SPEAR-heading THE CANCER REVOLUTION

Corporate Deck
June 2021

Adaptimmune
TRANSFORMING T CELL THERAPY

Disclaimer

This presentation contains “forward-looking statements,” as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may be identified by words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect” and other words of similar meaning. These forward-looking statements involve certain risks and uncertainties. Such risks and uncertainties could cause our actual results to differ materially from those indicated by such forward-looking statements, and include, without limitation: the success, cost and timing of our product development activities and clinical trials; our ability to submit an IND and successfully advance our technology platform to improve the safety and effectiveness of our existing TCR therapeutic candidates; the rate and degree of market acceptance of T-cell therapy generally and of our TCR therapeutic candidates; government regulation and approval, including, but not limited to, the expected regulatory approval timelines for TCR therapeutic candidates; and our ability to protect our proprietary technology and enforce our intellectual property rights; amongst others. For a further description of the risks and uncertainties that could cause our actual results to differ materially from those expressed in these forward-looking statements, as well as risks relating to our business in general, we refer you to our Annual Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 6, 2021 and our other SEC filings.

We urge you to consider these factors carefully in evaluating the forward-looking statements herein and you are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement. The forward-looking statements contained in this presentation speak only as of the date the statements were made and we do not undertake any obligation to update such forward-looking statements to reflect subsequent events or circumstances.

We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.

Our vision and mission – Arming cell therapies to target solid tumors

Arming Cells.
Against Cancer.
For Good.

To transform the lives of people with cancer by designing and delivering cell therapies

Our 5-year core value drivers

5-year core value drivers: our "2-2-5-2" plan

Two
marketed SPEAR T-cell products targeting MAGE-A4

- Synovial sarcoma and MRCLS
- Esophageal and EGJ cancers

Two
additional BLAs for SPEAR T-cell products

- Additional indications for MAGE-A4 targeted products
- ADP-A2AFP

Five
autologous products in the clinic

- HiT
- Next-gen TILs
- New targets
- Broader HLA coverage

Two
allogeneic products entering the clinic

- SPEAR T-cell product targeting MAGE-A4
- HiT mesothelin – partnered with Astellas

Integrated Cell Therapy Capabilities
Research | Preclinical | Translational | Clinical | CMC | Regulatory | Commercial

EGJ: esophagogastric junction cancer; HiT: HLA-independent T-cell receptor (TCR); TIL: tumor infiltrating lymphocyte; CMC: chemistry, manufacturing, and controls

A strong autologous clinical pipeline in multiple clinical trials in 10 solid tumors

Goal to launch first TCR T-cell therapy in 2022

Program	Therapy	Phase 1	Phase 2/3	
MAGE-A4	**afamitresgene autoleucel** **"afami-cel"** **formerly ADP-A2M4** **ADP-A2M4CD8**	**Phase 1 trial** Multiple tumors* **Radiation sub-study** Multiple tumors** **SURPASS** Focus on lung, gastroesophageal, head and neck, and bladder cancers	**SPEARHEAD-1** Synovial sarcoma, MRCLS **SPEARHEAD-2** Head and neck Combo with pembro. **SURPASS-2** Esophageal and EGJ cancers	*Enrollment complete* *BLA planned for 2022**** *Initiating in 2021*
AFP	**ADP-A2AFP**	**Phase 1 trial** Hepatocellular carcinoma		

* Bladder, Melanoma, Head and Neck, Ovarian, Non-small cell lung cancer (NSCLC), Esophageal, Gastric, Synovial sarcoma, MRCLS
** Site specific protocol amendment with MD Anderson Cancer Center
***Planned for synovial sarcoma
MRCLS: myxoid/round cell liposarcoma; EGJ: esophagogastric junction cancers

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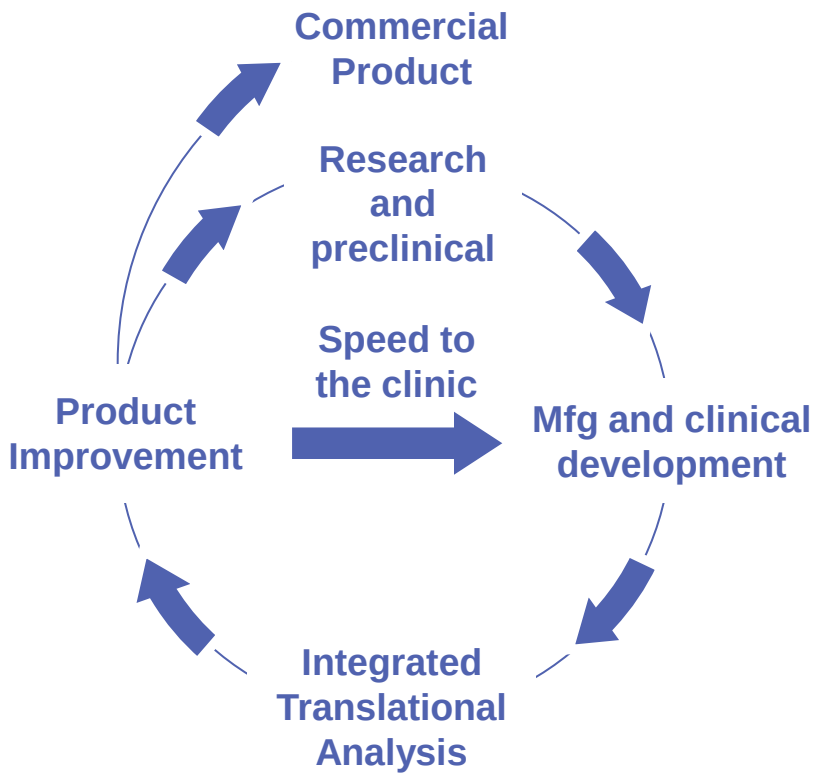
Strong pipeline to deliver five products to the clinic by 2025

Aiming for curative and mainstream therapies

Platform	Product	Discovery	Preclinical
Autologous SPEAR T-cells	ADP-A2AFP+CD8 next-gen		
	MAGE-A4 next-gen approaches (IL-7, IL-15, dnTGFbeta, PDE7)		
	IL-7/CCL19 Noile-Immune Biotech		
	Undisclosed ALPINEImmuneSciences		
	HLA-A1 MAGE-A4		
	HLA-A24 MAGE-A4		
	HLA-A24 AFP		
	PRAME gsk		
TILs	TIL IL-7		
HiTs	HiT targets (e.g., GPC3)		
Allogeneic	HiT mesothelin astellas		
	Allogeneic T-cells targeting MAGE-A4		

HiT: HLA-independent T-cell receptor (TCR); TIL: tumor infiltrating lymphocyte

Integrated capabilities delivering value across the pipeline



Examples of value creation

- SPEARHEAD-1 enrollment completed in ~12 months
- ADP-A2M4CD8 IND to registration directed trial ~2 years
- Security of vector supply and >90% reduction in costs
- Manufacturing innovation drives ~40% reduction in SPEAR T-cell therapy COGs

Integrated Cell Therapy Capabilities

Research | Preclinical | Translational | Clinical | CMC | Regulatory | Commercial

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Planned data updates and catalysts for 2021 and 2022

