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

# FORM 6-K

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

June 30, 2022

**Commission File Number: 001-39363**

# IMMATICS N.V.

**Paul-Ehrlich-Straße 15**
**72076 Tübingen, Federal Republic of Germany**
**(Address of principal executive office)**

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 ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ☐

**INFORMATION CONTAINED IN THIS REPORT ON FORM 6-K**

On June 30, 2022, Immatics N.V. (the "Company") made available an updated investor presentation on its website. A copy of the presentation is attached hereto as Exhibit 99.1. The fact that the presentation is being made available and furnished herewith is not an admission as to the materiality of any information contained in the presentation. The information contained in the presentation is being provided as of June 30, 2022 and the Company does not undertake any obligation to update the presentation in the future or to update forward-looking statements to reflect subsequent actual results.

**EXHIBIT INDEX**

| Exhibit No. | Description |
| --- | --- |
| 99.1 | Corporate presentation dated June 2022 |

**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.

Date: June 30, 2022

**IMMATICS N.V.**

By: /s/ Harpreet Singh
Name: Harpreet Singh
Title: Chief Executive Officer

Exhibit 99.1


# Immatics Corporate Presentation

**June 30, 2022**

# Forward-Looking Statements

This presentation ("Presentation") is provided by Immatics N.V. ("Immatics" or the "Company") for informational purposes only. The information contained herein does not purport to be all-inclusive and Immatics nor any of its affiliates nor any of its or their control persons, officers, directors, employees or representatives makes any representation or warranty, express or implied, as to the accuracy, completeness or reliability of the information contained in this Presentation. You should consult your own counsel and tax and financial advisors as to legal and related matters concerning the matters described herein, and, by accepting this presentation, you confirm that you are not relying upon the information contained herein to make any decision.

Forward-Looking Statements. Certain statements in this presentation may be considered forward-looking statements. Forward-looking statements generally relate to future events or the Company's future financial or operating performance. For example, statements concerning timing of data read-outs for product candidates, the clinical trial application for IMA204, IMA301, IMA401, the Company's focus on partnerships to advance its strategy, projections of future cash on hand and other metrics are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may", "should", "expect", "intend", "will", "estimate", "anticipate", "believe", "predict", "potential" or "continue", or the negatives of these terms or variations of them or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable Immatics and its management, are inherently uncertain. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Factors that may cause actual results to differ materially from current expectations include, but are not limited to, various factors beyond management's control including general economic conditions and other risks, uncertainties and factors set forth in the Company's filings with the Securities and Exchange Commission (the "SEC"). Nothing in this presentation should be regarded as a representation by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. Company undertakes no duty to update these forward-looking statements.

No Offer or Solicitation. This communication is for informational purposes only and does not constitute, or form a part of, an offer to sell or the solicitation of an offer to sell or an offer to buy or the solicitation of an offer to buy any securities, and there shall be no sale of securities, in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offer of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended, and otherwise in accordance with applicable law.

Certain information contained in this Presentation relates to or is based on studies, publications, surveys and the Company's own internal estimates and research. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. Finally, while the Company believes its internal research is reliable, such research has not been verified by any independent source. Clinical study results and associated biomarker studies presented within this presentation are by definition prior to completion of the clinical trial and a clinical study report and, are therefore, preliminary in nature and subject to further quality checks including customary source data verification. This meeting and any information communicated at this meeting are strictly confidential and should not be discussed outside your organization.

# Building a Leading TCR Therapeutics Company

**Two Clinical-Stage Modalities**

Pipeline of TCR-T and TCR Bispecific product candidates in clinical & preclinical development

**Clinical PoC for Cell Therapy**

Objective responses across multiple solid tumors in early TCR-T clinical development

**Differentiated Platforms**

Unique technologies to identify true cancer targets and right TCRs

**Therapeutic Opportunity**

Potential for addressing large patient populations with high prevalence targets in solid tumors

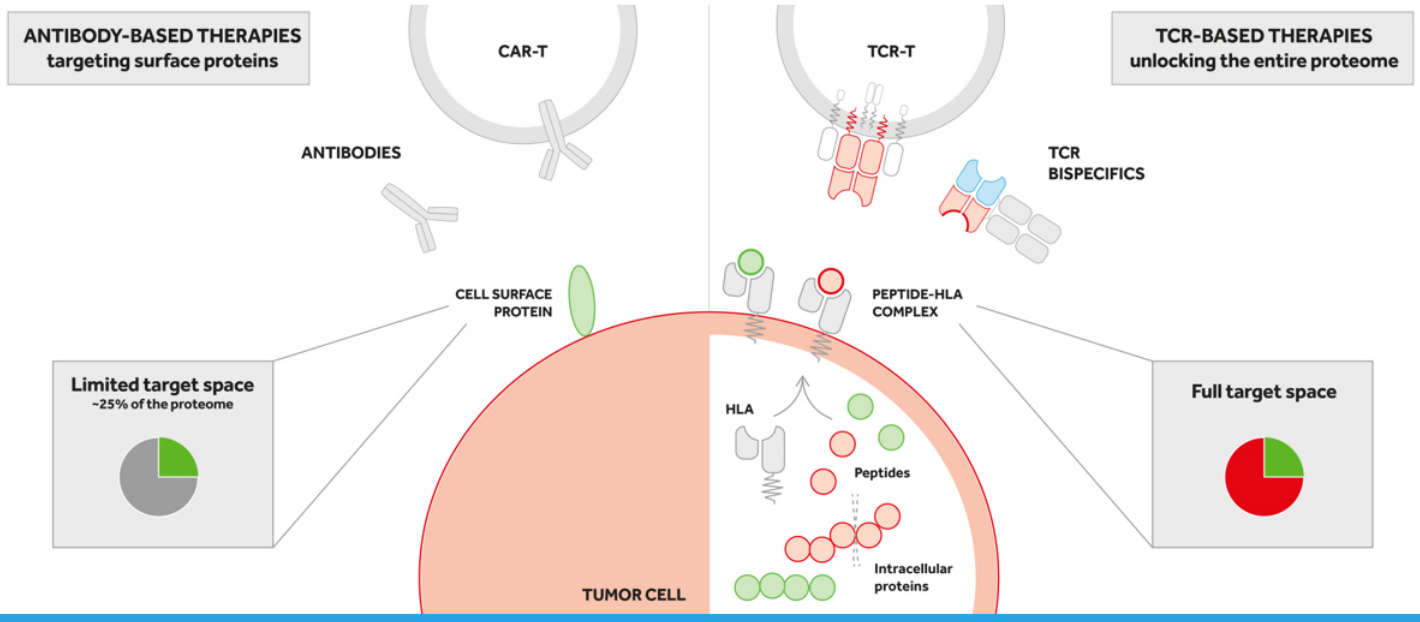
**Strategic Partnerships**

World-leading industry players with synergistic expertise

**Solid Cash Runway**

To reach next value inflections points across our portfolio

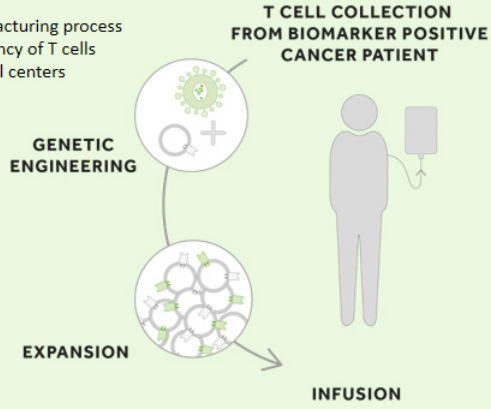
# Our TCR-based Approaches Leverage the Full Target Space beyond the Cancer Cell Surface



# Two Distinct TCR-based Therapeutic Modalities in Clinical Development

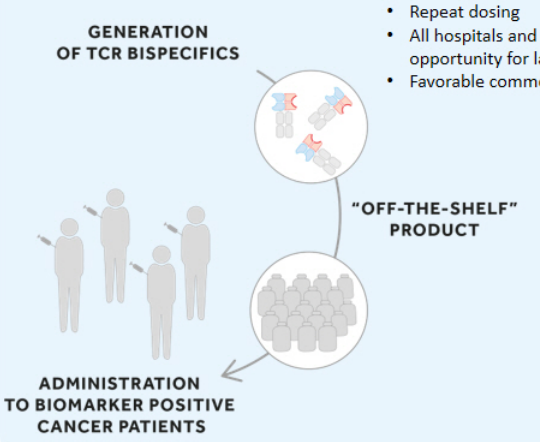
## Autologous TCR-T (ACTengine®)

- Strong clinical activity in patients with high tumor burden[1]
- Single dose[2]
- Proprietary manufacturing process for enhanced potency of T cells
- Specialized medical centers




## TCR Bispecifics (TCER®)

- Off-the-shelf biologic for immediate treatment
- Repeat dosing
- All hospitals and out-patient, opportunity for larger patient reach
- Favorable commercial characteristics

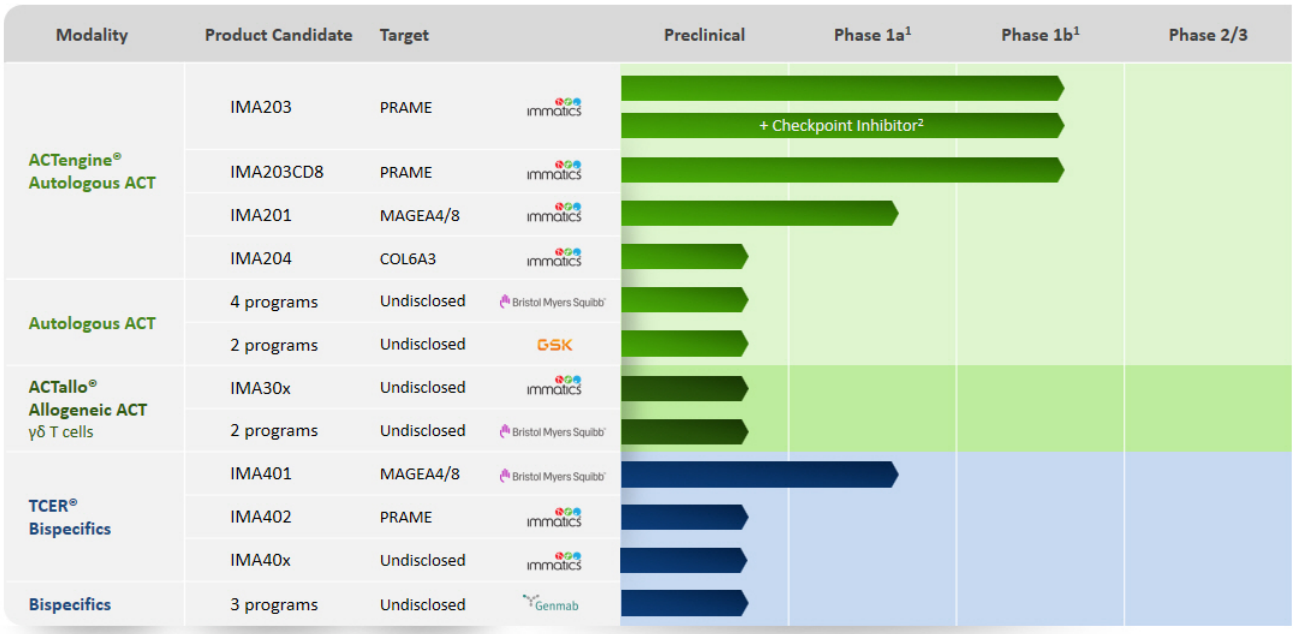



**Differentiated positioning of ACTengine® vs. TCER® based on patient population, medical need and geographical reach**



[1] Interim dose escalation data from the IMA203 Phase 1a trial with an objective response rate of 50% (8/16) across several solid tumor indications; [2] Repeat dosing without re-manufacturing possible

