PRESS RELEASE

Immatics Reports Interim Clinical Data Update on ACTengine® IMA203 TCR-T Monotherapy Targeting PRAME

*Company to host **conference call** today, October 10, at 8:30 am EDT / 2:30 pm CEST*

- Clinical validation of PRAME as multi-tumor target with large potential for TCR-based therapies: confirmed responses in different solid cancers, in patients with high and low PRAME expression
- Update covers data from 27 patients in completed Phase 1a dose escalation and first 5 patients in Phase 1b dose expansion (cohort A) treated with IMA203 monotherapy
- Confirmed objective response rate (cORR): 50% (6/12) at target dose or above with at least 1 billion infused TCR-T cells across Phase 1a and 1b; thereof 80% cORR (4/5) in Phase 1b patients alone with all responses ongoing at data cut-off
- Confirmed responses across different solid tumor types: cutaneous melanoma, ovarian cancer, head and neck cancer, uveal melanoma, and synovial sarcoma
- Treatment with IMA203 continues to show manageable tolerability; biological data including T cell engraftment, persistence and tumor infiltration consistent with clinical data
- IMA203 TCR-T is part of Immatics' strategy to leverage the full clinical potential of targeting PRAME; next data read-outs on IMA203 monotherapy, IMA203 in combination with a checkpoint inhibitor and 2nd generation IMA203CD8 planned during 2023

Houston, Texas and Tuebingen, Germany, October 10, 2022 – 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 a clinical data update for the IMA203 monotherapy covering the completed Phase 1a dose escalation part of the trial and initial data from the first 5 patients in the ongoing Phase 1b dose expansion cohort A (monotherapy). In the Phase 1 trial with ACTengine® IMA203, Immatics is treating recurrent and/or refractory solid cancer patients utilizing TCR-T cells directed against an HLA-A*02-presented peptide derived from PRAME, which is frequently expressed across several solid cancer indications. Overall, IMA203 continues to be well tolerated and achieved confirmed objective responses across multiple solid cancers such as cutaneous melanoma, ovarian cancer, head and neck cancer, uveal melanoma, and synovial sarcoma. Encouraging early signs of

improved durability were seen with a 50% (6/12) confirmed objective response rate, when patients were infused at the target dose or above with more than 1 billion TCR-T cells.

Key clinical findings from IMA203 TCR-T monotherapy

The data obtained during the Phase 1a and Phase 1b cohort A trial provide clinical validation of PRAME as a highly promising T cell target for solid cancers. Confirmed clinical responses were observed at high and low PRAME-expression levels above threshold, indicating IMA203's potential to provide clinical benefit for all PRAME biomarker-positive cancer patients. The predicted high PRAME prevalence across key indications has so far been supported by prevalence rates obtained during the clinical screening of patients.

Moving from Phase 1a to Phase 1b, Immatics has continued to introduce planned improvements that may influence clinical outcomes including (1) applying higher cell doses (DL4 and exploratory DL5), (2) optimizing the cell product through manufacturing enhancements and (3) working with disease area experts to gradually reduce the fraction of very heavily pre-treated patients with extreme tumor burden who have exhausted standard of care and have undergone multiple clinical trials. In addition, the focus in Phase 1b is also shifting from initial objective response rate (ORR) determined at the ~6-week scan to confirmed ORR determined at the ~12-week scan.

Preliminary Objective Response Rates (ORR; RECIST 1.1) in Phase 1a and Phase 1b Cohort A

	Phase 1a		Phase 1a + Phase 1b	Phase 1b only
	All pts (DL1-4)	DL4 pts only [1]	DL4/DL5 pts only[1]	All pts (DL4/DL5)[1]
Patients Treated	27	7	12	5
ORR (~week 6)	48% (13/27)	57% (4/7)	67% (8/12)	80% (4/5)
cORR (~week 12)[2]	19% (5/27)	29% (2/7)	50% (6/12)*	80% (4/5)*

*[1] All patients received >1 billion total TCR-T cells; [2] confirmed ORR (cORR), * 1 patient with SD at ~6-week scan with pending ~12-week scan considered as non-responder for cORR; DL – dose level*

Positively evolving durability profile for IMA203 was observed at higher doses: 6 of 12 patients (50%) treated with more than 1 billion infused TCR-T cells (DL4 and DL5) in the Phase 1a and Phase 1b cohort A part of the trial experienced a confirmed objective response (partial response according to RECIST 1.1). In the Phase 1b part of the trial alone, 4 of 5 patients (80%) had a confirmed objective response which were all ongoing at the timepoint of data cut-off.

