PRESS RELEASE

Immatics Reports Clinical Responses across Multiple Solid Tumor Types in Ongoing ACTengine® IMA203 Phase 1a Trial Targeting PRAME

Company to host conference call on Tuesday, November 9 at 8:30 am EST

- Dose escalation for cell therapy candidate ACTengine® IMA203 ongoing; dose level 3 completed at doses below 1 billion transduced cells
- Objective responses (RECIST 1.1) observed in 8/16 patients (50%) across multiple solid cancer types, with 8/13 responders (62%) treated at dose levels 2 and 3
- High T cell engraftment and persistence; clinical response associated with tumor infiltration
- Transient and manageable treatment-emergent adverse events; no higher-grade cytokine release syndrome or neurological toxicities observed
- IMA203 clinical data will be presented as late-breaking oral presentation at the SITC Annual Meeting on Saturday, November 13 at 12:00 pm EST

Houston, Texas and Tuebingen, Germany, November 9, 2021 – Immatics N.V. (NASDAQ: IMTX, "Immatics"), a clinical-stage biopharmaceutical company active in the discovery and development of T cell-redirecting cancer immunotherapies, today announced an interim clinical data update from its TCR-engineered cell therapy (TCR-T) approach ACTengine® IMA203 targeting PRAME. Data from patients treated at the first three of four dose levels of the ongoing IMA203 Phase 1a dose escalation study show a high preliminary objective response rate (partial responses according to RECIST 1.1) at doses below 1 billion total transduced cells. The data will be presented as a late-breaking oral presentation on Saturday, November 13 at 12:00-12:15 pm EST at the 36th Annual Meeting of the Society for Immunotherapy of Cancer (SITC). In addition, Immatics will present preclinical proof-of-concept data for its next-generation IMA203CD8 candidate at the SITC Annual Meeting on Friday, November 12 and will provide an overall update on all IMA200 programs including IMA201 (MAGEA4/A8) and IMA202 (MAGEA1) in a conference call on November 9, 2021 at 8:30 am EST.

Key clinical findings from IMA203 Phase 1a trial

In the ongoing ACTengine® IMA203 trial, Immatics is treating advanced solid cancer patients utilizing TCR-T cells directed against an HLA-A*02-presented peptide derived from preferentially expressed antigen in melanoma (PRAME). PRAME is homogenously expressed and highly prevalent across several solid cancer indications. The chosen PRAME target peptide has been identified by Immatics' proprietary mass spectrometry-based target discovery platform

XPRESIDENT®, demonstrating natural and specific occurrence of the target on tumors at high copy numbers.

Clinical and biological activity: *IMA203 demonstrates objective responses (RECIST 1.1.) at low cellular doses across several solid cancer types*

- At data cut-off on October 5, 2021, 18 patients received ACTengine® IMA203 T cells across dose level 1 (DL1) to dose level 4 (DL4).
- All patients were heavily pretreated with a median of 4 lines of prior systemic treatment.
- 16 patients were evaluable for tumor response analysis according to RECIST 1.1 with at least one post-treatment tumor assessment at the time of data cut-off. All 16 patients received dose levels 1 to 3 - below 1 billion total transduced cells. For the remaining 2 patients, the first tumor response assessment is still pending.
  - 15 out of 16 patients (94%) achieved disease control. Tumor shrinkage was observed in 14 patients (88%).
  - 8 out of 16 patients (50%) showed objective responses; onset of responses in all cases was detected within 6 weeks following infusion of IMA203 T cells.
  - All responses occurred above DL1; 8 out of 13 patients (62%) treated at DL2[1] and DL3 receiving up to 0.59 billion total transduced cells had objective partial responses. Responses were observed in patients with synovial sarcoma, malignant melanoma, uveal melanoma, and head and neck cancer.
  - As of data cut-off, partial responses were confirmed in subsequent scans in two synovial sarcoma patients and one uveal melanoma patient.
- Longer follow-up is required for patients infused at higher dose levels DL3 and DL4 are required to assess response durability and response rate at target dose.
- IMA203 continues to show high levels of T cell engraftment, persistence, and tumor infiltration at first three dose levels. Clinical response was associated (p=0.016) with infiltration of IMA203 T cells into the tumor tissue and showed an emerging trend towards higher peak vector copies of IMA203 T cells in blood (p=0.065) – supporting the mechanism-of-action.
- The ACTengine® IMA203 trial is currently recruiting patients to the 4th and highest dose level (up to approximately 2.5 billion total transduced cells) of the Phase 1a dose escalation cohort.