# Our Pipeline of TCR-based Adoptive Cell Therapies and Bispecifics

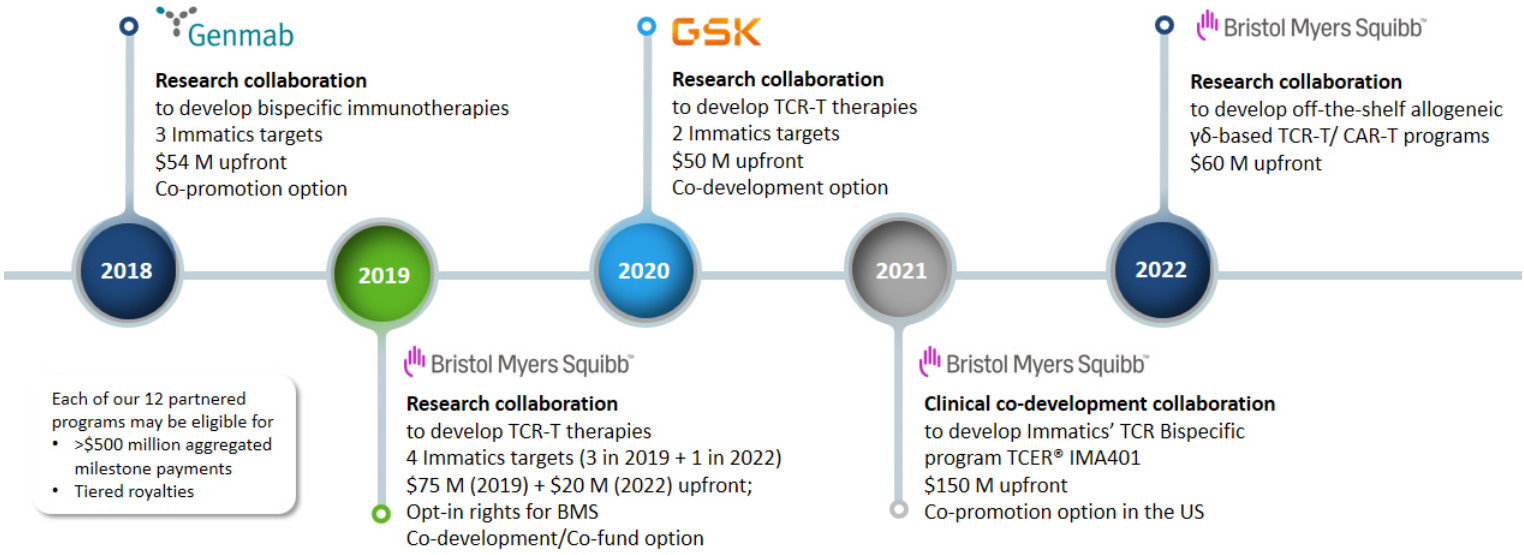





[1] Phase 1a: Dose escalation, Phase 1b: Dose expansion; [2] Opdivo® (nivolumab): programmed death-1 (PD-1) immune checkpoint inhibitor

# Strategic Collaborations

## Synergistic Expertise that Can Foster Transformative Innovations for ACT and Bispecifics




**Broadening the clinical framework beyond our pipeline**

# Immatics and Bristol Myers Squibb – New Allogeneic Multi-program Collaboration

## Leveraging Complementary Technologies & Capabilities for the Benefit of Cancer Patients

**Immatics**

Innovative γδ-derived allogeneic cell therapy platform ACTallo®

State of the art gene editing & manufacturing

Activities for initial 2 BMS programs: Preclinical development

**Off-the-shelf allogeneic TCR-T/CAR-T therapies for patients with solid cancers**

- Initial 2 BMS programs
- Up to 4 additional BMS programs
  (TCRs developed in the context of the autologous TCR-T collaboration[1] might feed into allogeneic TCR-T programs)
- Up to 4 Immatics programs

**Bristol Myers Squibb**

Complementary next-gen technologies to potentiate anti-tumor activity

Expertise in oncology drug development and commercialization

Activities for initial 2 BMS programs: Clinical development and commercialization



[1] Exclusive options to 3 Immatics TCR-T targets in 2019, expansion in 2022 by exclusive option to 1 additional Immatics TCR-T target

# Potential for Large Patient Populations across Multiple Solid Cancers

| | IMA201 / IMA401<br>MAGEA4/8 | IMA203 / IMA402<br>PRAME | IMA204<br>COL6A3 exon 6 |
|---|---|---|---|
| Selected solid cancer indications with significant target prevalence[1] | Sarcoma Subtypes – up to 80%<br>Squamous NSCLC – 50%<br>HNSCC – 35%<br>Bladder Carcinoma – 30%<br>Esophageal Carcinoma – 25%<br>Uterine Carcinosarcoma – 25%<br>Ovarian Carcinoma – 20%<br>Melanoma – 20% | Uterine Carcinoma – 100%<br>Sarcoma Subtypes – up to 100%<br>Melanoma – 95%<br>Uveal Melanoma – 80%[2]<br>Ovarian Carcinoma – 80%<br>Squamous NSCLC – 65%<br>Kidney Carcinoma – up to 45%<br>Cholangiocarcinoma – 35%<br>Adeno NSCLC – 25%<br>Breast Carcinoma– 25%<br>HNSCC – 25%<br>Esophageal Carcinoma – 20%<br>HCC – 20%<br>Bladder Carcinoma – 20% | Pancreatic Carcinoma – 80%<br>Breast Carcinoma – 75%<br>Stomach Carcinoma – 65%<br>Sarcoma – 65%<br>Esophageal Carcinoma – 60%<br>Squamous NSCLC– 55%<br>Adeno NSCLC– 55%<br>HNSCC – 55%<br>Uterine Carcinosarcoma – 55%<br>Colorectal Carcinoma – 45%<br>Mesothelioma – 45%<br>Cholangiocarcinoma – 40%<br>Ovarian Carcinoma – 40%<br>Melanoma – 35%<br>Bladder Carcinoma – 35% |

**ACTengine® and TCER® targets demonstrate high expression in multiple solid cancers**



[1] Solid cancer indications with 20% or more target expression, Target prevalence for selected cancer indications based on mRNA expression (TCGA and Immatics inhouse data);
[2] Based on metastatic uveal melanoma patients screened in IMA203 study (N=12);

# ACTengine® IMA203 – TCR-T Targeting PRAME

# ACTengine® IMA203 – TCR-T Targeting PRAME

## Broadly Expressed Target on Multiple Solid Cancers Combined with Highly Specific TCR

### TARGET

HLA-A*02-presented peptide derived from **PRAME**

Naturally and specifically presented on tumors at high target density[1]: **100-1,000 copies/cell**

Identified and validated by XPRESIDENT® quant. mass spectrometry platform

### TCR

High-affinity, specific TCR targeting PRAME

**Pairing-enhanced, engineered TCR** to avoid mispairing

High functional avidity[2]: **EC50 ~5 ng/ml**

Identified and characterized by XCEPTOR® TCR discovery and engineering platform

### CLINICAL DATA

N=18 pts treated in phase 1 dose escalation cohort

Manageable tolerability profile; no additional DLTs[3] & no CRS/ICANS ≥ grade 3

16 patients with at least one post treatment tumor assessment

**Objective responses in 50% (8/16) of patients, thereof 62% (8/13) of responses above DL1; all doses still below 1 bn cells**

### PATIENT POPULATION[4]

Uterine Carcinoma – 100%
Sarcoma Subtypes – up to 100%
Melanoma – 95%
Uveal Melanoma – 80%[5]
Ovarian Carcinoma – 80%
Squamous NSCLC – 65%
Kidney Carcinoma – up to 45%
Cholangiocarcinoma – 35%
Adeno NSCLC – 25%
Breast Carcinoma– 25%
HNSCC – 25%
Esophageal Carcinoma – 20%
HCC – 20%
Bladder Carcinoma – 20%

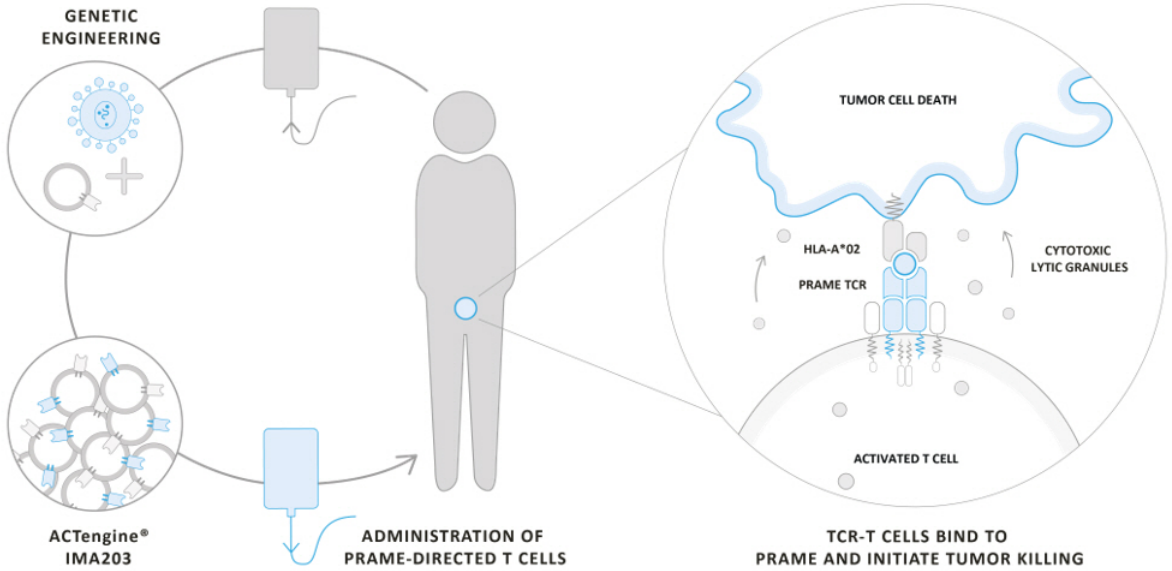
Data cut-off – 05-Oct-2021



[1] Target density: peptide copy number per tumor cell, approximate range representing the majority of tumor samples analyzed; [2] Functional avidity: EC50 half maximal effective concentration; [3] One DLT in DL2 previously reported in March 2021, fully resolved; [4] Solid cancer indications with 20% or more target expression, Target prevalence for selected cancer indications based on mRNA expression (TCGA and Immatics inhouse data); [5] Based on metastatic uveal melanoma patients screened in IMA203 study (N=12)

# ACTengine® IMA203 Targeting PRAME – Mechanism of Action

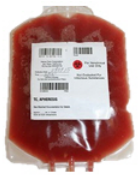
## Immatics' Leading TCR-T Approach



# Optimized Cell Therapy Products to Enhance T cell Persistence & Efficacy

## Current Proprietary Manufacturing Protocol for ACTengine® Product Candidates

**Leukapheresis**



**ACTengine® clinical programs: ~3 weeks**

| Manufacturing time (~1 week) | QC testing (Full sterility, 2 weeks) |
|---|---|

