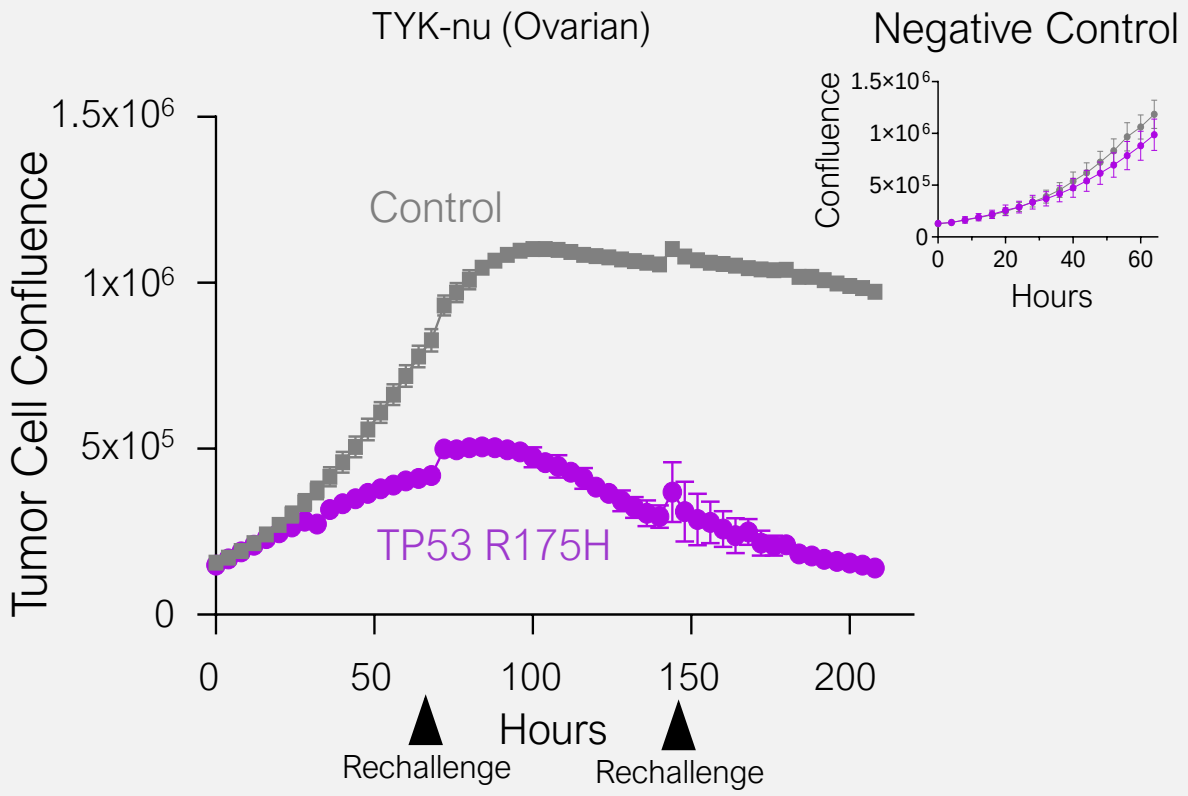
(CL-40 colorectal model)

AFNT-313: A2 TP53 R175H TCR Engineered T Cells + 2 Durability Switch Receptors + Gene Editing