"The data presented today highlight the clinical potential of PRAME as one of the most promising multi-tumor targets to achieve meaningful benefits for a large cancer patient population," commented Cedrik Britten, MD, Chief Medical Officer at Immatics. "In addition to this first data from IMA203 monotherapy today, we are awaiting data from two additional dose expansion cohorts: IMA203 together with an immune checkpoint inhibitor and our 2nd generation product candidate IMA203CD8. As we continue to shift our focus from Phase 1a to Phase 1b, we look forward to reporting meaningful data throughout 2023, including safety and response rates, as well as durability of response with a longer follow-up time. In addition, we are excited to start a first-in-human trial with our half-life extended Bispecific against PRAME, TCER® IMA402, also in 2023."

Safety data for IMA203 monotherapy across Phase 1a and Phase 1b: *Treatment with IMA203 continues to show manageable tolerability profile.*

- At data cut-off on September 6, 2022, 32 patients were infused with IMA203 TCR-T cells.
- Most frequent treatment-emergent adverse events (TEAEs) were as expected for cell therapies.
- All patients experienced expected cytopenia (Grade 1-4) associated with lymphodepletion. 31 patients (97%) experienced cytokine release syndrome (CRS) of any grade: 29 patients had low to moderate (Grade 1-2), and 2 patients had Grade 3 CRS that occurred in Phase 1a; both recovered to Grade ≤2 after 3 and 4 days. 5 patients (16%) experienced a low to moderate (Grade 1-2) immune effector cell associated neurotoxicity syndrome (ICANS). No dose-dependent increase of CRS and ICANS was observed.
- No additional dose limiting toxicities (DLT) were observed since the initial data release in March 2021.

Phase 1a - Clinical activity: *IMA203 demonstrated a high initial objective response rate in several solid tumor types.*

- At data cut-off on September 6, 2022, a total of 27 patients received IMA203 monotherapy in the Phase 1a dose escalation trial:
    - High initial objective response rate (ORR; partial responses according to RECIST 1.1) of 48% (13/27) was observed at the first CT scan post infusion at ~week 6, and a confirmed ORR of 19% (5/27) the second CT scan at ~week 12.
    - 7 out of 27 patients received doses above 1 billion TCR-T cells (DL4); initial ORR was 57% (4/7) and confirmed ORR was 29% (2/7) in these patients.
- Patients were heavily pre-treated with a mean of 4.2 lines of prior systemic treatment and a particularly high baseline tumor burden.

- The provisional recommended Phase 2 dose (RP2D) for Phase 1b dose expansion was determined to be DL4.

Phase 1b Cohort A - Clinical activity: *IMA203 monotherapy demonstrates high confirmed objective response rate of 80% with early signs of prolonged durability.*

- At data cut-off on September 6, 2022, 5 patients received IMA203 monotherapy at DL4 and DL5 in the Phase 1b cohort A dose expansion trial:
    - 4 out of 5 patients (80%) experienced an initial objective response at ~week 6 (PR according to RECIST 1.1).
    - In all 4 patients, objective responses were confirmed at ~week 12 and were ongoing at data cut-off: confirmed ORR was 80% (4/5).
    - All 4 responses were observed in different solid tumor types: cutaneous melanoma, ovarian cancer, uveal melanoma and head and neck cancer.
- Patients were heavily pre-treated with a mean of 4.0 lines of prior systemic treatment and high to moderate baseline tumor burden.

ACTengine® IMA203 is currently being evaluated in an ongoing Phase 1b study including three expansion cohorts: (A) IMA203 as a monotherapy, (B) IMA203 in combination with an immune checkpoint inhibitor and (C) IMA203CD8, a next-generation cell therapy where IMA203 engineered T cells are co-transduced with a CD8$\alpha\beta$ co-receptor. Further data read-outs on the individual cohorts are planned throughout 2023. In addition to the ACTengine® programs, Immatics is addressing PRAME-positive cancers with a second therapeutic modality: TCR Bispecifics. The company's TCER® IMA402 is a next-generation, half-life extended TCR Bispecific which will enter the clinic in 2023. Both approaches, ACTengine® and TCER®, are distinct therapeutic modalities that have the potential to provide innovative treatment options for a variety of cancer patient populations with different medical needs.

Immatics conference call

Immatics will host a conference call today, October 10, 2022, at 8:30 am EDT / 2:30pm CEST to discuss these clinical data. 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 IMA203 and target PRAME

ACTengine® IMA203 T cells 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, thereby supporting the programs' potential to address a broad cancer patient population. Immatics' PRAME peptide is present at 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®, Immatics has generated a highly specific T cell receptor (TCR) against this target for its TCR-based cell therapy approach, ACTengine® IMA203.

About ACTengine®

ACTengine® is a personalized cell therapy 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. The approach is also known as TCR-engineered cell therapy (TCR-T). All Immatics' 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® 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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