**Commercial ACTengine® expected ~2 weeks**

| Manufacturing time (~1 week) | Expedited QC testing (~1 week) |
|---|---|

**Infusion-Ready**

**Proprietary Manufacturing Process, designed to**

- ✓ reduce manufacturing process to approx. 1 week[1]
- ✓ shorten vein-to-vein time
- ✓ generate younger T cells with increased proliferative capacity
- ✓ improve engraftment and persistence in patients while utilizing smaller doses

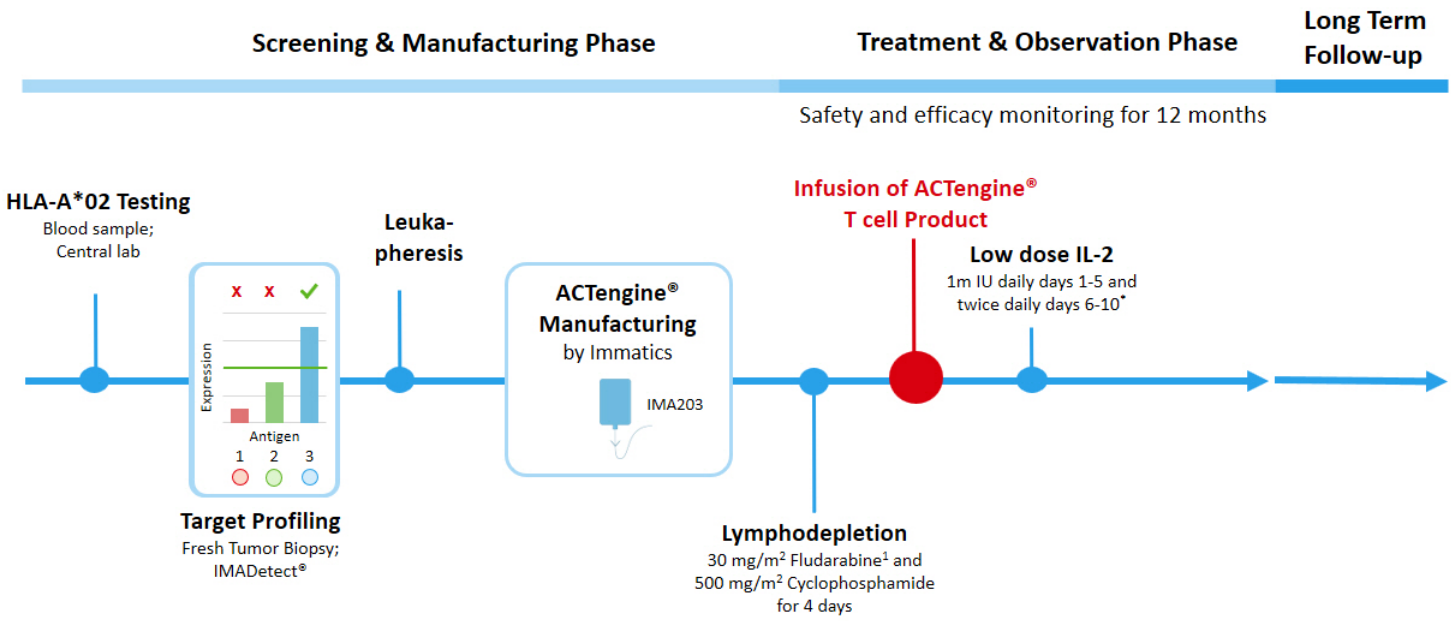
**In-house state-of-the-art cGMP Facility[2]**

- ✓ Manufacturing by Immatics personnel
- ✓ Maximum capacity: 48 manufacturing runs/month
- ✓ Substantial in-house process development expertise



[1] IMA203: 7 days, IMA201: 7-10 days; [2] Exclusive access through collaboration with UT Health, Houston, TX

# ACTengine® IMA203 – Patient Flow






* IL-2 dose reduction from twice daily to daily for the first 5 days and dosing duration from 14 to 10 days introduced prior to treatment of first patients on dose level 3;
¹ Dose reduction of Fludarabine (from 40mg/m² to 30mg/m²) was introduced prior to treatment of the first patient on dose level 3

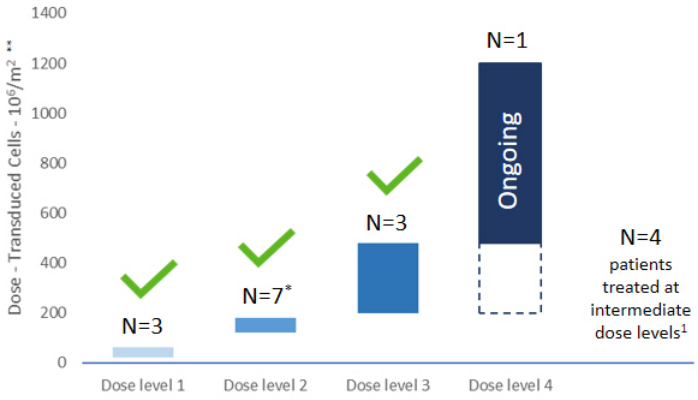
# ACTengine® IMA203 – Key Objectives & Trial Design

## Presented at SITC Conference as Late-Breaking Presentation (Cut-off October 05, 2021)

### Key Study Objectives

- **Primary: Safety**
  Investigation of Adverse Events,
  Determination of a recommended Phase 2 dose
- **Secondary: Biological and Clinical Activity**
  T cell engraftment and persistence
  Objective responses as per RECIST1.1
  Duration of response
- **Exploratory**
  Tumor Infiltration

### Trial Design & Recruitment Status




**18 patients[1] infused with PRAME-directed T cells at 5 clinical sites**

Data cut-off – 05-Oct-2021



[1] Enrichment cohorts EC1 & EC2: patients infused with intermediate doses enabling infusion of patients with medical need during dose escalation observation periods, or in case of lower production yields; * One patient infused at the same dose level as part of the enrichment cohort; **Dose is shown as transduced viable CD8 T cells per $m^2$ total body surface area

# ACTengine® IMA203 – Safety Profile

## Manageable & Transient Treatment-emergent Adverse Events – No ≥ Grade 3 CRS or ICANS

**TEAEs by maximum severity (N=19)[1]**

| Adverse event | All grades No. | All grades % | ≥ Grade 3 No. | ≥ Grade 3 % |
|---|---|---|---|---|
| **Patients with any adverse event** | 19 | 100.0 | 19 | 100.0 |
| **Adverse Events of Special interest** | | | | |
| Cytokine release syndrome | 17 | 89.5 | 0 | 0.0 |
| ICANS[2] | 4 | 21.1 | 0 | 0.0 |
| **Blood and lymphatic system disorders** | | | | |
| Neutropenia* | 16 | 84.2 | 15 | 78.9 |
| Anaemia | 16 | 84.2 | 9 | 47.4 |
| Thrombocytopenia | 15 | 78.9 | 7 | 36.8 |
| Lymphopenia* | 14 | 73.7 | 14 | 73.7 |
| Leukopenia* | 12 | 63.2 | 11 | 57.9 |
| Cytopenia | 1 | 5.3 | 1 | 5.3 |
| **Infections and infestations** | | | | |
| Enterococcal infection | 1 | 5.3 | 1 | 5.3 |
| COVID-19 | 1 | 5.3 | 1 | 5.3 |
| Appendicitis | 1 | 5.3 | 1 | 5.3 |
| Sepsis[3] | 1 | 5.3 | 1 | 5.3 |
| **Respiratory, thoracic and mediastinal disorders** | | | | |
| Hypoxia | 2 | 10.5 | 1 | 5.3 |
| Pleural effusion | 2 | 10.5 | 1 | 5.3 |
| Bronchial obstruction | 1 | 5.3 | 1 | 5.3 |
| **Metabolism and nutrition disorders** | | | | |
| Hyponatraemia | 7 | 36.8 | 1 | 5.3 |
| Hypokalaemia | 5 | 26.3 | 1 | 5.3 |
| Decreased appetite | 3 | 15.8 | 0 | 0.0 |

| Adverse event | All grades No. | All grades % | ≥ Grade 3 No. | ≥ Grade 3 % |
|---|---|---|---|---|
| table continued… | | | | |
| **Cardiac or vascular disorders** | | | | |
| Hypertension | 3 | 15.8 | 2 | 10.5 |
| Atrial fibrillation | 2 | 10.5 | 1[4] | 5.3 |
| **General disorders and administration site conditions** | | | | |
| Fatigue | 7 | 36.8 | 1 | 5.3 |
| Pyrexia | 5 | 26.3 | 0 | 0.0 |
| Oedema peripheral | 3 | 15.8 | 0 | 0.0 |
| **Gastrointestinal disorders** | | | | |
| Nausea | 12 | 63.2 | 0 | 0.0 |
| Vomiting | 7 | 36.8 | 0 | 0.0 |
| Diarrhoea | 7 | 36.8 | 0 | 0.0 |
| Constipation | 6 | 31.6 | 0 | 0.0 |
| **Investigations** | | | | |
| Aspartate aminotransferase increased | 5 | 26.3 | 0 | 0.0 |
| Alanine aminotransferase increased | 4 | 21.1 | 0 | 0.0 |
| Blood creatinine increased | 4 | 21.1 | 0 | 0.0 |
| **Other** | | | | |
| Rash | 5 | 26.3 | 0 | 0.0 |
| Myalgia | 4 | 21.1 | 0 | 0.0 |
| Arthralgia | 3 | 15.8 | 0 | 0.0 |
| Alopecia | 3 | 15.8 | 0 | 0.0 |
| Rash maculo-papular | 2 | 10.5 | 1 | 5.3 |
| Orchitis | 1 | 5.3 | 1 | 5.3 |
| Contrast media allergy | 1 | 5.3 | 1 | 5.3 |

CRS/ICANS: No ≥ Grade 3 CRS or ICANS observed so far

Most Adverse Events were associated with lymphodepletion

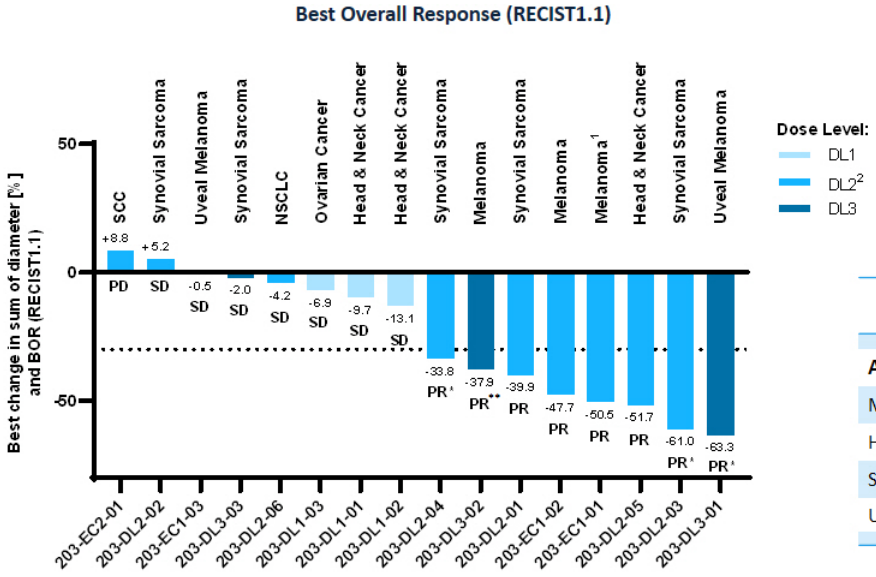
DLT: Transient, Grade 3 atrial fibrillation Onset on day 5 post infusion that resolved within 48h DLT triggered expansion of DL2