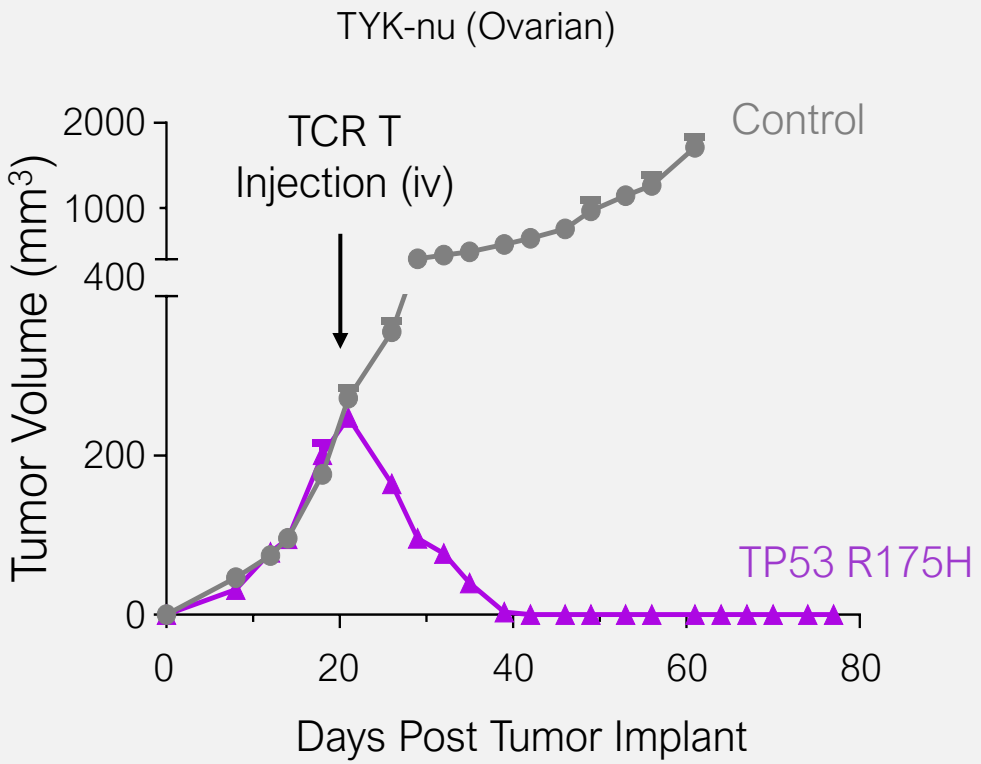
AFNT-313 TCR-T Showed Robust Preclinical Tumor Cell Control *In Vitro* and *In Vivo*

In Vitro



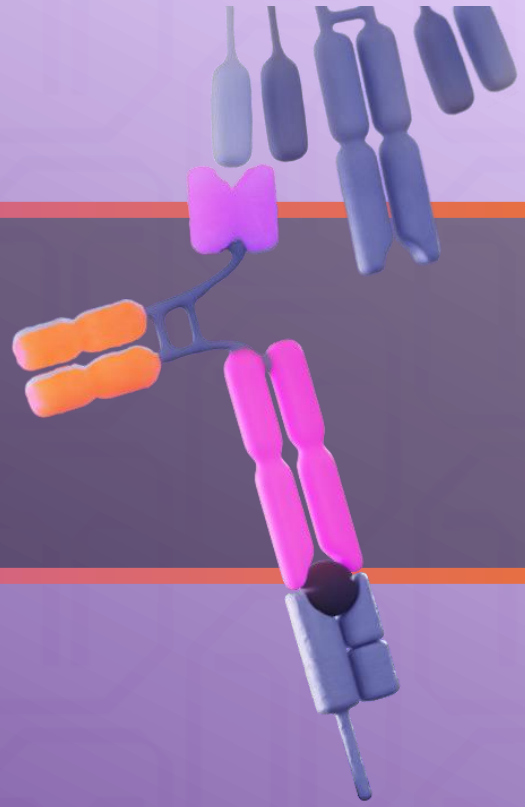
TP53 R175H TCR-T cells controlled tumor proliferation even following multiple re-challenges