Funded into 2023

2021

- ✓ SPEARHEAD-1 preliminary data at ASCO
- Initiate SURPASS-2 trial with ADP-A2M4CD8 in esophageal and EGJ cancers
- SURPASS data update at ESMO
- ADP-A2AFP Phase 1 trial data update at ILCA
- Radiation sub-study data update*
- Update on additional translational data at SITC
- SPEARHEAD-1 full data update at CTOS

2022

- File BLA and planned launch of afami-cel for people with synovial sarcoma and MRCLS
- Preclinical pipeline program data updates
- Allogeneic platform update
- SPEARHEAD-2 initial clinical data
- SURPASS-2 initial clinical data
- First trial with ADP-TILIL7

Two marketed SPEAR T-cell products targeting MAGE-A4

Two additional BLAs for SPEAR T-cell products

Five autologous products in the clinic

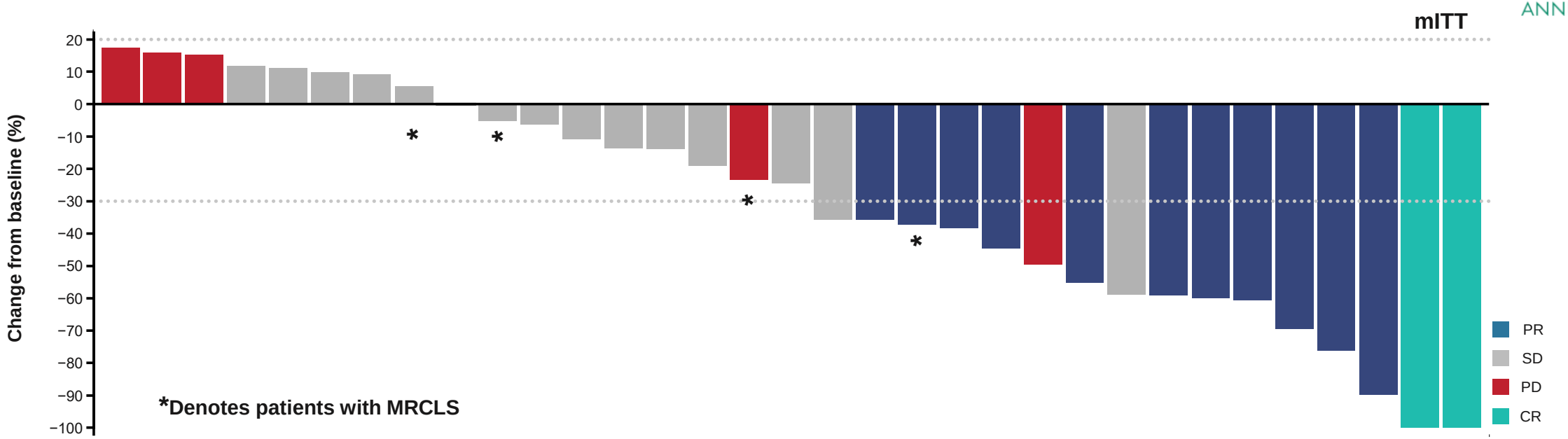
Two allogeneic products entering the clinic

All data updates subject to congress acceptance; EGJ: esophagogastric junction
*Originally planned for ASTRO

Clinical and market potential for SPEAR T-cells targeting MAGE-A4 and AFP

Deep responses observed with afami-cel therapy

Best overall response by RECIST v1.1



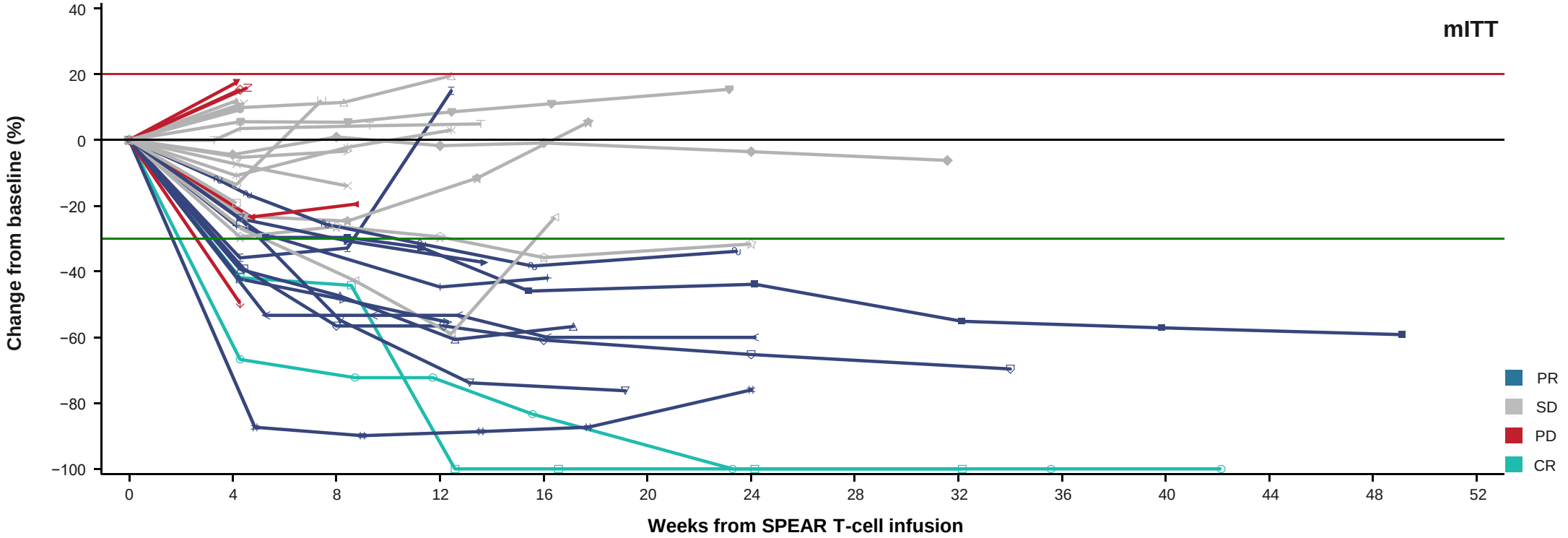
- Overall response rate 39.4% (13/33): synovial sarcoma 41.4% (12/29) and MRCLS 25.0% (1/4)
- Two CRs in patients with synovial sarcoma
- Disease control rate of 84.8% (28/33)

CR = complete response; mITT = modified intent to treat; MRCLS = myxoid/round cell liposarcoma; PD = progressive disease; PR = partial response; SD = stable disease; Data represent percent changes from baseline in sum of diameters (sum of the long diameters for non-nodal lesions and short axis for nodal lesions) in target lesions through progression or prior to surgical resection; Reponses evaluated by RECIST v1.1 per Investigator assessment; Data excludes 4 patients who were pending 1st efficacy assessment as of the data cut-off

Data cut-off March 29, 2021

Initial durability encouraging with afami-cel therapy

Best overall response by RECIST v1.1



- Improvements in sum of diameters over time have been observed
- Median duration of response not reached – range (weeks): 4.3+, 38.0+

2021 ASCO ANNUAL MEETING

CR = complete response; mITT = modified intent to treat; PD = progressive disease; PR = partial response; SD = stable disease; Data represent percent changes from baseline in sum of diameters (sum of the long diameters for non-nodal lesions and short axis for nodal lesions) in target lesions through progression or prior to surgical resection; Reponses evaluated by RECIST v1.1 per Investigator assessment; + Denotes censored ongoing response

Data cut-off March 29, 2021

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There is a large unmet medical need for people with synovial sarcoma

"Initial data from SPEARHEAD-1 indicate that afamicel has the potential to offer people with synovial sarcoma a promising new treatment option where there is currently a great unmet medical need. As clinicians, we want to be able to provide a treatment regimen that can help offer a better quality of life."