[1] All treatment-emergent adverse events (TEAEs) with grade 1-2 occurring in at least 3 patients (incidence ≥15.8%) and additionally all events with grade 3-5 regardless of relatedness to study treatment are presented. Data source: clinical database. Adverse events were coded using the Medical Dictionary for Regulatory Activities. Grades were determined according to National Cancer Institute Common Terminology Criteria of Adverse Events (CTCAE), version 5.0. Grades for Cytokine release syndrome and ICANS were determined according to CARTOX criteria (Neelapu *et al.*, 2018). Patients are counted only once per adverse event and severity classification; [2] ICANS: Immune effector cell-associated neurotoxicity syndrome; [3] Patient died from sepsis of unknown origin and did not receive IMA203 T cells; [4] DLT: Dose limiting toxicity; *100% of patients experienced transient cytopenias ≥ Grade 3 (CTCAE v5.0)

Data cut-off – 05-Oct-202

# ACTengine® IMA203 – Change in Target Lesions

## Objective Responses across Multiple Tumor Types at Doses below 1 billion Transduced Cells




**Preliminary Objective Response Rates (RECIST1.1., confirmed and unconfirmed)**

| | All doses | Dosed above DL1 |
|---|---|---|
| **All comers** | **8/16 (50%)** | **8/13 (62%)** |
| Melanoma | 3/3 (100%) | 3/3 (100%) |
| Head & Neck Cancer | 1/3 (33%) | 1/1 (100%) |
| Synovial Sarcoma | 3/5 (60%) | 3/5 (60%) |
| Uveal Melanoma | 1/2 (50%) | 1/2 (50%) |

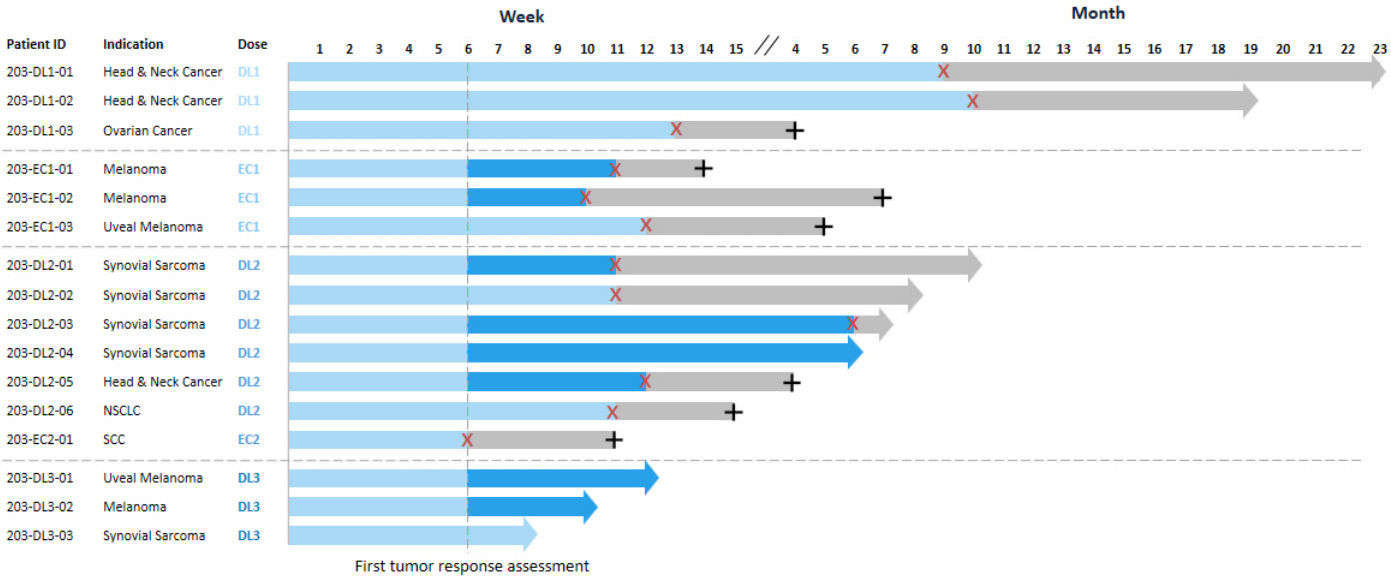
Data cut-off – 05-Oct-2021



[1] RECIST1.1 response at the timepoint of maximum change of target lesions (week 12): PD due to new lesions (leptomeningeal disease) at week 12
[2] Patients dosed with DL2, EC1 and EC2; * Confirmed at subsequent scan; ** Confirmation pending as of data cut-off

# ACTengine® IMA203 – Response Over Time

## Objective Responses across Multiple Tumor Types at Doses below 1 billion Transduced Cells



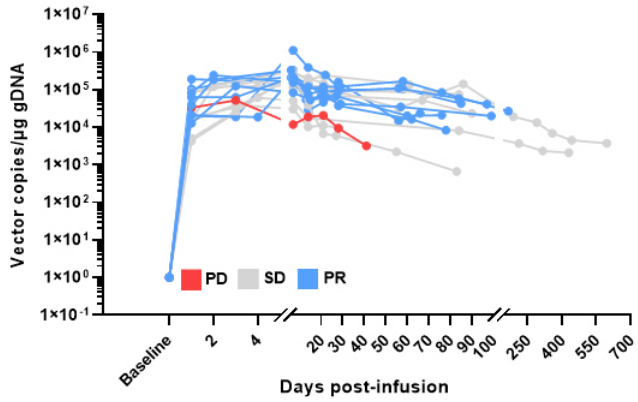

According to RECIST1.1

Data cut-off – 05-Oct-2021

# ACTengine® IMA203 – Engraftment, Persistence & Tumor Infiltration

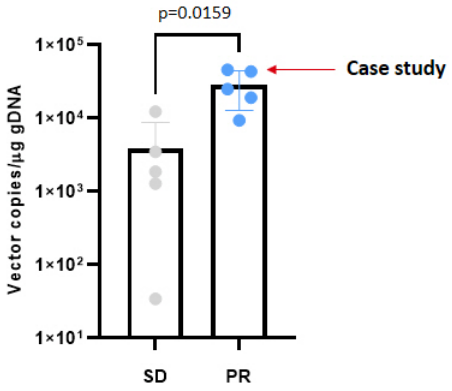
## Clinical Responses Consistent with Biological Data

### T cell Engraftment & Persistence




High T cell engraftment and persistence with trend for association of peak vector copies with clinical response[1]

### Tumor Infiltration post Infusion[2]




High T cell infiltration observed through serial biopsies associated with clinical response[3]

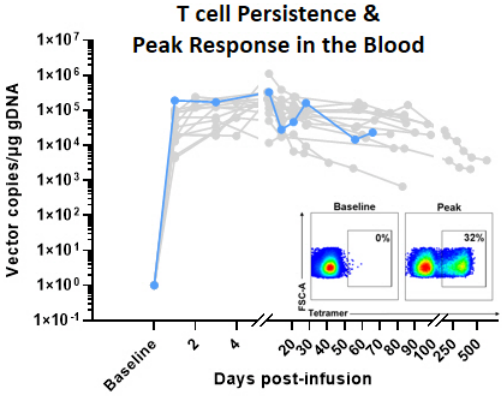
Data cut-off – 05-Oct-2021

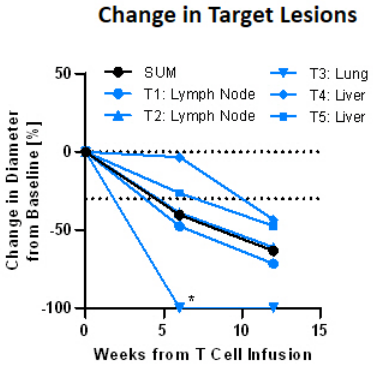


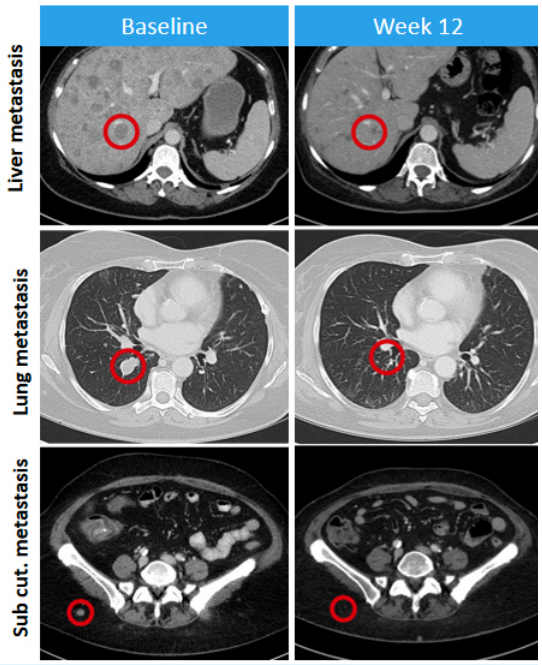
[1] Mann-Whitney U test, p=0.065; [2] Post infusion biopsies at week 6 (except one patient with SD at week 3); [3] Mann-Whitney U test, p=0.0159

# ACTengine® IMA203 – Case Study Patient IMA203-DL3-01

## Confirmed Partial Response with Deepening Tumor Regression in Multiple Lesions




- 62-year-old female; metastatic uveal melanoma
- High tumor burden in multiple organs
- Infused at refractory disease after failing 4 prior lines of therapy including 2 lines of CPI[1]
- Patient received total dose of 0.59 billion transduced T cells following lymphodepletion

- **T cell persistence until end of observation & detection in the tumor**
- **All lesions decreased at week 6 - 40% decrease in target lesions response deepened at week 12 to 63% decrease**
- **Best Response (RECIST1.1): PR (confirmed & ongoing)**



[1] Immune checkpoint inhibitor

# ACTengine® IMA203 PRAME – Phase 1a Dose Escalation Interim Update

## Preliminary Findings after Completion of Dose Level 3

## Objective responses observed across multiple tumor types at dose levels below 1 billion T cells originally presumed to be subtherapeutic