Preliminary Objective Response Rates (ORR; RECIST 1.1, confirmed and unconfirmed)

Dose Level	ORR

[1] DL2 here includes patients dosed with DL2, EC1 and EC2 (EC1: Enrichment cohort with intermediate dose level between DL1 and DL2 , EC2: between DL2 and DL3)

DL1	0/3 (0%)
DL2[1]	6/10 (60%)
DL3	2/3 (67%)

	All dose levels	**DL2[1] & DL3**
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%)

Safety: *IMA203 treatment was well tolerated with transient and manageable treatment-emergent adverse events (TEAEs)*

- At data cut-off on October 5, 2021, 19 patients were evaluable for safety analysis.
- Most frequent TEAEs included expected transient cytopenia (Grade 1-4) associated with lymphodepletion and transient low to moderate (Grade 1-2) cytokine release syndrome (CRS) or immune effector cell associated neurotoxicity syndrome (ICANS).
- No additional dose limiting toxicities (DLT) were observed since the previous data release on March 17, 2021.

"We observed multiple clinical responses early-on during dose escalation and saw anti-tumor activity at much lower doses than would have been expected in the field of TCR-T. IMA203 T cells will now be tested at the target dose level and have the potential to provide meaningful benefits to patients with advanced stages of cancer," commented **Martin Wermke, MD,** Coordinating Investigator of Immatics' ACTengine® trials in Germany and Head of the Early Clinical Trial Unit of the National Center for Tumor Diseases at the University Hospital Carl Gustav Carus in Dresden, Germany. "I am looking forward to presenting this exciting data set to the scientific and medical community at SITC and to supporting the further development of IMA203."

Following the completion of the dose escalation portion of the study (Phase 1a) and the determination of the recommended Phase 2 dose (RP2D), Immatics plans to expand the IMA203 study to multiple Phase 1b (dose expansion) study cohorts:

- IMA203 as a monotherapy
- IMA203 in combination with an immune checkpoint inhibitor

- IMA203CD8, next-generation TCR-T where IMA203 cells are co-transduced with a CD8 co-receptor

Cedrik Britten, M.D., Chief Medical Officer at Immatics, commented: "The unexpected high clinical response rate in PRAME-positive patients before reaching our target cell dose has shifted our expectations of what cell therapy could potentially achieve in solid cancers. This is a very promising first step, which encourages us to double down efforts for a focused development strategy of our programs targeting PRAME. Our immediate next steps aim to maximize the benefit for PRAME-positive patients through (1) ACTengine® IMA203 monotherapy at target dose, (2) combination with checkpoint inhibitors, and (3) our efficacy-enhanced next-gen TCR-T approach ACTengine® IMA203CD8. In addition, we are gearing up for clinical testing of our off-the-shelf Bispecifics program, TCER® IMA402 targeting PRAME, which has the potential of delivering transformational benefits for patients, combined with the advantages of easy and fast supply at significantly reduced cost of goods."

Preclinical update on next-generation ACTengine® IMA203CD8

IMA203CD8 consists of IMA203-engineered T cells targeting PRAME co-transduced with CD8$\alpha\beta$, a T cell co-receptor that plays an important role during T cell antigen recognition and T cell activation. The IMA203CD8 product candidate has the potential to harness the potency of CD4 T cells. Engagement of CD4 T cells, in addition to CD8 T cells, might further enhance depth and durability of anti-tumor response and clinical outcome of TCR-T in solid cancer patients.

- Immatics has exclusively licensed the CD8$\alpha\beta$ technology from Baylor College of Medicine in Houston, Texas.
- IMA203CD8 product candidate demonstrates enhanced anti-tumor activity in preclinical proof-of-concept data, which will be presented on-site at the SITC Annual Meeting on Friday, November 12, 2021 between 7 am - 8:30 pm EST as well as virtually throughout the duration of the conference. The poster will also be available on Immatics' website following the poster presentation.
- IND submission for IMA203CD8 cohort is expected in the first half of 2022.

Further updates on the ACTengine® IMA200 Programs

IMA201 (MAGEA4/A8) and IMA202 (MAGEA1)

- The dose escalation Phase 1a study with ACTengine® IMA201 and IMA202 product candidates directed at MAGEA4/8 and MAGEA1 HLA-A*02 peptides respectively, continue to advance with IMA202 at dose level 3 and IMA201 at dose level 2.
- At data cut-off on September 17, 2021, 12 heavily pretreated patients have been treated; 8 out of 12 patients showed disease control. Tumor shrinkage was observed in 6 patients.

- All treatment-emergent adverse events (TEAEs) for both IMA201 and IMA202 continue to be transient and manageable. No dose limiting toxicities (DLT) or higher grade CRS/ICANS have been observed.
- The next step in the IMA201 and IMA202 trials is to complete dose escalation including target dose (DL3).

IMA204 (COL6A3 exon 6)

- ACTengine® IMA204 is a potential first-in-class TCR-T directed against COL6A3 exon 6, a novel tumor stroma target highly expressed in several solid cancers. IMA204 utilizes a next-generation CD8-independent TCR with full functionality in both CD4 and CD8 T cells.
- IND-enabling studies are close to completion. Submission of the IND application for IMA204 is now expected in 2022 to allow accelerated initiation of the multiple ACTengine® IMA203 Ph1b cohorts.