In Vivo



TP53 R175H TCR-T drove complete responses even against large established tumors

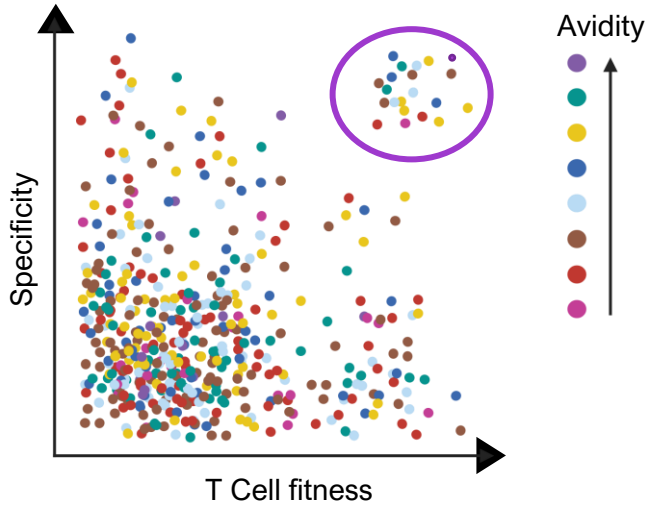
TETHER™ T Cell Engagers Highlights



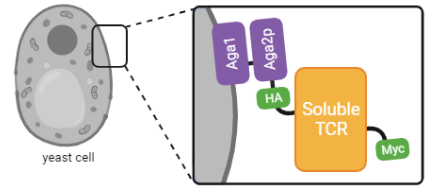
Affini-T Platform Technologies Designed to Generate Highly Specific & Active T Cell Engagers

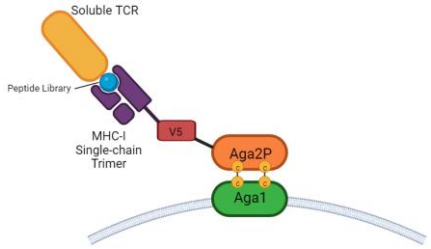
1 TAILOR™ TCR Discovery

- High throughput screening, predictive algorithms, and decades of learning
- Generate highly functional and tolerable TCRs against diverse targets



2 Affinity Maturation



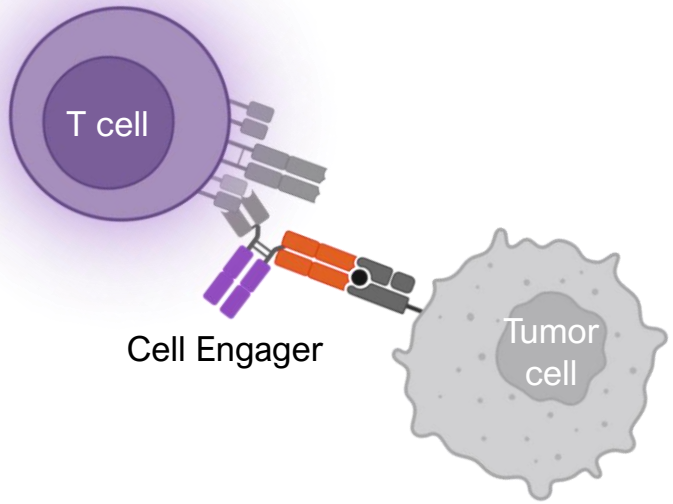


Yeast Display Modalities

- Libraries to identify high affinity TCRs
- Libraries for specificity screenings