### SAFETY

**3** Dose levels completed, all below 1 bn cells

**0** Additional DLTs[1]

**0** Grade ≥3 CRS or ICANS[2]

### CLINICAL ACTIVITY

**50%** ORR[3] across all doses and multiple solid cancers (8/16 patients)

**62%** ORR[3] at DL2[*]& DL3 (8/13 patients) – all still dosed below 1 bn cells

### BIOLOGICAL ACTIVITY

**Blood** High T cell engraftment and persistence

**Tumor** High T cell infiltration associated with clinical response

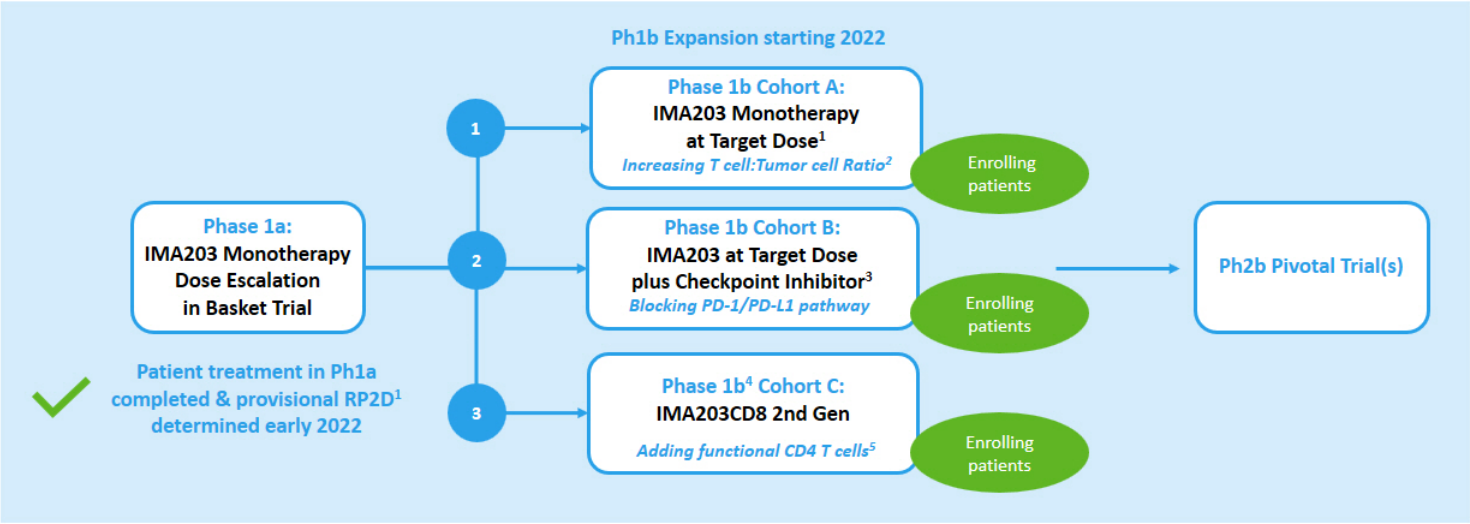
Data cut-off – 05-Oct-2021



[1] DLT: dose-limiting toxicity, since March 17, 2021 (reported DLT at DL2); [2] CRS: cytokine release syndrome, ICANS: Immune effector cell-associated neurotoxicity syndrome, both graded by CARTOX criteria (Neelapu *et al*., 2018); [3] Objective response rate according to RECIST 1.1 including confirmed and unconfirmed partial responses; [*] Includes patients treated at enrichment cohorts EC1 and EC2

# Our Plans to Achieve Long-Lasting Responses with TCR-T cells against PRAME

## Addressing Relevant Secondary Resistance Mechanisms to Increase Durability of Response



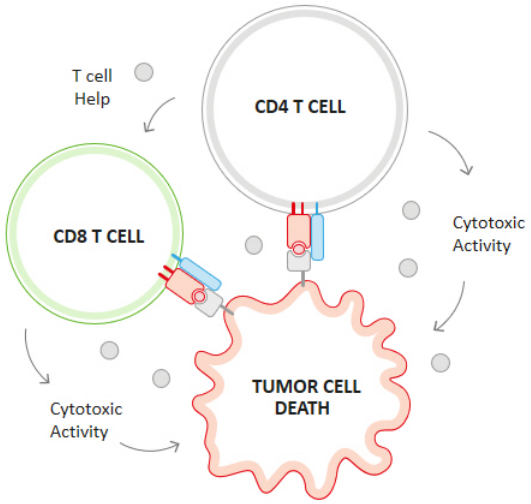

**Each expansion cohort is designed to evaluate the observed objective response rate, demonstrate durability of response & provide the basis for entering registration trials**



[1] Exploration of higher dose (DL5) planned; [2] Demonstrated to be associated with durable response: Locke *et al.* 2020 Blood advances; [3] Opdivo® (nivolumab): programmed death-1 (PD-1) immune checkpoint inhibitor; [4] Treatment of n=3 patients in DL3 prior to patient treatment at provisional RP2D (DL4); [5] Demonstrated to be important for long-term remission: Melenhorst *et al.* 2022 Nature

# ACTengine® IMA203CD8 – Next-generation TCR-T

## Building on First-Gen IMA203 Success to Further Improve Anti-Tumor Activity




- Engagement of CD4 T cells by CD8 co-transduction reported to boost anti-tumor activity in TCR-T trials
- Recent data from leukaemia patients treated with CAR-T achieving decade-long remissions show that CD4 T cells dominate at the later time points of response[1]
- Functional superiority of the **CD8αβ** construct over multiple other CD8 constructs in preclinical experiments
- Proprietary 4-in-1 lentiviral vector to engineer CD4 and CD8 T cells with the PRAME-specific IMA203 TCR and CD8αβ construct (IMA203CD8)

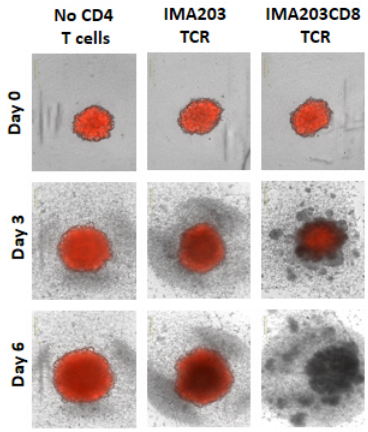


[1] Melenhorst *et al.* 2022 Nature

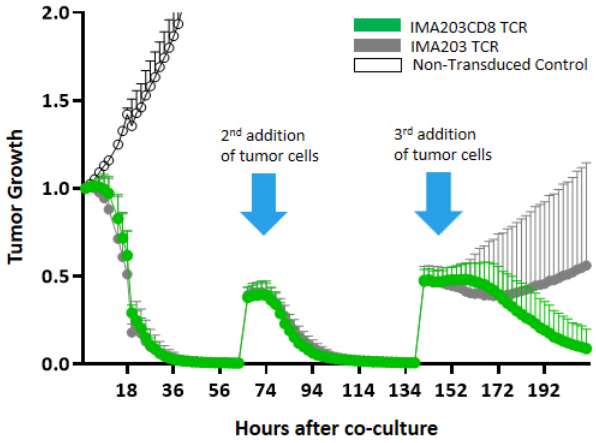
# ACTengine® IMA203CD8 – Preclinical Assessment of Anti-Tumor Efficacy

## Co-Transduction of CD8 Enhances Anti-Tumor Activity *in Vitro*

### 3D Spheroid Killing – CD4 T cells




### Serial Killing Assay – CD8 & CD4 T cells




**Engagement of CD4 T cells may enhance depth and durability of anti-tumor response and clinical outcome of TCR-T in solid cancer patients**

# ACTengine® IMA201 and IMA204 – TCR-T Targeting MAGEA4/8 and COL6A3

# ACTengine® IMA201 Targeting MAGEA4/8

## Key Features

### TARGET

HLA-A*02-presented peptide derived from **MAGEA4 and/or MAGEA/8**

**>5-fold higher** peptide copy number per tumor cell than a commonly used MAGEA4 target

Naturally and specifically presented on tumors at high target density[1]: **100-1,000 copies/cell**

Identified and validated by XPRESIDENT® quant. mass spectrometry platform

### TCR

High-affinity, specific TCR targeting MAGE4/8

High functional avidity[2]: **EC50 ~10 ng/ml**

Identified and characterized by XCEPTOR® TCR discovery and engineering platform

### CLINICAL DATA

Dose escalation ongoing, target dose level to commence

Too early for assessment of safety or anti-tumor activity

### PATIENT POPULATION[3]

Sarcoma Subtypes – up to 80%
Squamous NSCLC – 50%
HNSCC – 35%
Bladder Carcinoma – 30%
Esophageal Carcinoma – 25%
Uterine Carcinosarcoma – 25%
Ovarian Carcinoma – 20%
Melanoma – 20%

Status – 02-June-2022



[1] Target density: peptide copy number per tumor cell, approximate range representing the majority of tumor samples analyzed; [2] Functional avidity: EC50 half maximal effective concentration; [3] Solid cancer indications with 20% or more target expression, Target prevalence for selected cancer indications based on mRNA expression (TCGA and Immatics inhouse data)

# ACTengine® IMA204 First-in-Class TCR-T Targeting Tumor Stroma

## Key Features

### TARGET

HLA-A*02-presented peptide derived from **COL6A3 exon 6**

Naturally and specifically presented on tumors at high target density[1]: **100-700 copies/cell**

Novel **tumor stroma target** identified and validated by XPRESIDENT® quant. mass spectrometry platform

### TCR

High-affinity, specific TCR targeting COL6A3 exon 6

**Affinity-maturated, CD8-independent TCR**

High functional avidity[2]: **~0.01ng/ml**

Identified and characterized by XCEPTOR® TCR discovery and engineering platform

### PRECLINICAL DATA

CD8-independent, next-generation TCR engages both, CD8 and CD4 T cells

*In vitro* anti-tumor activity against target-positive cell lines in CD8 and CD4 T cells

Complete tumor eradication in *in vivo* mouse models

### PATIENT POPULATION[3]

Pancreatic Carcinoma – 80%
Breast Carcinoma – 75%
Stomach Carcinoma – 65%
Sarcoma – 65%
Esophageal Carcinoma – 60%
Squamous NSCLC– 55%
Adeno NSCLC– 55%
HNSCC – 55%
Uterine Carcinosarcoma – 55%
Colorectal Carcinoma – 45%
Mesothelioma – 45%
Cholangiocarcinoma – 40%
Ovarian Carcinoma – 40%
Melanoma – 35%
Bladder Carcinoma – 35%

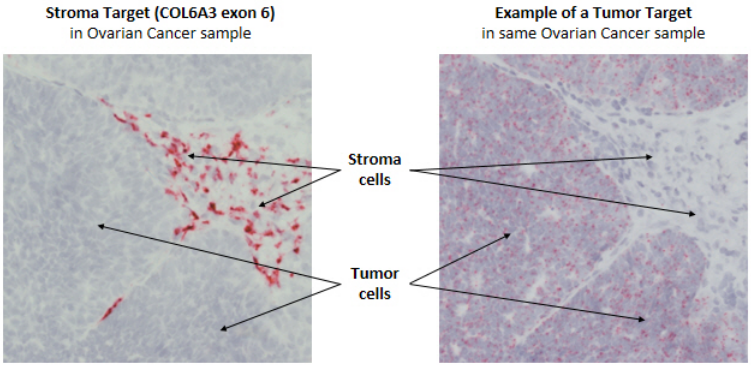
IMA204 provides a promising therapeutic opportunity for a broad patient population as monotherapy or in combination with TCR-T cells directed against tumor targets



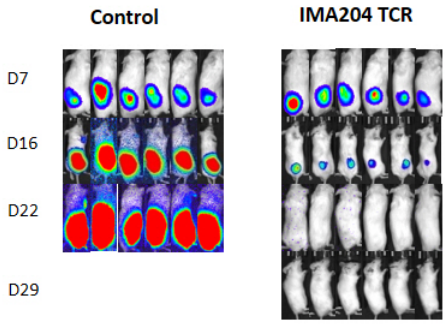
[1] Target density: peptide copy number per tumor cell, approximate range representing the majority of tumor samples analyzed; [2] Functional avidity: EC50 half maximal effective concentration;
[3] Solid cancer indications with 20% or more target expression, Target prevalence for selected cancer indications based on mRNA expression (TCGA and Immatics inhouse data)

# ACTengine® IMA204 – High Affinity, CD8-independent TCR

## Complete Tumor Eradication *in vitro & in vivo*[1] by Affinity-enhanced IMA204 TCR




COL6A3 exon 6 prevalently expressed at high target density in tumor stroma across many solid cancers