-- Dr. Sandra P. D'Angelo of the
Memorial Sloan Kettering Cancer Center

"Amongst the limitations of using chemotherapy to treat synovial sarcoma is the need to always be on a therapy and to deal with the side effects that come from it. Chemo patients are not able to live a normal life. What we're really looking for is a therapy where once it's performed, it's durable and you don't need another one."

-- Dr. Brian Van Tine, Associate Professor of Medicine,
Division of Oncology, Section of Medical Oncology,
Washington University School of Medicine

"After suffering from misdiagnosis or years-long journey to diagnosis, people living with synovial sarcoma struggle with limited, and often ineffective, treatment options. A treatment for synovial sarcoma patients that gives them more options, a better prognosis, and a better quality of life is long overdue."

-- Brandi Felser, CEO, Sarcoma Foundation of America

SPEARHEAD-1 data will be used to support marketing application next year for afami-cel

First milestone in our 2-2-5-2 strategic plan

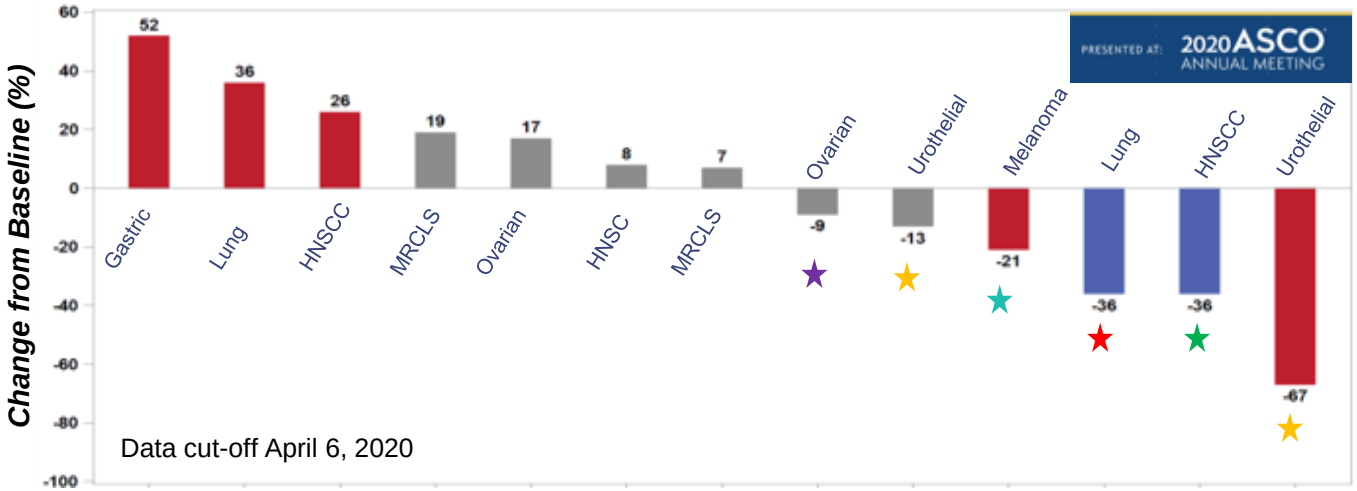
- Afami-cel response rates compare favorably to available 2nd line therapies*
- SPEARHEAD-1 is ongoing
  - Cohort 1 (n=45) enrollment and treatment is complete, and Cohort 2 (n=45) is currently recruiting
  - The primary evidence supporting marketing applications will be based on Cohort 1
- BLA filing on track for 2022 for people with synovial sarcoma and MRCLS
- Planning for successful marketing applications and regulatory agency interactions

*Pollack S, et al. Cancer Medicine. 2020;9:4593–4602; Seto T, et al Med. Sci. 2019, 7, 48; van der Graaf WT, et al. 2012, Lancet, 379(9829), 1879-1886

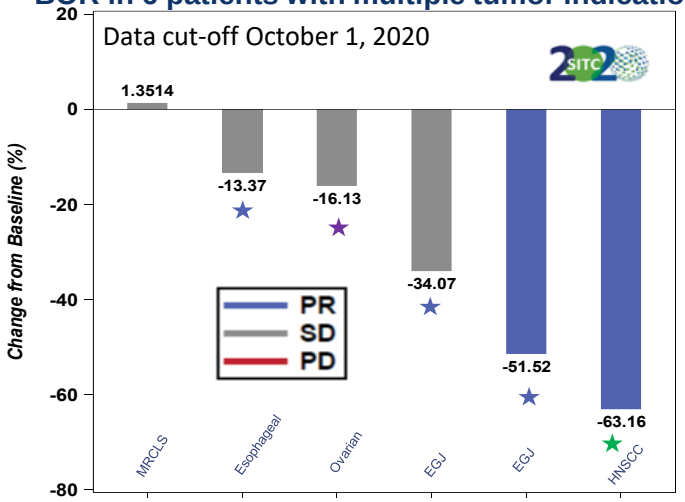
The power of SPEAR T-cells targeting MAGE-A4 in multiple tumor types

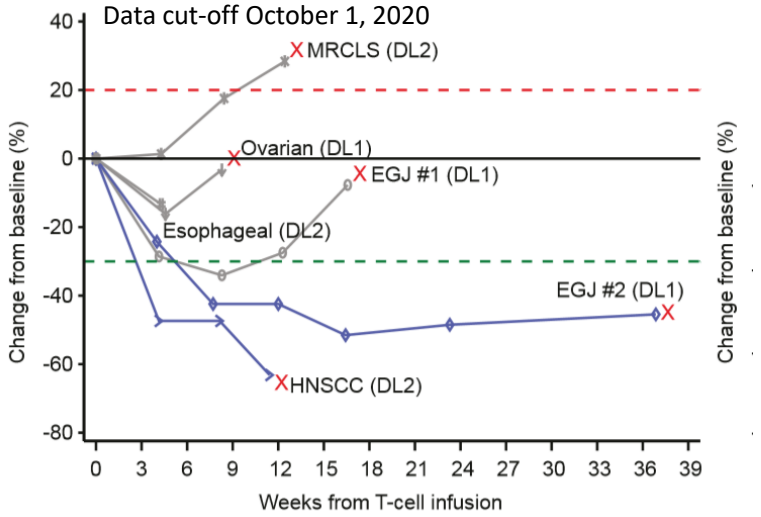
The basis for new Phase 2 trials and future BLAs

Afamitresgene autoleucel Phase 1 trial best overall response (BOR) in 13 patients with multiple tumor indications*



ADP-A2M4CD8 SURPASS Trial
BOR in 6 patients with multiple tumor indications





Confirmed PRs:

- ★ ***Esophagogastric Junction (EGJ)***
- ★ ***Head and Neck***
- ★ ***Lung***

Other reductions in tumor size:

- ★ ***Esophageal***
- ★ ***Urothelial (Bladder)***
- ★ ***Ovarian***
- ★ ***Melanoma***

*Cohort 3 and Expansion; PR, partial response; SD, stable disease; PD, progressive disease
Data represent percent changes from Baseline in sum of diameters in target lesions through progression or prior to surgical resection;
Sum of diameters = sum of the long diameters for non-nodal lesions and short axis for nodal lesions; Reponses evaluated by RECIST v1.1