3 TETHER™ T Cell Engagers

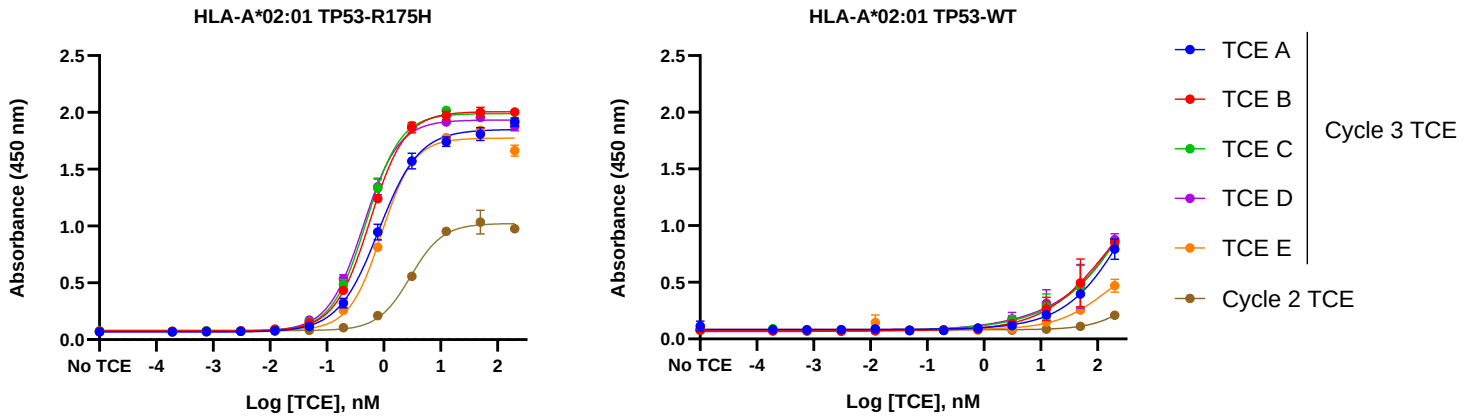
- Affinity matured TAILOR™ TCRs with high specificity and affinity
- Balanced CD3 binders for optimal T cell engagement
- Bispecific T cell engager format with long half-life



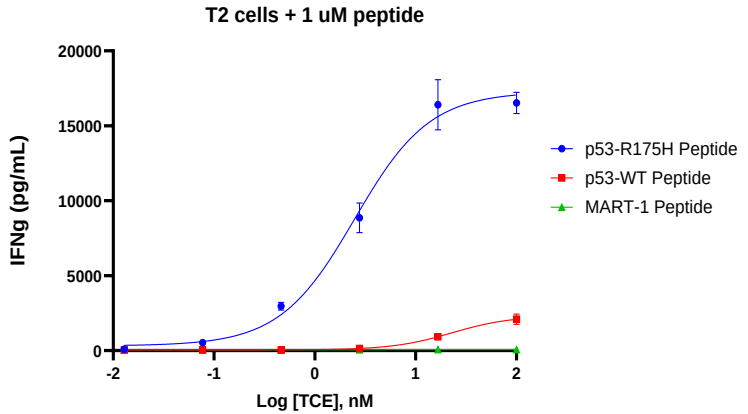
affini T

A2 TP53 R175H **TETHER** TCEs Showed Robust & Specific Tumor Killing & T Cell Activation *In Vitro*

