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

April 1, 2021

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 | \boxtimes | Form 40-F |
|-------------|-------------|-------------|
| 101111 20-1 | | 101111 40-1 |

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(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 April 1, 2021, Immatics N.V. (the "Company") made available an updated investor presentation on its website. A copy the investor presentation is attached hereto as Exhibit 99.1. The fact that this presentation is being made available and filed 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 April 1, 2021 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. 99.1

Description Investor presentation dated April 2020

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: April 1, 2021

IMMATICS N.V.

By: Name: Title:

/s/ Harpreet Singh Harpreet Singh Chief Executive Officer





Unlocking Immunotherapies for Solid Cancer Patients Immatics Corporate Presentation, April 2021

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 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 (SEC). Nothing in this presentation should be regarded as a representation by any person that the forward-looking statements set forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements, which speak only as of the dat 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.

Immatics

Unlocking Immunotherapies for Solid Cancer Patients



Two Transformative Treatment Modalities: Adoptive Cell Therapies and TCR Bispecifics



Highly Differentiated Technologies to Identify True Cancer Targets and the Right TCRs



Strategic Collaborations with World-leading Industry Players

Limitations of Current Immunotherapies in Solid Cancer Patients



Most cancer patients do not benefit from current immuno-oncology approaches



Intro ¹ Chalmers et al., 2017; ²SEER Cancer Statistics Review, 1975-2017, Estimated New Cancer Cases for 2020

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The Immatics Approach to Disrupt Current Tumor Treatment Paradigms Based on 5 Defined Principles



- 1. True Cancer Targets & Matching Right TCRs
- 2. Targeted Approach in Two Distinct Modalities: Adoptive Cell Therapy & TCR Bispecifics

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- 3. Optimized Manufacturing to Enhance T cell Persistence & Efficacy
- 4. Disrupting the Tumor Microenvironment by Targeting Stroma
- 5. Combating Tumor Heterogeneity & Escape through Multi-Target Approach

Immatics' Targeted Approach in Two Distinct Modalities



Immatics' Pipeline



| Modality | Product Candidate | Status | Preclinical | Phase 1a ¹ | Phase 1b1 | Phase 2 | Phase 3 |
|-------------------|-----------------------------------|---------------------------------------|-------------|-----------------------|-----------|---------|---------|
| | ACTengine® IMA201 (MAGEA4/8) | Proprietary | | | | | |
| | ACTengine* IMA202 (MAGEA1) | Proprietary | | | | | |
| Autologous | ACTengine* IMA203 (PRAME) | Proprietary | | | | | |
| ACT | ACTengine* IMA204 (COL6A3) | Proprietary | | | | | |
| | ACT programs (Undisclosed) | ر ^{ال} Bristol Myers Squibb" | | | | | |
| | ACT programs (Undisclosed) | gsk | | | | | |
| Allogeneic ACT | ACTallo* IMA301 (Undisclosed) | Proprietary | | | | | |
| | TCER® IMA401 (MAGEA4/8) | Proprietary | | | | | |
| Bispecifics | TCER® IMA402 (Undisclosed) | Proprietary | | | | | |
| | Bispecific programs (Undisclosed) | AMGEN' | | | | | |
| | Bispecific programs (Undisclosed) | Genmab | | | | | |

Intro ¹ Phase 1a: Dose escalation, Phase 1b: Dose expansion

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Significant Adressable Solid Cancer Patient Populations

High Prevalence of MAGE4/8, MAGEA1 and PRAME in Major Tumor Indications







Adoptive Cell Therapy

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Key Features of Our Clinical ACTengine® Programs

Differentiated Targets, TCRs and Cellular Manufacturing Designed to Enhance Safety and Activity

| | IMA201 | IMA202 | IMA203 | |
|-------------------|--|---|--|--|
| | ł | ILA-A*02-presented peptide derived from | n | |
| Peptide | MAGEA4/8 | MAGEA1 | PRAME | |
| Target | shown to be naturally and specifically | presented on native tumor tissues at diffe | erentiated high peptide target density | |
| | 100-1,000 copies/cell | 50-900 copies/cell | 100-1,000 copies/cell | |
| coll Pocontor | High-a | ffinity specific TCRs with high functional a | avidity ² | |
| (TCR) | Natural TCR Natural TCR | | Pairing-enhanced TCR | |
| (10.1.) | ~10 ng/ml | ~15 ng/ml | ~5 ng/ml | |
| T cell Product | Autologous T cells applying proprietary short-term manu | gene-engineered with lentiviral vector e facturing process designed to achieve bet | xpressing TCR and tter T cell engraftment and persistence | |
| | 7-10 days ³ | 7-10 days ³ | 6-7 days ³ | |