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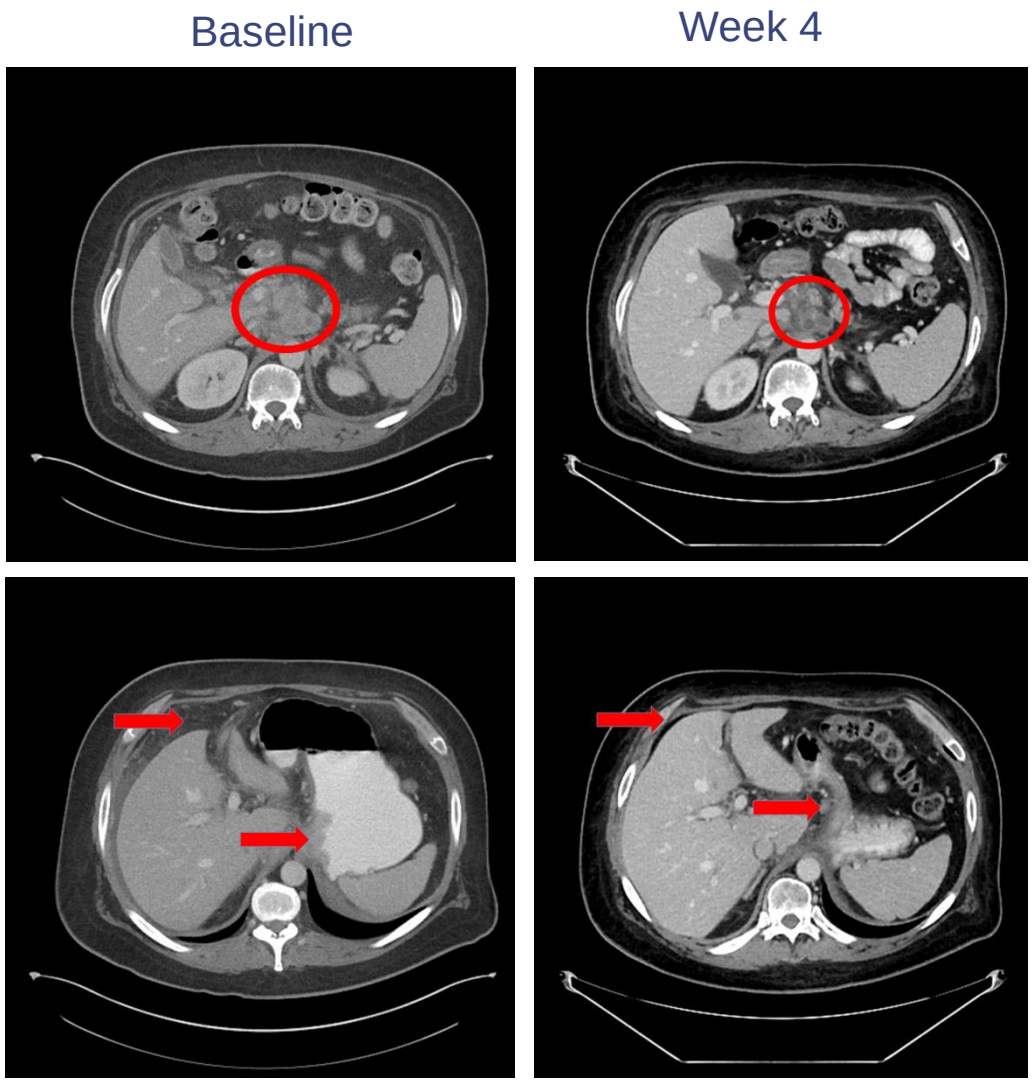
Marked improvement in a patient with EGJ cancer treated with ADP-A2M4CD8

Single dose of 1.2 billion transduced cells with over 9 months until progression



31-yr-old male with Stage IV EGJ cancer, HER2^{neg}
Diagnosed July 2018

PRIOR THERAPY

Chemotherapy (2018-2019)	– FLOT – Atezo with BL-8040 – FOLFIRI – Ramucirumab and paclitaxel (bridging)
Radiation	– 30 Gy to abdomen/retroperitoneal lymph node

ADP-A2M4CD8

High MAGE-A4 expression (100% 3+)

1.2 billion SPEAR T-cells: 30-Oct-2019

Typical adverse events

RESPONSE

Partial Response with 51.52% reduction in target lesions

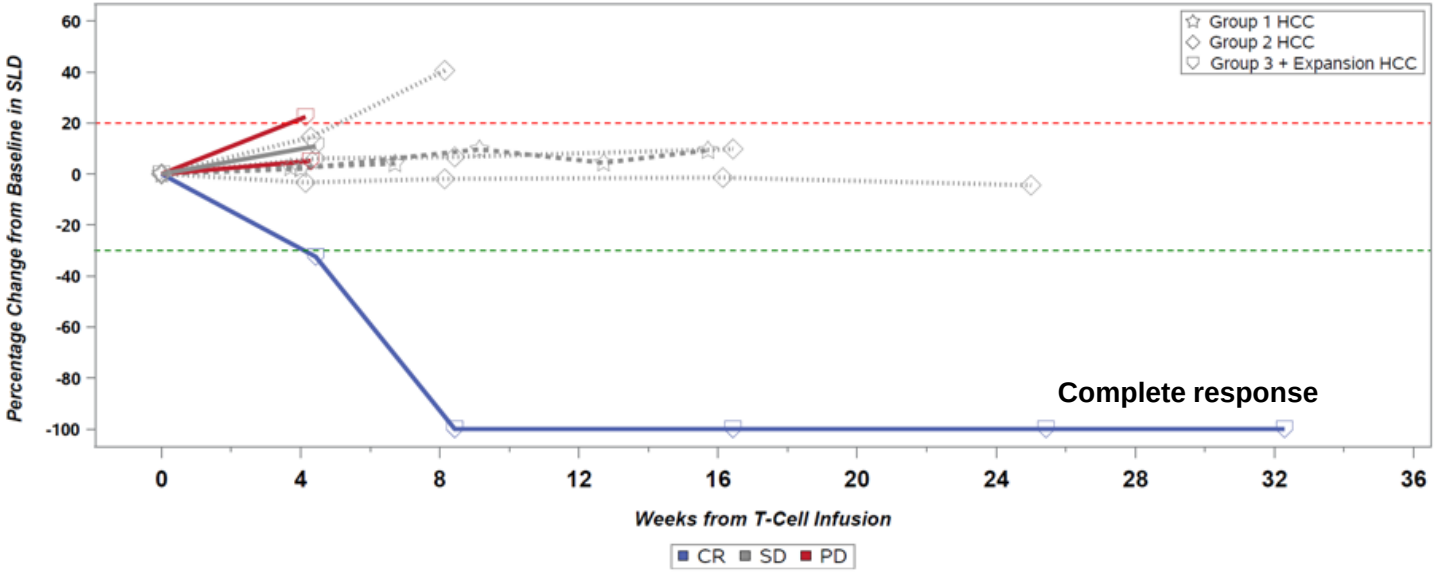
Marked symptomatic improvement - reduced narcotic requirement for pain, resolution of ascites, general well-being

