PRESS RELEASE

Immatics Announces First Patient Treated with ACTengine® IMA203 TCR-T in Combination with Checkpoint Inhibitor Opdivo® (nivolumab) in Patients with Advanced Solid Tumors

- The Phase 1b dose expansion cohort will evaluate safety, biological activity and initial anti-tumor activity of IMA203 TCR-T targeting PRAME in combination with nivolumab[1], a PD-1 immune checkpoint inhibitor, in patients with multiple solid tumors
- Initiation of the combination treatment follows positive interim results from the IMA203 monotherapy Phase 1a dose escalation cohort and determination of provisional recommended phase 2 dose
- IMA203 targets an HLA-A*02-presented peptide derived from the protein PRAME that is highly prevalent and homogenously expressed at high target copy numbers across several solid cancer indications
- IMA203 and nivolumab combination is part of Immatics' strategy to realize the full clinical potential of IMA203 TCR-T targeting PRAME; initial data read-out is planned for YE 2022

Houston, Texas and Tuebingen, Germany, May 18, 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 that the first patient has been dosed in the IMA203 and nivolumab combination Phase 1b dose expansion cohort. This cohort will evaluate Immatics' TCR-engineered cell therapy (TCR-T) approach ACTengine® IMA203 targeting an HLA-A*02-presented peptide derived from PRAME, in combination with Bristol Myers Squibb's PD-1 checkpoint inhibitor nivolumab, in patients with advanced solid tumors. The objectives of the study will be to evaluate the safety, biological activity, and initial anti-tumor activity of the IMA203 and nivolumab combination.

"Initiating the second of three dose expansion cohorts is an important milestone in our comprehensive approach to target PRAME. It builds on the successful completion of the dose escalation part of the Phase 1 trial and the early positive clinical data we observed with IMA203," said Cedrik Britten, Chief Medical Officer at Immatics. "We are excited to elucidate how the combination with an immune checkpoint inhibitor could enhance the potency of our engineered

[1] Opdivo® (nivolumab) is a trademark of Bristol-Myers Squibb Company

IMA203 T cells. We also look forward to initiating the third Phase 1b cohort with IMA203CD8, our next generation approach that additionally harnesses the power of CD4 T cells."

The IMA203 and nivolumab combination Phase 1b dose expansion cohort is expected to enroll up to 18 patients with different types of solid tumors across 10 clinical trial sites in Germany and the U.S. Bristol Myers Squibb will provide Immatics, the study sponsor of the combination trial, with nivolumab as part of a clinical supply agreement. Nivolumab has become the standard of care treatment for many solid cancer indications and we believe it fits well into the IMA203 treatment and observation schedule. According to the clinical trial protocol for ACTengine® IMA203, nivolumab will be administered at regular intervals following IMA203 treatment. The primary endpoint of this cohort is to assess the safety of the combination. Anti-tumor activity resulting from the drug combination is a secondary endpoint, which will be assessed through imaging and measured according to the standard Response Evaluation Criteria In Solid Tumors (RECIST).

The combination treatment of IMA203 and nivolumab is part of Immatics' strategy to realize the full clinical potential of IMA203 TCR-T targeting PRAME. Based on this strategy, the company has expanded the IMA203 trial to a total of three Phase 1b dose expansion cohorts – each designed to assess observed objective response rates, demonstrate durability of response, and form the basis for enrollment in pivotal studies. In addition to the IMA203 and nivolumab combination (first patient treated, initial data read-out planned for YE 2022), Immatics will also investigate IMA203 as monotherapy (patient enrollment ongoing, next data read-out planned in 2H 2022) and IMA203CD8, a next-generation cell therapy where IMA203-engineered T cells are co-transduced with a CD8αβ co-receptor (initiation planned for 2Q 2022, initial data read-out planned for YE 2022).

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 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 Instagram, 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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