CD8-independent TCR leads to tumor eradication in all mice treated

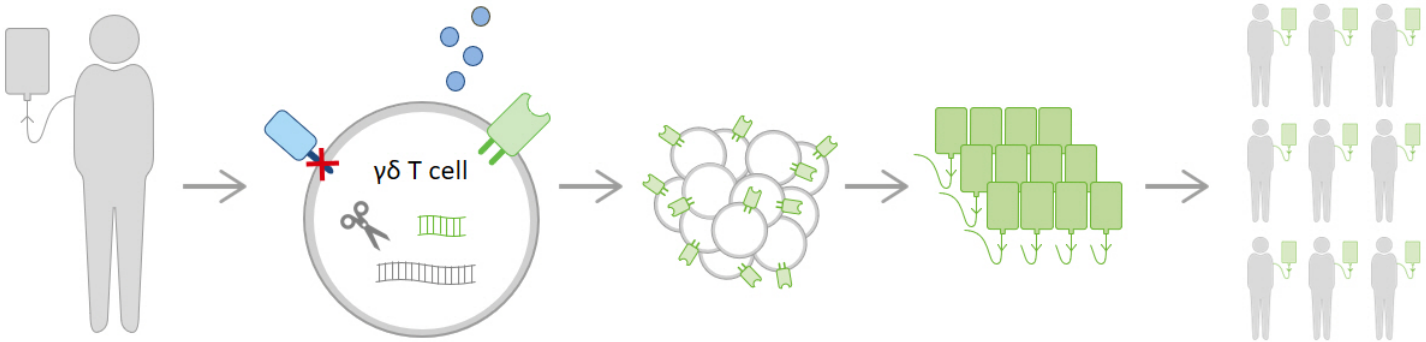
- Affinity maturated CD8-independent, next-generation TCR engages both CD4 and CD8 T cells without the need of CD8 co-transduction
- IND-enabling studies are nearing completion



[1] *In vivo* data in collaboration with Jim Riley, University of Pennsylvania, control: non-transduced T cells. TCR avidity and specificity data not shown, available in IMA204 presentation on Immatics website.

# ACTallo® – Our Next-generation Off-the-shelf TCR-T

# ACTallo® – Immatics' Allogeneic Cell Therapy Approach




γδ T cell Collection from Healthy Donor

Cell Engineering (gene editing & enhancements)

Expansion

Off-the-shelf Products

Patient Treatment

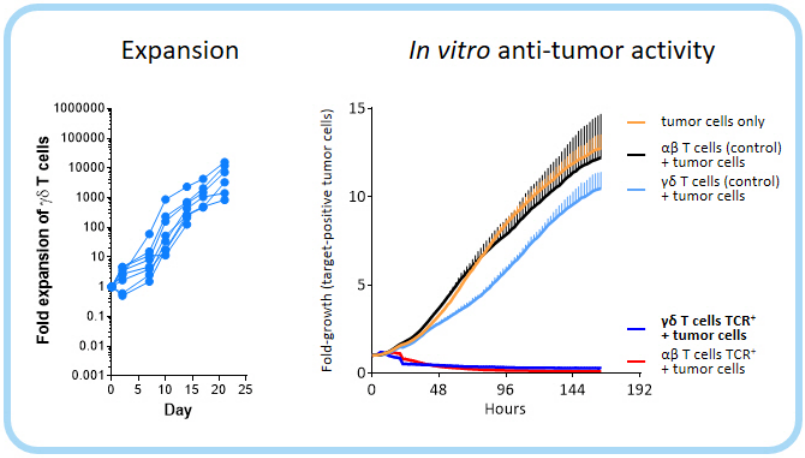
- **Off-the-shelf cell therapy**, no need for personalized manufacturing → reduced logistics and time to application
- **Potential for hundreds of doses** from one single donor leukapheresis → lower cost of goods
- **Use of healthy donor material** provides standardized quality and quantity of starting material

# Why γδ T cells?

## γδ T cells Are Well Suited for an Off-the-shelf Cell Therapy Approach

### γδ T cells

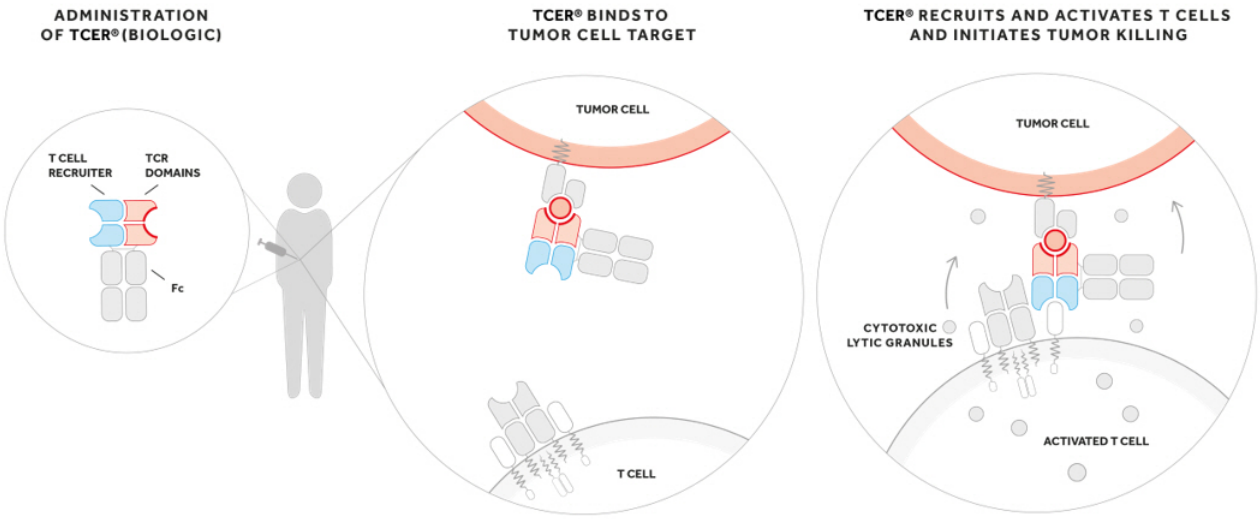
- ✓ are abundant in the peripheral blood
- ✓ show intrinsic anti-tumor activity
- ✓ naturally infiltrate solid tumors & correlate with favorable prognosis
- ✓ are HLA-independent, thus do not cause graft-vs-host disease in allogeneic setting
- ✓ can be expanded to high numbers in a cGMP-compatible manner
- ✓ can be effectively redirected using αβ TCR or CAR constructs



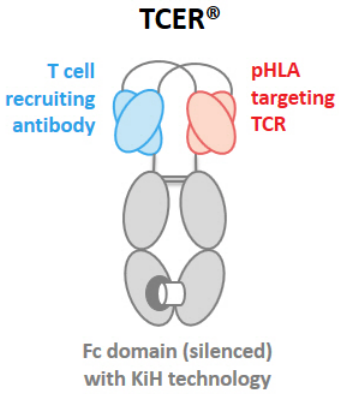
# TCER® – TCR Bispecifics

# TCER® – Mechanism of Action

## Immatics' Off-the-Shelf TCR Bispecifics Approach



# TCER® – Immatics' Half-Life Extended Bispecifics




**pHLA targeting TCR**

- ✓ **High-affinity TCR** targeting HLA-restricted tumor-specific peptides
- ✓ Broad therapeutic window through **XPRESIDENT®-guided** affinity maturation (>1000x)[1]
- ✓ **Complete tumor eradication** in mouse xenograft models at low doses

**T cell recruiting antibody**

- ✓ **Low-affinity** T cell recruiter against both **TCR & CD3**
- ✓ **Optimized biodistribution** aiming for enrichment at tumor site and **prevention of CRS**[2]
- ✓ **Superior anti-tumor activity** in mouse models as compared to widely used CD3 recruiters

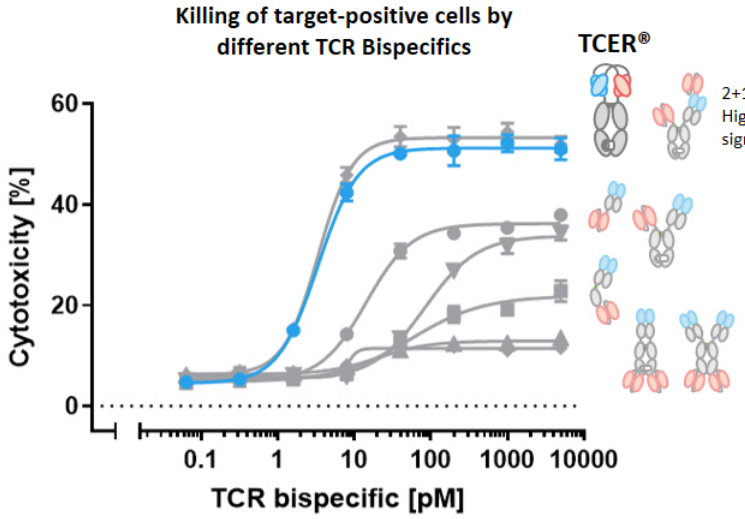
**Next-generation TCER® format**

- ✓ Off-the-shelf biologic with antibody-like manufacturability[3] and low cost of goods
- ✓ Superior anti-tumor activity[4] compared to six alternative bispecific formats
- ✓ Half-life of several days expected in humans

**Our TCER® format is designed to maximize efficacy while minimizing toxicities in patients**


[1] As compared to natural TCR; [2] Based on literature data for other low-affinity recruiters (e.g. Harber *et al.*, 2021, Nature); [3] Production in mammalian cells (CHO cells); [4] Based on preclinical testing

# Potency of Our Proprietary TCR Bispecific Format TCER®




- Seven different TCR Bispecific formats were evaluated with a pHLA targeting TCR and the identical T cell recruiting antibody
- TCER® format had higher combination of potency and specificity[1] than six alternative TCR Bispecific format designs evaluated

**Flexible Plug-and-play platform: TCER® format successfully validated for different TCRs & different T cell recruiting antibodies**



[1] Preclinical data on specificty not shown

# TCER® Portfolio

## Building a Pipeline of Next-Gen Half-Life Extended TCR Bispecifics

| | IMA401 | IMA402 | IMA40X |
|---|---|---|---|
| | **MAGEA4/8** | **PRAME** | **Undisclosed** |
| **Status** | Start of Phase 1 trial in May 2022 | Clinical GMP batch targeted in 2022<br>Phase 1 trial in 2023 | TCER® engineering and preclinical testing ongoing |
| **Preclincial Proof-of-concept – Efficacy / Safety** | ➢ Complete remission of estab. tumors in xenograft mouse models at low doses<br>➢ Very broad therapeutic window (reactivity tumor compared to normal cells) | | n/a |
| **Half-life** | Half-life extended to several days via effector function silenced Fc part | | |
| **Clinical Development Strategy** | ➢ First-in-human basket trial<br>➢ Adaptive design aiming at fast dose escalation<br>➢ Development strategy includes TCER® as add on to checkpoint inhibitor-based standard of care in early lines of treatment | | |

# Phase 1 Clinical Trial to Evaluate TCER® IMA401 Targeting MAGEA4/8

## Trial Overview

**Biomarker positive patients** with recurrent and/or refractory solid tumors
- HLA-A*02:01
- MAGEA4/8 (Immatics' IMADetect® test)

**Basket trial** in indications with high MAGEA4/8 prevalence, e.g. sqNSCLC, SCLC, HNSCC, bladder carcinoma, esophageal carcinoma, ovarian carcinoma, melanoma, uterine carcinosarcoma, sarcoma subtypes