Disease progression ~8.5 months after receiving SPEAR T-cells

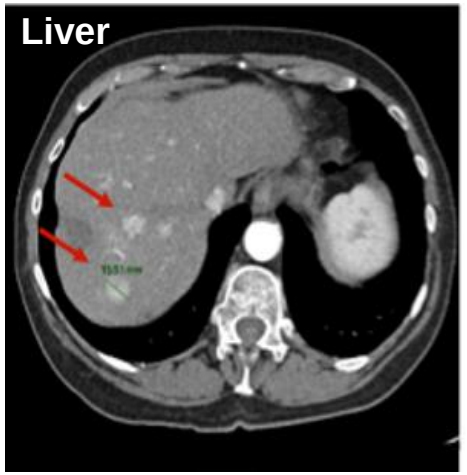
Data cut-off October 1, 2020, scan data updated at noted weeks; EGJ: esophagogastric junction cancer

Complete response in the Phase 1 trial demonstrates potential of ADP-A2AFP

Trial ongoing in expansion phase



Baseline



Post-treatment

Best overall response	Group 1 (n=2)	Group 2 (n=3)	Group 3 and expansion (n=4)
Complete response	0	0	1 (25%)
Stable disease	2 (100%)	3 (100%)	1 (25%)
Progressive disease	0	0	2 (50%)

EASL
THE DIGITAL INTERNATIONAL LIVER CONGRESS
27–29 August 2020
www.ilc-congress.eu

Data cut-off July 6, 2020

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Large market opportunity potential with SPEAR T-cells targeting MAGE-A4

When considering all indications in our trials there is a large potential patient population eligible for treatment

Indication	Mortality US and EU*	MAGE-A4 Expression **	Potential MAGE-A4 +ve Patients	Potential MAGE-A4 +ve Patients Factored for HLA***
Synovial sarcoma	1,804+	67 %	1,209	496
Myxoid/round cell liposarcoma	2,000	34 %	680	279
Gastroesophageal (esophageal, EGJ, and gastric)	101,080	17 %	17,184	7,045
Head and neck	44,500	18 %	8,010	3,284
Urothelial	53,180	33 %	17,549	7,195
NSCLC (squamous)	101,661	38 %	38,631	15,839
Melanoma	19,750	16 %	3,160	1,296
Ovarian	38,840	22 %	8,545	3,503
			Total MAGE-A4: 94,968	**Total MAGE-A4 HLA-A*02: 38,937**

*Mortality figures based on American Cancer Society 2020 (US) and Global Can (EU); +Synovial sarcoma and MRCLS figures reflect advanced/refractory treatable patients based on internal primary market research

**MAGE-A4 expression based on ADAP samples and expression cut-off criteria of ≥30% tumor cells at ≥2+ intensity

***HLA-A*02 expression of 41% based on ADAP samples (1,043 patient samples)

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Strong pipeline to deliver five products into the clinic by 2025

Strong pipeline to deliver five products to enter the clinic by 2025

Aiming for curative and mainstream therapies

- Insights from translational sciences
- Next-generation products
- Next-generation Tumor Infiltrating Lymphocytes (TILs)
- TCRs to alternative pHLA
- HLA-independent TCR (HiT) platform

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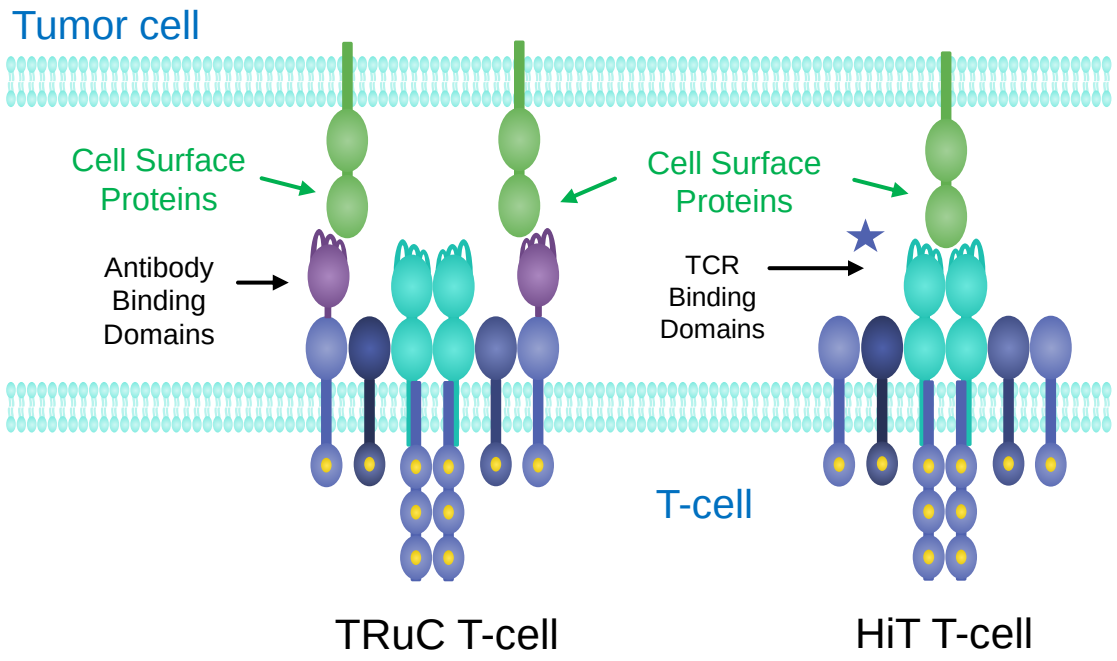
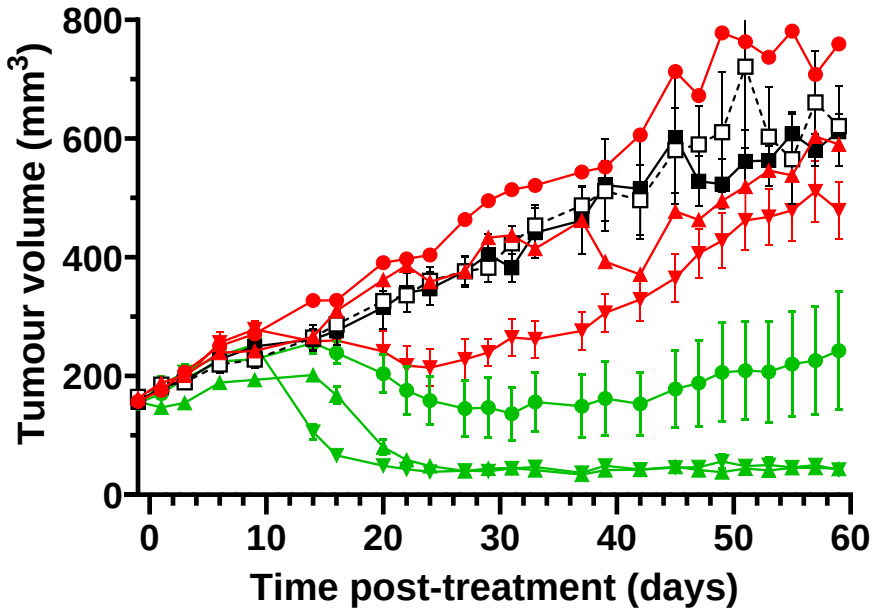
HiT induces strong, dose-dependent and persistent tumor regression *in vivo*