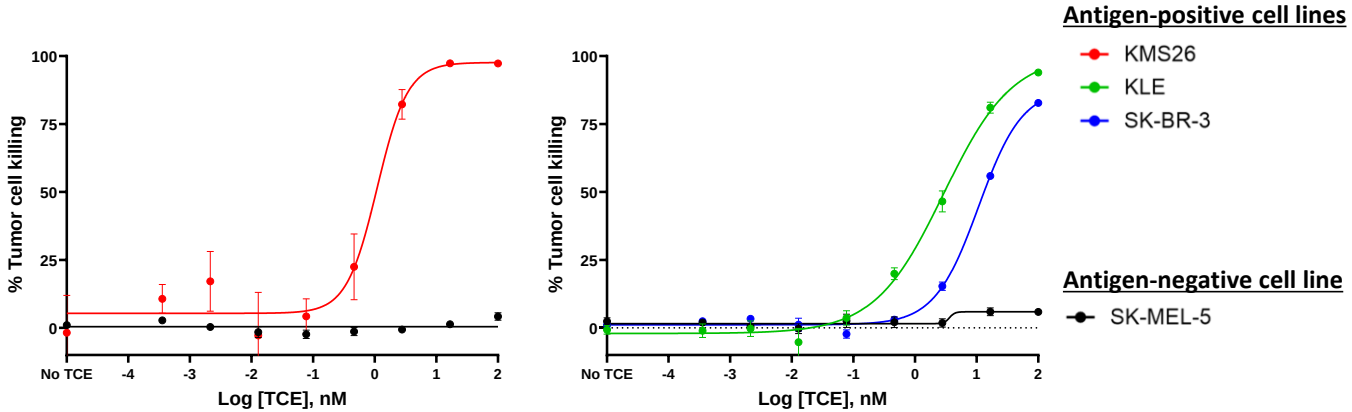
Specific binding



Robust activation

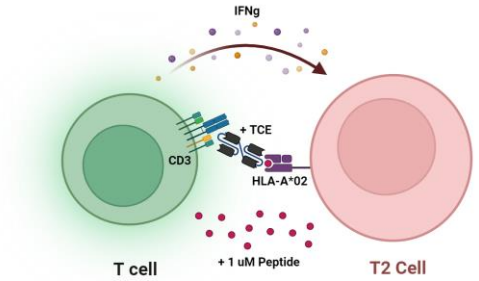


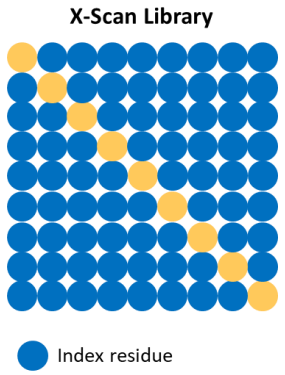
Potent and specific tumor cell killing

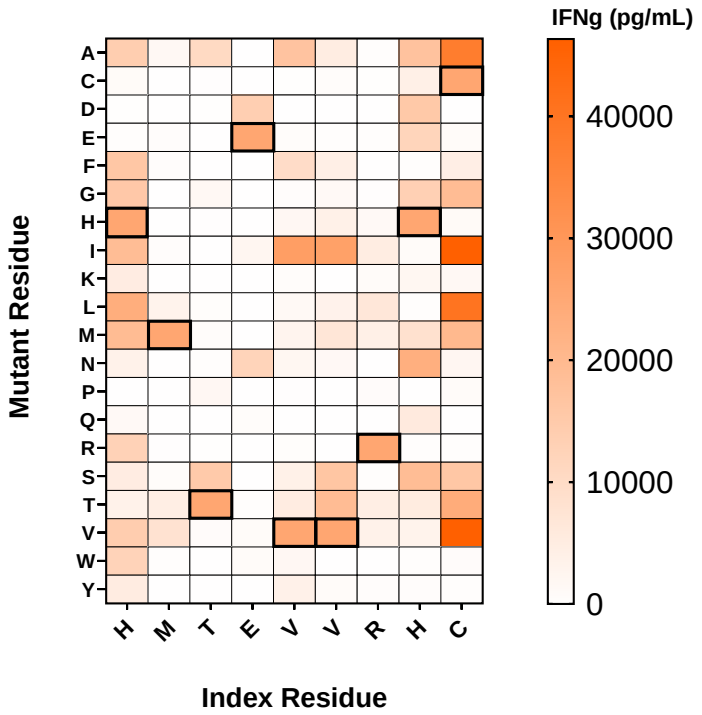


Preliminary Data for A2 TP53 R175H TCE Suggested Favorable Tolerability & Specificity Profiles