**Phase 1a: Dose escalation cohort**
**Phase 1b: Dose expansion cohort(s)**

**Up to N=50 patients**
**Up to 15 centers**

## Primary Objective

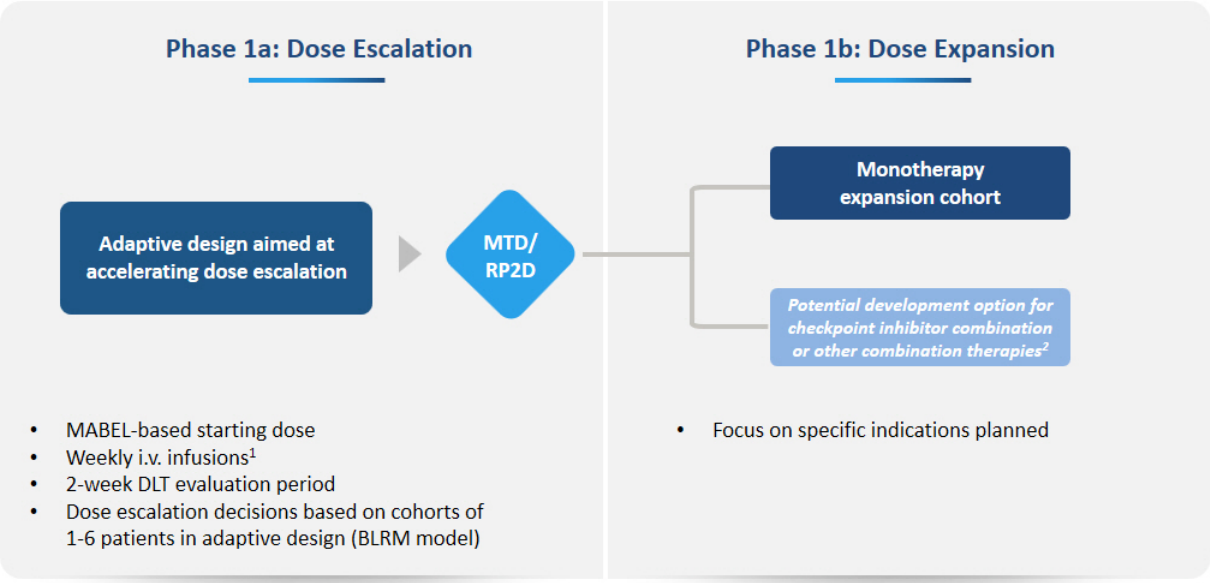
- Determine maximum tolerated dose (MTD) and/or recommended phase 2 dose (RP2D)

## Secondary Objectives

- Safety and tolerability
- Initial anti-tumor activity
- Pharmacokinetics


MTD: maximum tolerated dose, RP2D: recommended phase 2 dose

# Phase 1 Clinical Trial to Evaluate TCER® IMA401 Targeting MAGEA4/8



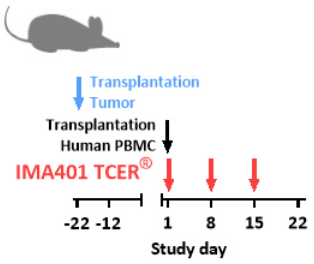



MTD: maximum tolerated dose, RP2D: recommended phase 2 dose; MABEL: minimum anticipated biological effect level; BLRM: Bayesian logistic regression model;
[1] Pharmacokinetics data assessed throughout the trial might provide an opportunity to optimize scheduling to a less frequent regimen. [2] Conducted in collaboration with BMS

# TCER® IMA401 Targeting MAGEA4/8

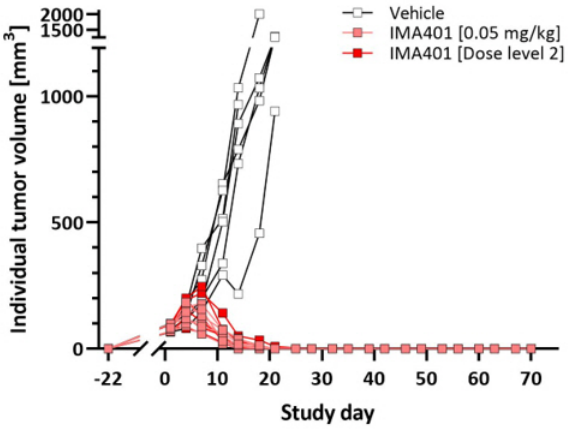
## Product Candidate in Clinical Development with Bristol Myers Squibb

### Treatment schedule




N=6 mice per group, two PBMC donors
Dose: two dose levels

### Tumor Model in Mice[1]




- **Complete remissions observed in all animals** even at low IMA401 dose of 0.05 mg/kg
- No detectable outgrowth of tumors during **prolonged observation period of 70 days**



[1] Hs695T xenograft model in MHC I/II ko NSG mice, tumor volume of individual mice shown

# TCER® IMA402 Targeting PRAME

## Preclinical-stage Product Candidate Fully Owned by Immatics

### PRAME Target Peptide

- **HLA-A*02-restricted PRAME peptide** targeted by TCER® IMA402 is one of the most frequently expressed intracellular cancer targets for TCR-based therapies
  - Homogenously expressed at high prevalence across multiple solid tumors including melanoma, lung cancer, gynecological cancers (ovarian, breast, uterine) and others

### Preclinical Proof-of-Concept Data

- **High *in vitro* potency** in killing of tumor cells with physiological PRAME peptide levels
- Favorable safety profile with broad therapeutic window between tumor and normal cell reactivity *in vitro*
- **Consistent tumor regression** including complete responses in NOG mice treated at low doses
- **Extended serum half-life** of several days[1] expected in humans driven by the TCER® Fc part

### Well Progressing CMC Development

- Current data support antibody-like manufacturability and developability
- GMP process development and IND-enabling activities ongoing
- Manufacturing of the clinical batch for the Phase 1 trial expected in 2H 2022

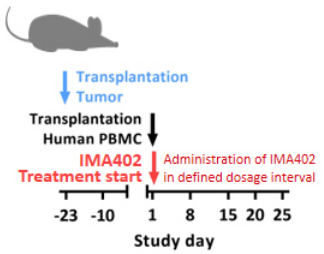


[1] Based on preclinical testing

# TCER® IMA402 – Efficacy Assessment in Tumor Model in Mice

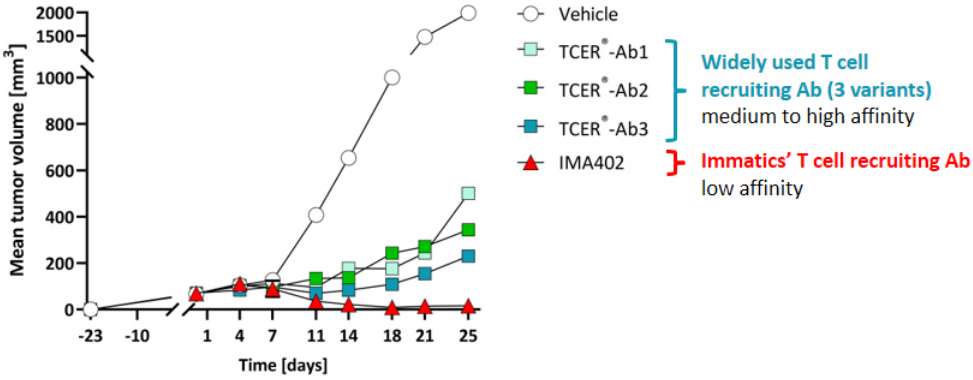
## Superior Tumor Control Using a Proprietary, Low-Affinity Recruiter

**Treatment schedule**




N=6 mice per group, two PBMC donors
**Dose: 0.025 mg/kg**

**Tumor Model in Mice[1]**

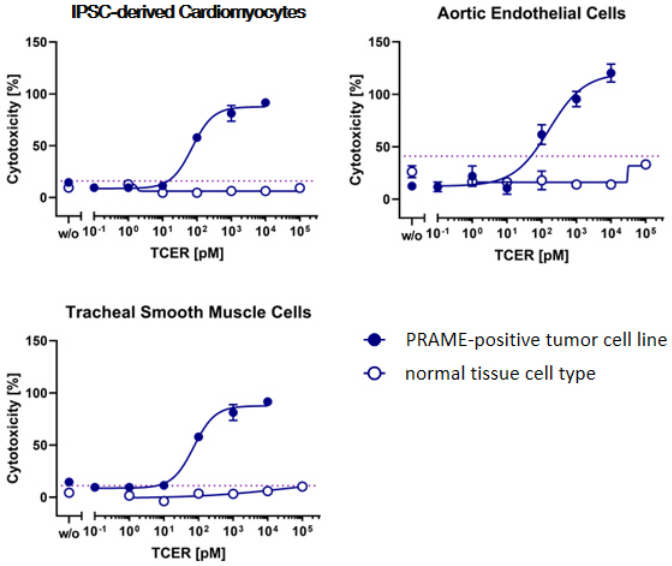



Proprietary, **low-affinity T cell recruiting region** demonstrates superior tumor control compared to analogous TCER® molecules designed with higher-affinity variants of a widely used recruiter



[1] Hs695T xenograft model in NOG mice, tumor volume of group means shown

# TCER® IMA402 – *In vitro* Safety Assessment with Normal Tissue Cells




| Normal Tissue Type | Therapeutic Window (x-fold) |
|---|---|
| IPSC-derived astrocytes | ≥1,000 |
| IPSC-derived GABA neurons | ≥1,000 |
| IPSC-derived cardiomyocytes | ≥1,000 |
| Human Pulmonary Fibroblasts | ≥1,000 |
| Human Cardiac Microvascular Endothelial Cells | ≥1,000 |
| Human Dermal Microvascular Endothelial Cells | ≥1,000 |
| Human Aortic Endothelial Cells | ≥1,000 |
| Human Coronary Artery Smooth Muscle Cells | ≥1,000 |
| Human Tracheal Smooth Muscle Cells | ≥1,000 |

- Cytotoxicity against N≥9 different human normal tissue cell types
- TCER® IMA402 shows a **minimum of 1,000-fold therapeutic window** between normal tissue cell reactivity and tumor cell reactivity

# Immatics' Proprietary Target and TCR Discovery Platforms

# True Cancer Targets & Matching Right TCRs

## Goal to Maximize Anti-Tumor Activity and Minimize Safety Risks of TCR-based Immunotherapies


**True Targets** via XPRESIDENT® technology platform

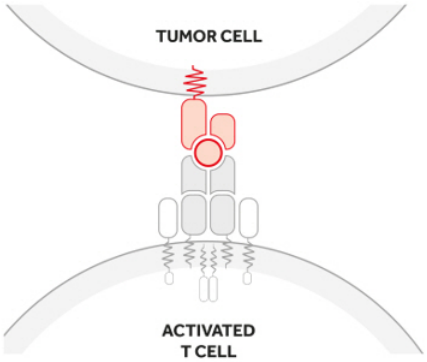
- are naturally presented on tumor tissues as identified by mass-spec
- are absent or presented at only low levels on normal tissues
- are presented at high copy numbers to trigger a pharmacological response