HiT outperformed TRuC in a mouse tumor model





untreated
Non-transduced T-cells
Control

0.3 x10^6 T cells
1 x10^6 T cells
3 x10^6 T cells
TRuC
HiT

Mean ± SEM, n = 6–8 per group

HiT, HLA-independent TCR; HLA, human leukocyte antigen; TRuC, TCR fusion constructs; All T-cells manufactured with Adaptimmune proprietary technology

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Enhancing SPEAR T-cells to improve patient response, survival, and quality of life

Next-generation products

Promote immunological memory

Improve T-cell function, proliferation and survival

Overcome tumor resistance mechanisms

Next-Generation Products

Improve T-cell homing and tumor penetration

Evoke a wider immune response

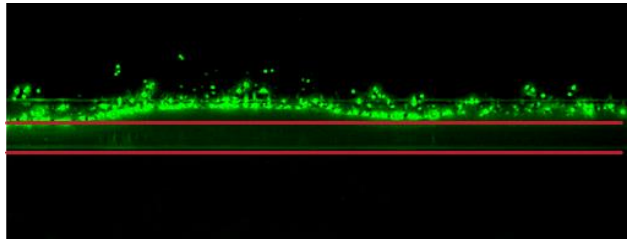
Toolbox of next-gen constructs developed

- CD8α (SURPASS trial)
- IL7
- PDE-7
- dnTGFbeta
- IL15
- IL7 + CCL19
- Undisclosed

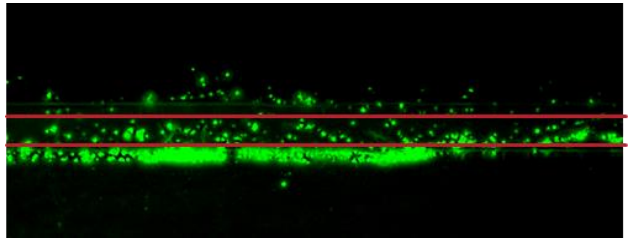
Noile-Immune Biotech

ALPINEImmuneSciences

- CCL19



+ CCL19



Migration of SPEAR T-cells induced by CCL19

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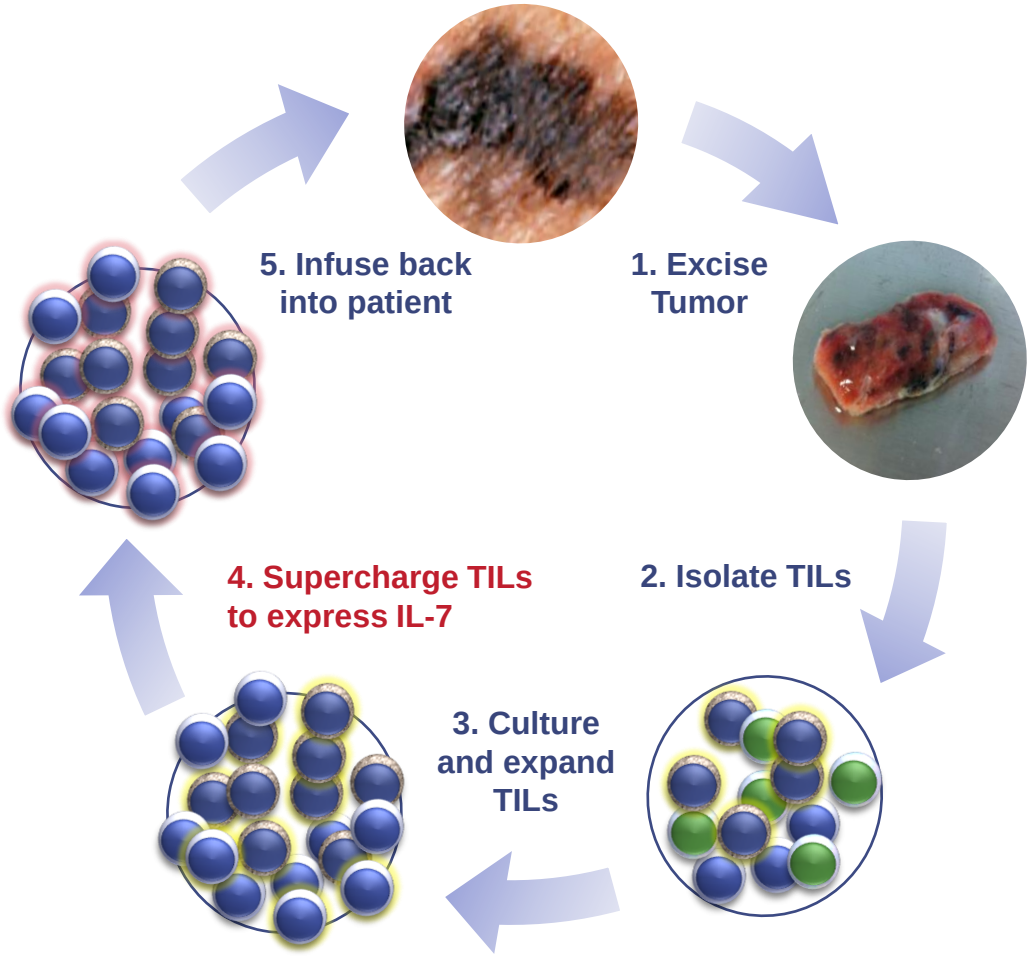
Working with CCIT to develop next-generation ‘supercharged’ TILs co-expressing IL-7

The future of melanoma treatment?



Partnership with leading TIL therapy center (CCIT, Denmark) led by Inge-Marie Svane

- Tumor Infiltrating Lymphocytes (TILs) therapy is efficacious in solid tumors, including melanoma
- Aim to transform patient responses with a next-generation TIL product
  - TIL-IL7 product progressing to the clinic
- Builds on our strengths in TCR discovery, next-generation product development and manufacturing
- Broad market potential

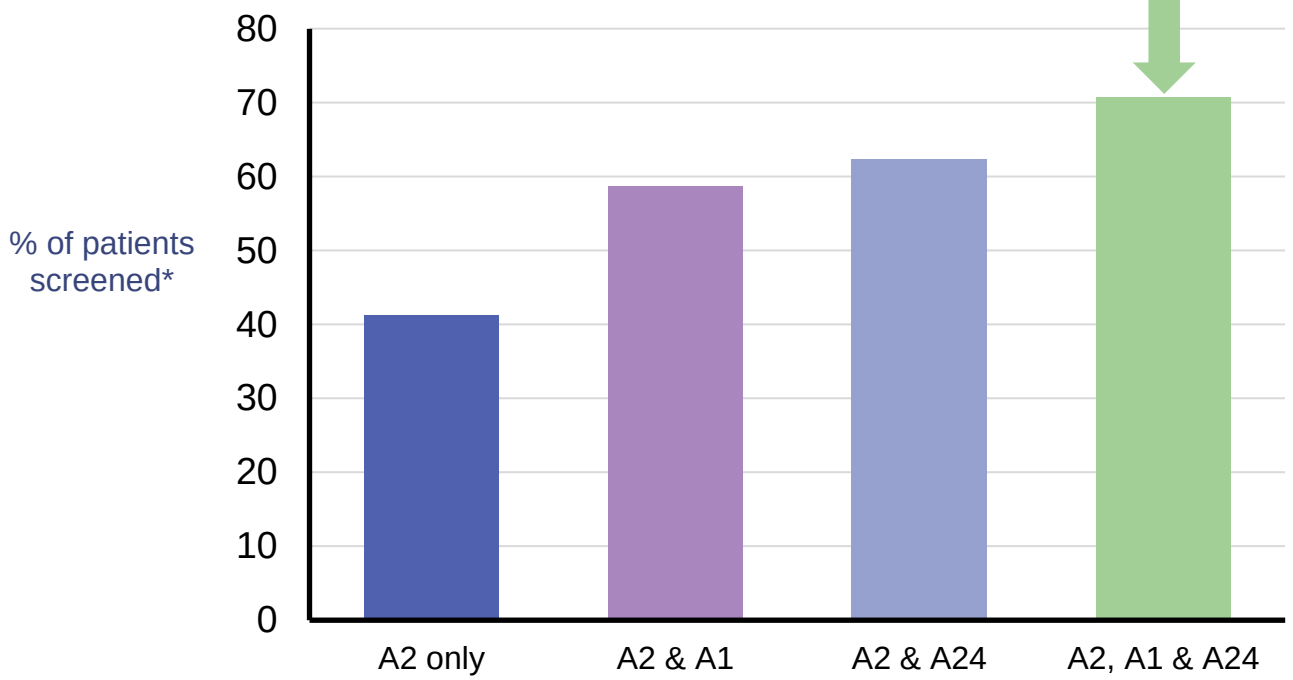
Increase treatable patient population with products targeting additional HLA types