[1]DL2 here includes patients dosed with DL2, EC1 and EC2 (EC1: Enrichment cohort with intermediate dose level between DL1 and DL2 , EC2: between DL2 and DL3)

Immatics conference call

Immatics will host a conference call on Tuesday, November 9, 2021 at 8:30 am EST / 2:30pm CET to discuss these clinical data and the company's comprehensive strategy to target PRAME via different programs. The webcast and presentation can be accessed directly through this link. Participants may also access the slides and the webcast on the Immatics website in the Investors section under "Presentations" at www.investors.immatics.com/events-presentations. A replay of the webcast will be made available shortly after the conclusion of the call and archived on the Company's website for at least 90 days.

About Immatics' PRAME Programs

Immatics' PRAME programs are directed against an HLA-A*02-presented peptide derived from preferentially expressed antigen in melanoma (PRAME), a protein frequently expressed in a large variety of solid cancers – such as uterine carcinoma, synovial sarcoma, melanoma, ovarian carcinoma, uveal melanoma, squamous NSCLC, breast carcinoma and HNSCC – thereby supporting the programs' potential to address a broad cancer patient population. Immatics' PRAME peptide demonstrates a high copy number per tumor cell and is homogenously and specifically expressed in tumor tissue. The peptide has been identified and characterized by Immatics' proprietary mass spectrometry-based target discovery platform XPRESIDENT®. Through its proprietary TCR discovery and engineering platform XCEPTOR®, the Company has generated a highly specific T cell receptor (TCR) against this target for its TCR-based cell therapy approach, ACTengine® IMA203, and its TCR Bispecifics pipeline, TCER® IMA402. Both therapeutic

modalities have distinct attributes and mechanisms of actions suitable for cancer patients at different disease stages and tumor types.

ACTengine® IMA203 is currently being evaluated in an ongoing Phase 1a dose escalation cohort utilizing a 3+3 design with four increasing IMA203 dose levels to determine the Recommended Phase 2 Dose (RP2D). Immatics plans to expand the IMA203 study to multiple Phase 1b study cohorts including (1) IMA203 as a monotherapy, (2) IMA203 in combination with an immune checkpoint inhibitor and (3) IMA203CD8, a next-generation cell therapy where IMA203 engineered T cells are co-transduced with a CD8$\alpha\beta$ co-receptor.

TCER® IMA402 is a PRAME-specific "off-the-shelf" biologic that leverages the body's immune system by redirecting and activating T cells towards cancer cells. TCER® IMA402 has previously demonstrated anti-tumor activity against PRAME-positive cancer cells in an *in vivo* mouse model leading to consistent tumor regression including complete responses.

About ACTengine® programs

ACTengine® is a personalized approach for patients with advanced solid tumors. The patient's own T cells are genetically engineered to express a novel, proprietary TCR directed against a defined cancer target. The modified T cells are then reinfused into the patient to attack the tumor, an approach also known as TCR-T. ACTengine® programs IMA201 (NCT03247309), IMA202 (NCT03441100) and IMA203 (NCT03686124) are currently in clinical development in the US and in Germany. The objective of the three Phase 1 clinical trials is to evaluate safety, tolerability and initial signs of clinical and biological efficacy in target-positive solid cancer patients. IMA204 is currently in pre-clinical development. All ACTengine® product candidates can be rapidly manufactured utilizing a proprietary manufacturing process designed to enhance T cell engraftment and persistence *in vivo.*

The ACTengine® T cell products are manufactured at the Evelyn H. Griffin Stem Cell Therapeutics Research Laboratory in collaboration with UTHealth. The ACTengine® IMA200 Programs are co-funded by the Cancer Prevention and Research Institute of Texas (CPRIT).

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About Immatics

Immatics combines the discovery of true targets for cancer immunotherapies with the development of the right T cell receptors with the goal of enabling a robust and specific T cell response against these targets. This deep know-how is the foundation for our pipeline of Adoptive Cell Therapies and TCR Bispecifics as well as our partnerships with global leaders in the

pharmaceutical industry. We are committed to delivering the power of T cells and to unlocking new avenues for patients in their fight against cancer.

For regular updates about Immatics, visit www.immatics.com. You can also follow us on Twitter and LinkedIn.

Forward-Looking Statements:
Certain statements in this press release may be considered forward-looking statements. Forward-looking statements generally relate to future events or Immatics' future financial or operating performance. For example, statements concerning the timing of product candidates and Immatics' focus on partnerships to advance its strategy 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 by 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 filings with 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. Immatics undertakes no duty to update these forward-looking statements. All the scientific and clinical data presented within this press release are – by definition prior to completion of the clinical trial and a clinical study report – preliminary in nature and subject to further quality checks including customary source data verification.

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