**Right TCRs** via XCEPTOR® technology platform

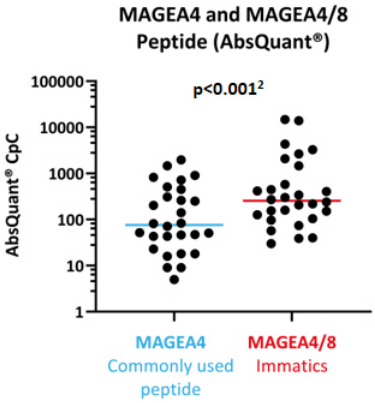
- recognize the target peptide with high affinity and specificity
- show selective killing of tumor cells
- are developed to be suitable for two different therapeutic modalities, Cell Therapies and TCR Bispecifics

# Immatics' Unique Capability – Identification of the most Relevant Target

## Example of MAGEA4/8 Peptide Target




**Ranking of pHLA targets**




XPRESIDENT® quantitative information on target density[1] between peptides originating from the same source protein

MAGEA4/8 target is presented at >5-fold higher target density[1] than a commonly used MAGEA4 target peptide



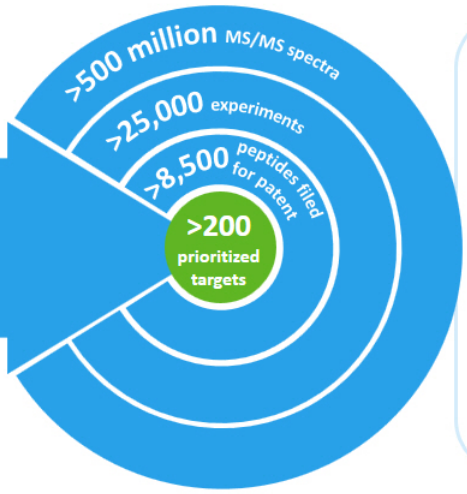
[1] Copy number per tumor cell (CpC) measured on a paired-sample basis by AbsQuant®, i.e. comparing MAGEA4 vs. MAGEA4/A8 peptide presentation on same sample, [2] Students paired T test

# Pool of 200 Prioritized Targets as Foundation for Future Value Generation

## pHLA Database

based on primary tissues

**>2,500 cancer & normal** tissues analyzed by **Quantitative, Ultra-Sensitive Mass Spectrometry**




### 200 Prioritized Targets

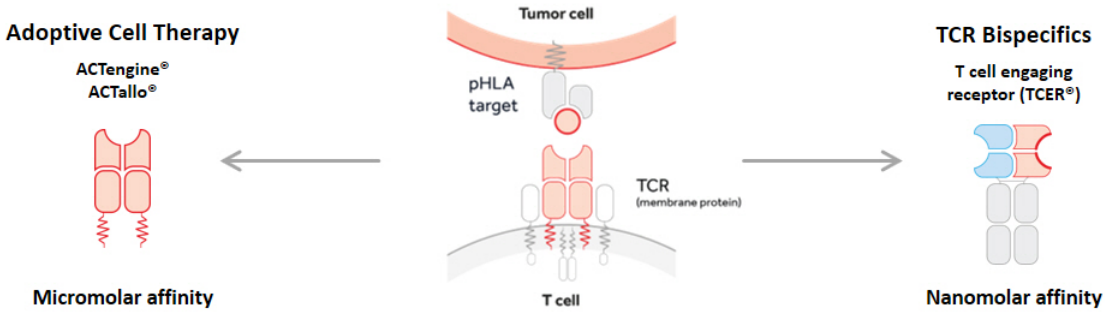
**Grouped in 3 Target Classes:**

1. **Well known and characterized parent protein (20%)**
   e.g. MAGE family cancer testis antigens
2. **Unknown or poorly characterized parent protein (60%)**
   e.g. stroma target COL6A3 exon 6
3. **Crypto-targets/Neoantigens (20%)**
   Novel target class which includes RNA-edited peptides & non-classical neoantigens

**~50% of our prioritized targets are non-HLA-A*02 restricted, substantially broadening the potential patient reach**

# Development of the Right TCR – XCEPTOR® Technology

## TCR Discovery and Engineering for ACT and TCR Bispecifics



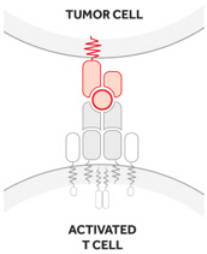
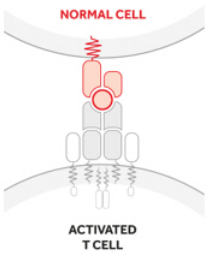
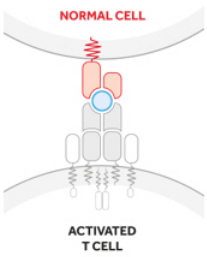
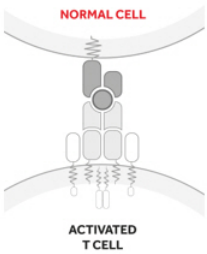

- Fast, efficient and highly sensitive discovery of highly specific, natural TCRs
- Protein engineering capabilities to design and maturate TCRs with increased affinity while retaining specificity
- Early de-selection of cross-reactive TCRs by the unique interplay between Immatics' target and TCR discovery platforms XPRESIDENT® and XCEPTOR® during TCR discovery[1] and TCR maturation[2]



[1] XPRESIDENT®-guided off-target toxicity screening; [2] XPRESIDENT®-guided similar peptide counterselection

# Optimal Target Selection & TCR Specificity for Minimizing Safety Risks

## Unique Interplay between Technology Platforms Allows Early De-risking for Clinical Development

| Target peptide presented on tumor cells | Target peptide presented on normal cells | Similar peptide presented on normal cells[1] | A different HLA is recognized on normal cells |
|---|---|---|---|
|   |   |   |   |
| Selective killing of tumor cells | On-target (off-tumor) toxicity | Off-target toxicity | Alloreactivity |

**XPRESIDENT®-guided screening** for on- and off-target toxicities of TCRs based on the extensive database of peptides presented on normal tissues



[1] Clinical fatalities have occurred in TCR-T trials using a titin cross-reactive TCR (Cameron *et al.*, Sci Transl Med)

# Corporate Information & Milestones

# Experienced Global Leadership Team Across Europe and the US

**Harpreet Singh**
Chief Executive Officer
Co-Founder
>20 yrs biotech experience

**Arnd Christ**
Chief Financial Officer
>20 yrs biotech experience
(Probiodrug, NovImmune, Medigene, InflaRx)

**Cedrik Britten**
Chief Medical Officer
>10 yrs pharma & biotech experience
(BioNTech, GSK)

**Carsten Reinhardt**
Chief Development Officer
>20 yrs pharma & biotech experience
(Micromet, Roche, Fresenius)

**Steffen Walter**
Chief Technology Officer
Co-Founder Immatics US
>15 yrs biotech experience

**Toni Weinschenk**
Chief Innovation Officer
Co-Founder
>15 yrs biotech experience

**Rainer Kramer**
Chief Business Officer
25 yrs pharma & biotech experience
(Amgen, MorphoSys, Jerini, Shire, Signature Dx)

**Edward Sturchio**
General Counsel
>15 yrs pharma & biotech experience
(Schering, Merck, Novartis, Advanced Accelerator Applications, Abeona Therapeutics)

**Jordan Silverstein**
Head of Strategy
>10 yrs biotech experience
(Advanced Accelerator Applications, InflaRx)

# Strong, Focused and Highly Integrated Trans-Atlantic Organization

**Tübingen, Germany, ~195 FTEs**
Target & TCR discovery and
TCR Bispecifics development

**Houston, Texas, ~140 FTEs**
Cell therapy development
and manufacturing

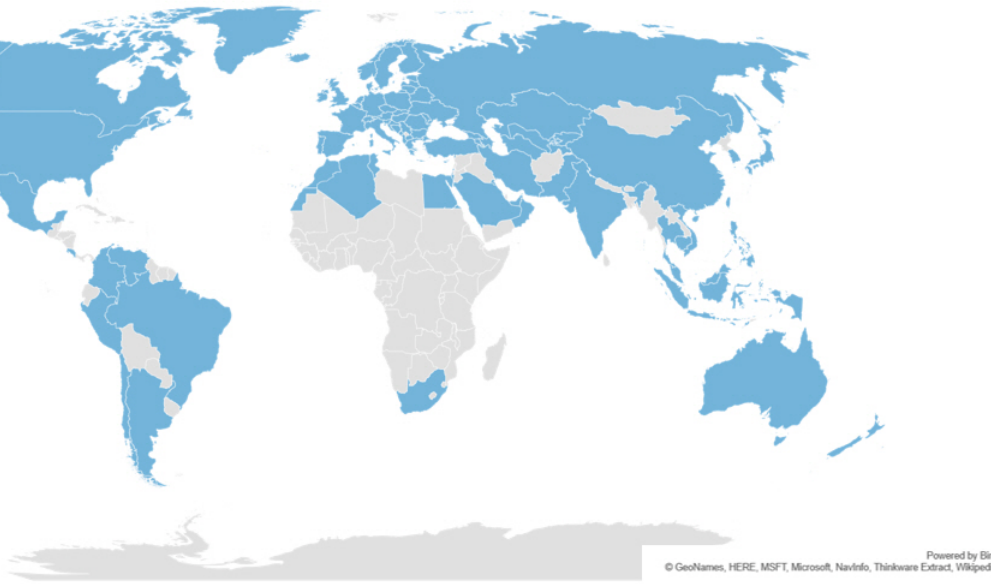
**Munich, Germany, ~55 FTEs**
Various operating functions

# Robust IP Portfolio

## Immatics' Patent Estate – Territorial Coverage

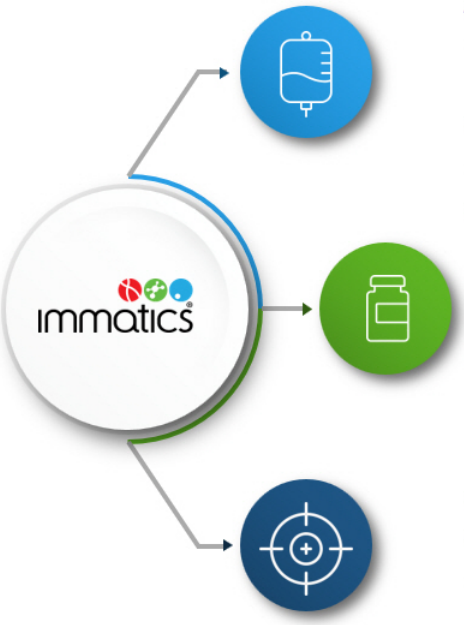
**Cancer targets, TCRs and technology protected by:**

- **5,800 applications and patents filed in all major countries and regions**
- **>115 patent families**
- **>2,000 granted patents, thereof >500 granted patents in the US**



# Near-Term Value Drivers and Development Milestones

## Clinical Expansion of TCR Bispecifics and the Next-generation of TCR-T



### Advance clinical development of ACTengine® candidates

- Multiple IMA203 Ph1b expansion cohorts:
  Monotherapy, checkpoint combination, 2nd-gen approach IMA203CD8
- Next IMA203 monotherapy data read-out in 2H 2022
- Initial data read-out for checkpoint combination, IMA203CD8 YE 2022
- Advance IMA204 to the clinic, submission of IND application YE 2022

### Further clinical development of TCER® candidates

- Start of Ph1 trial for IMA401 (MAGEA4/8) in May 2022
- Manufacturing of IMA402 clinical batch in 2H 2022, clinical trial in 2023
- Innovative TCER® program(s) IMA40X in preclinical development

### Leverage full potential of targeting PRAME

- Focused & accelerated development of IMA203 expansion cohorts
- Develop IMA402, an off-the-shelf TCER®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