Towards mainstream therapy

Single HLA allele frequency in patients

MAGE-A4	• **HLA-A*02**	**41%**
	• HLA-A*01	**25%**
	• HLA-A*24	**26%**
AFP	• **HLA-A*02**	**41%**
	• HLA-A*24	**26%**

> 70% patients treatable with products targeting HLA-A*02, *01 and *24



*HLA data taken from first 1,043 patients screened in our trials

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Our allogeneic platform: towards mainstream cell therapy

Gene edited stem cells provide a flexible platform while minimizing batch to batch variation

Potential to build a broad family of future products across multiple cell types

Stem cells

- Single donor - cord blood
- High proliferative potential
- **Reproducible** starting material

Gene Editing

- Overcomes lentivector capacity limit
- **Flexibility** to add multiple next-gens

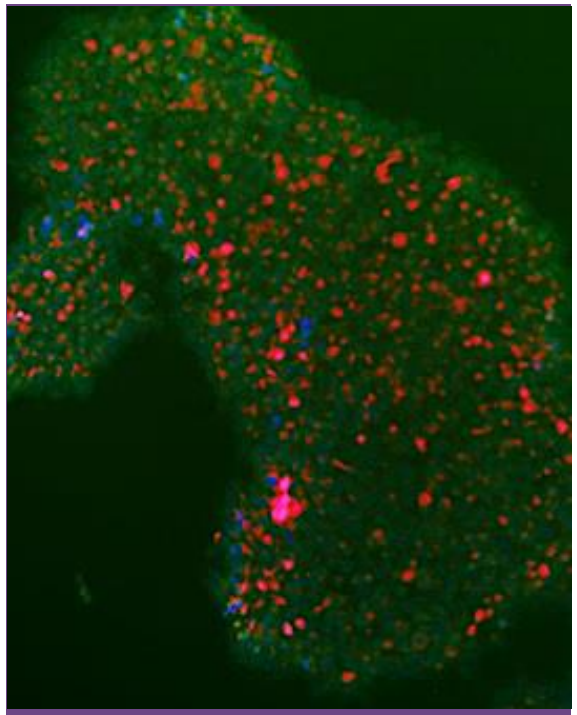
GMP

- Single cell line for characterization
- Defined media composition
- **No serum or feeder lines**

Greater Control

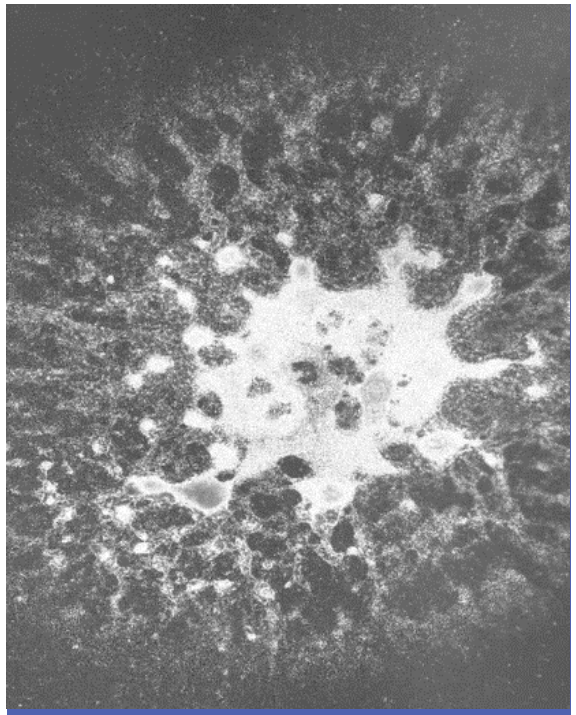
Differentiation process mimics early T-cell development in a dish

Hematopoietic organoids generate T-cell progenitors that mature to form iT-cells



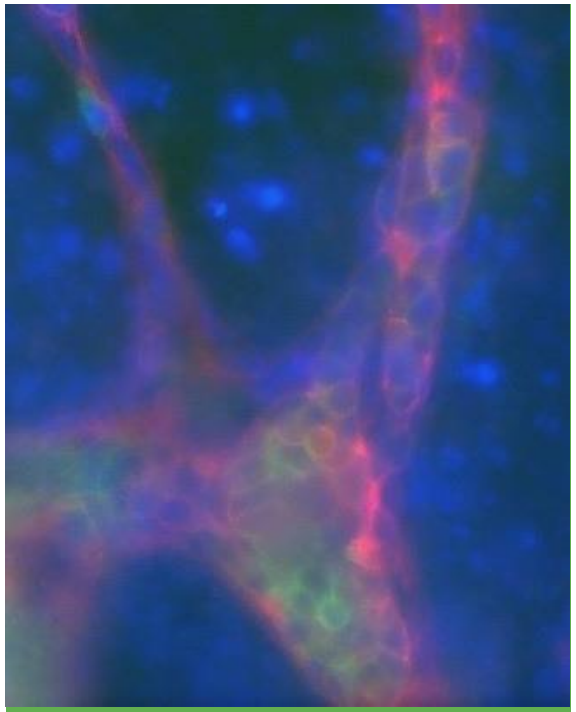
Stem cells (starting material)