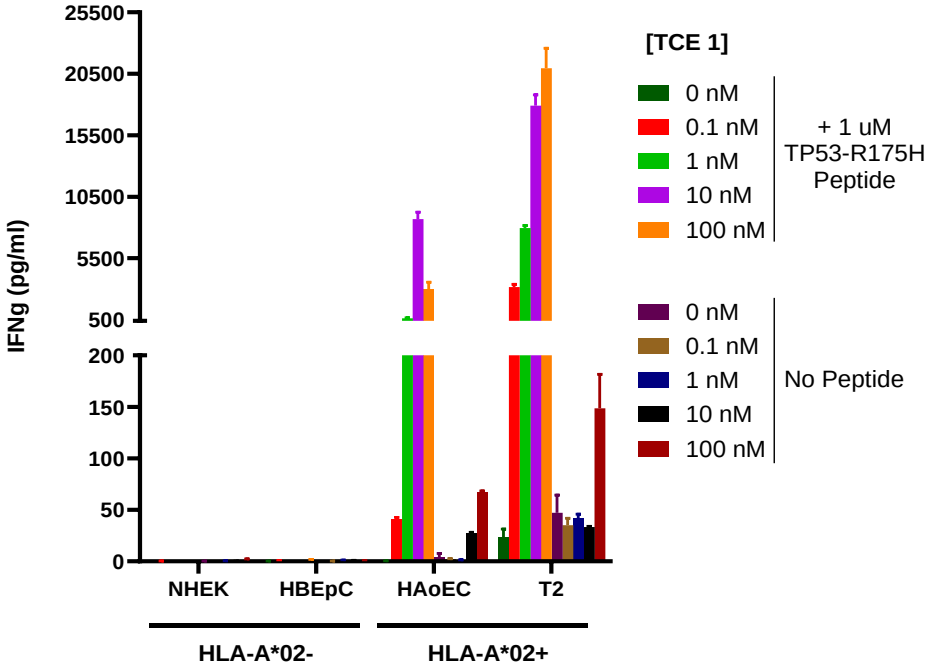
X-scan off-target binding profile







Did not mediate activation toward select normal tissues



Normal Tissue	HLA-A Alleles
Normal Human Epidermal Keratinocytes (NHEK)	A*11:01
Human Bronchial Epithelial Cells (HBEpC)	A*11:01
Human Aortic Endothelial Cells (HAoEC)	A*02:01/A*11:01
T2 Cells (Positive Control)	A*02:01

Experienced Management Team Supported by Blue-Chip Investor Syndicate

Executive Leadership

Jak Knowles, MD
Co-Founder and CEO

Kathy Bergsteinsson, MBA
Chief Financial Officer

Morgan Stanley

Dirk Nagorsen, MD
Chief Medical Officer

AMGEN
micromet

Kim Nguyen, PhD
Chief Technical Officer

PRECISION BIOSCIENCES
vitalant
TERUMO

Loïc Vincent, PhD
Chief Scientific Officer

Takeda
sanofi
adaptate

Kathy Yi, MBA
Chief Operating Officer

cerevel
Sangamo
NOVARTIS

Board of Directors

Jak Knowles, MD
Affini-T Therapeutics

Helen S. Kim, MBA
Vida Ventures

Lucio Iannone, PhD
Leaps by Bayer

SILENCE THERAPEUTICS

Mike Varney, PhD
Erasca

Genentech
Agouron
Pfizer

Dan Faga
AnaptysBio

Spark
MIRATI
AnaptysBio

Jill DeSimone
Independent

MERCK
teva
Bristol Myers Squibb

Investors

VIDA ventures
humboldt
InnoPinnacle
AGENT CAPITAL
leaps
PARKER INSTITUTE FOR CANCER IMMUNOTHERAPY
CATALIO CAPITAL MANAGEMENT
ERASCA Ventures
ALEXANDRIA.

Exceptional Scientific Co-Founders, SAB, and Strategic Partners

Co-Founders

Phil Greenberg, MD
Scientific Co-Founder

Aude Chapuis, MD
Scientific Co-Founder

Tom Schmitt, PhD
Scientific Co-Founder

Chris Klebanoff, MD
Scientific Co-Founder

Scientific Advisors

Jim Allison, PhD

Pam Sharma, MD

Strategic Partners

Fred Hutch Cancer Center

Memorial Sloan Kettering Cancer Center

elevatebio

Metagenomi

ADIMAB

Upcoming Catalysts

AFNT-211
A11 KRAS G12V

- Phase 1a data generation ongoing in 2L+ solid tumor indications
- Completion of dose escalation anticipated 2H25

AFNT-212
A11 KRAS G12D

- IND enabling studies complete
- IND clearance anticipated 2025
- THRIVE™ non-viral gene-edited FiH

AFNT-313
A2 P53 R175H

- IND enabling studies underway
- Pre-IND feedback anticipated 2025
- 2026 IND

Precision Immunotherapy targeting oncogenic driver mutations to develop potentially curative therapies for patients with solid tumors

* All future catalysts and milestones planned but not guaranteed

affini™