Hoescht blue, OCT4 green,TRA160 red



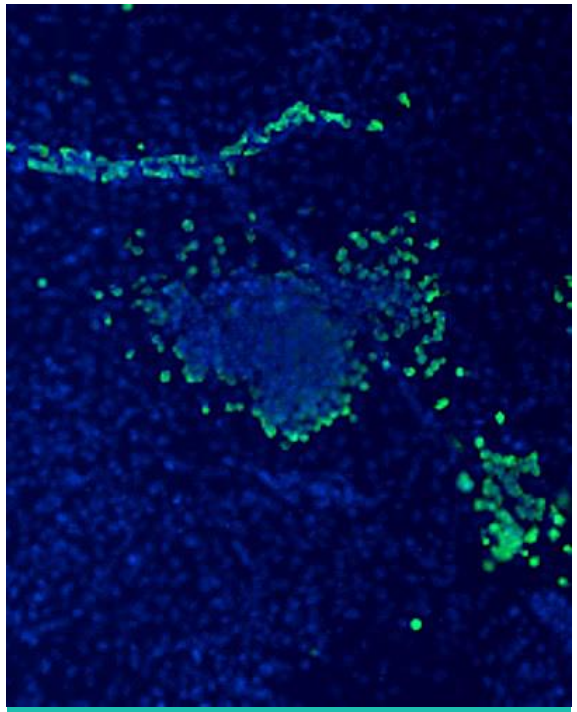
Complex 3D structures self assemble

Brightfield



Hemogenic endothelium forms

Hoescht blue, CD45 green,CD34 red



T-cells form

Hoescht blue, CD3 green

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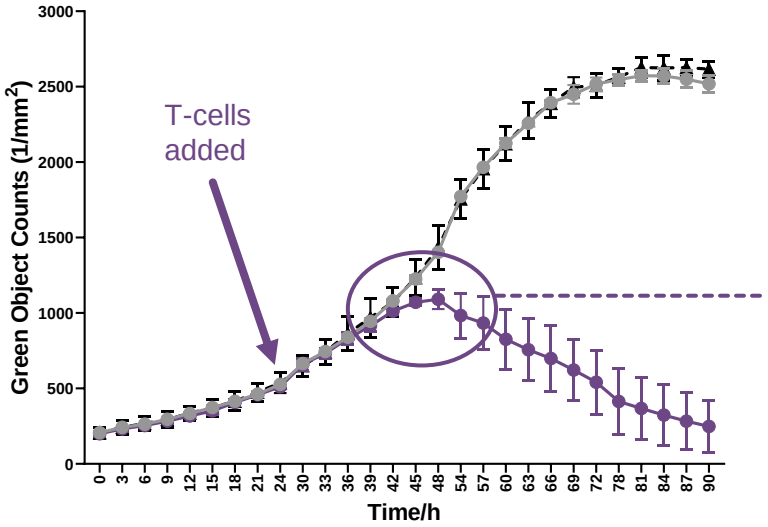
Our allogeneic iT-cells kill MAGE-A4 expressing target cells

Stem cell derived allogeneic iT-cells kill faster than first-generation autologous SPEAR T-cells

Autologous T-cells

transduced with ADP-A2M4 lentivirus

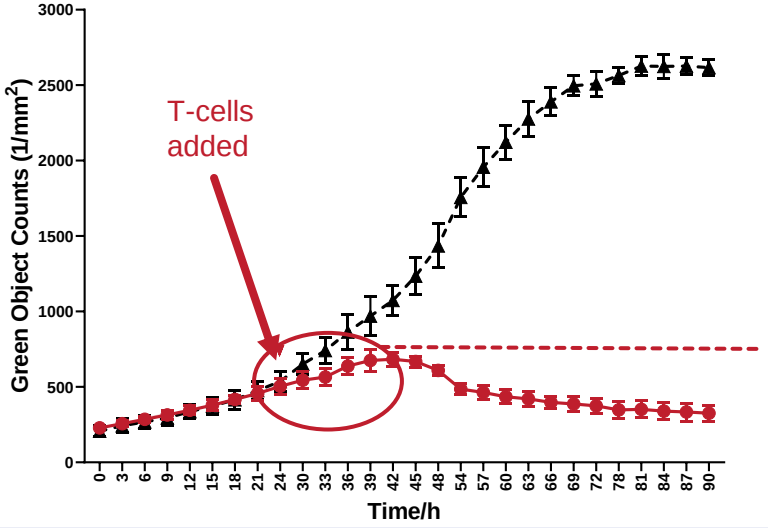


Non-transduced autologous T-cells have no effect on tumor line growth

Autologous ADP-A2M4 SPEAR T-cells kill targets 18-24hr after addition

Allogeneic iT-cells

edited to express the same SPEAR TCR targeting MAGE-A4



Tumor line growth curve (no T-cells added)

Allogeneic iT-cells start killing targets 6-9hr after addition

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Company overview and financials

Leading capabilities for designing and delivering cell therapies

Integrated, internal capabilities are the foundation for long-term value creation

~465 FTEs*

Philadelphia

- Autologous product manufacturing
- Clinical Development
- Commercial
- Corporate

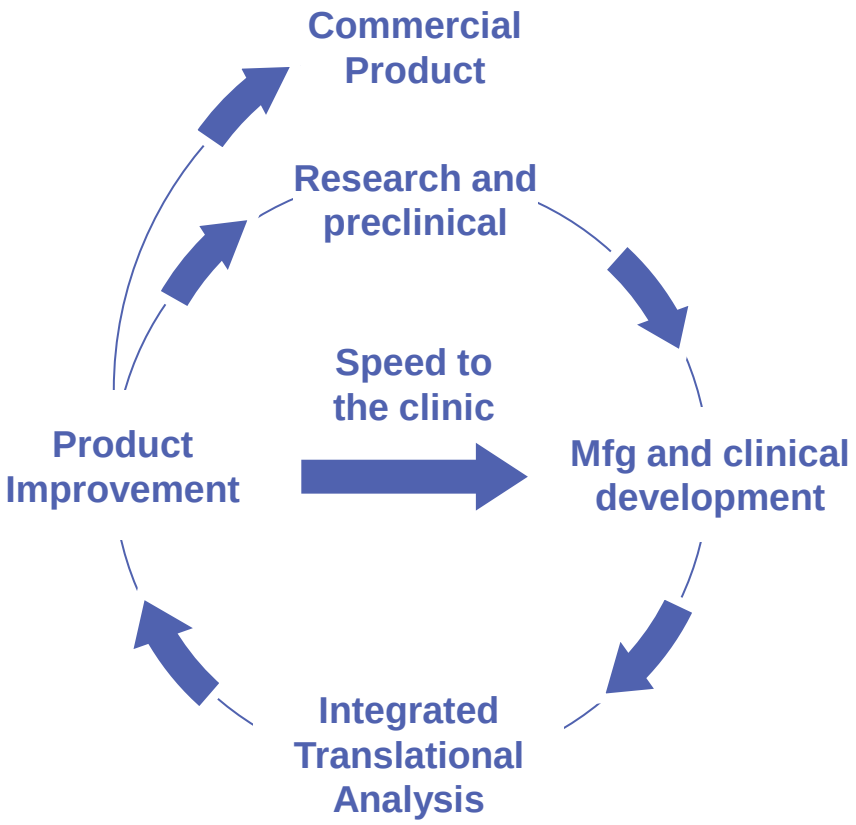
Milton Park

- Pipeline Research
- Allogeneic research
- Process and analytical development
- Corporate

Stevenage

- GMP Lentiviral vector manufacturing

Speed of innovation



* As of May 2021

Cash runway into early 2023

Current total liquidity at end of Q1 2021 was ~**$318M***

Well financed and ready to execute on broad range of opportunities/value drivers

* As of March 31, 2021 - Total Liquidity (a non-GAAP financial measure) is the total of cash and cash equivalents and marketable securities, which is explained and reconciled to the most directly comparable financial measures prepared in accordance with GAAP in our Annual Report on Form 10-Q filed with the SEC on May 6, 2021.

SPEAR-heading THE CANCER REVOLUTION

Corporate Deck
June 2021

Adaptimmune
TRANSFORMING T CELL THERAPY