ACT ¹ Applying XPRESIDENT ² Applying XCEPTOR® 1 nples analyzed nd expansion) without release testing 10

ACTengine® Clinical Programs – Clinical Overview & Patient Flow

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High Enrollment Efficiency through Combined Screening for Three Targets



ACTengine® Clinical Programs – Safety Profile

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Treatment-emergent Adverse Events Are Manageable, Transient and Expected for Cell Therapies

Adverse Events:

- Most frequent adverse events were transient cytopenias associated with lymphodepletion
- Transient CRS³ (Grade 1-2) in 13/14 infused patients.
- Transient Grade 1 or 2 ICANS in 3/14 infused patients, resolved within 48h in all cases

Dose-limiting toxicities:

- IMA201 and IMA202: No DLT⁵ observed
- IMA203: One transient, Grade 3 atrial fibrillation with onset on day 5 post infusion that resolved within 48h after onset. DLT triggered expansion of dose level 2 from three to six patients

All treatment-emergent adverse events (TEAEs) with grade 1-2 occurring in at least 5 patients (incidence 231.3%) and additionally all events with grade 3-5 regardless of relatedness to study treatment are presented. Data source: clinical and safety database; hematological adverse events were derived from lab values. Grades were determined according to Mational Cancer Institute Common Terminology Christia of Adverse Events, version 5.0. Grades for CRS and ICANS were determined according to CARTOX criteria (Neelapu et al, 2018). Patients are counted only once per adverse event and seventy classification.

| TEAEs by maximum severity (N=16) | | | | | |
|--|-------|--------|-----|--------|--|
| | All G | irades | ≥Gi | rade 3 | |
| Adverse event | No. | % | No. | % | |
| Patients with any adverse event | 16 | 100.0 | 16 | 100.0 | |
| Lymphopenia | 16 | 100.0 | 16 | 100.0 | |
| Leukopenia | 16 | 100.0 | 16 | 100.0 | |
| Neutropenia | 16 | 100.0 | 15 | 93.8 | |
| Anaemia | 16 | 100.0 | 10 | 62.5 | |
| Thrombocytopenia | 15 | 93.8 | 6 | 37.5 | |
| Nausea | 11 | 68.8 | 0 | 0 | |
| Pyrexia | 8 | 50.0 | 0 | 0 | |
| Vomiting | 6 | 37.5 | 1 | 6.3 | |
| Fatigue | 5 | 31.3 | 1 | 6.3 | |
| Hypoxia | 5 | 31.3 | 1 | 6.3 | |
| Hyponatraemia | 5 | 31.3 | 0 | 0 | |
| Dyspnoea ¹ | 3 | 18.8 | 1 | 6.3 | |
| Atrial fibrillation | 2 | 12.5 | 1 | 6.3 | |
| Hypertension | 2 | 12.5 | 1 | 6.3 | |
| Muscular weakness | 2 | 12.5 | 1 | 6.3 | |
| Pleural effusion | 2 | 12.5 | 1 | 6.3 | |
| Tumor pain | 2 | 12.5 | 1 | 6.3 | |
| Blood alkaline phosphatase increased | 1 | 6.3 | 1 | 6.3 | |
| Candida infection | 1 | 6.3 | 1 | 6.3 | |
| Corona virus infection | 1 | 6.3 | 1 | 6.3 | |
| Febrile neutropenia | 1 | 6.3 | 1 | 6.3 | |
| Infection | 1 | 6.3 | 1 | 6.3 | |
| Pneumonia ¹ | 1 | 6.3 | 1 | 6.3 | |
| Sepsis ² | 1 | 6.3 | 1 | 6.3 | |
| Adverse Events of Special Interest | | | | | |
| Cytokine release syndrome ³ | 13 | 81.3 | 0 | 0 | |
| ICANS ⁴ | 3 | 18.8 | 0 | 0 | |

Data cut-off – February 16, 2021

ACT ² Patient died from tumor progression and pneumonia 69 days after IMA202 T cell infusion (determined not related to any study medication ² Patient died from sensic of upproving origin and did not receive IMA203 T cells ³ CRS: Outpring release syndrome ⁴ ICANS: Imprune effect - Pebruary 10, 202.

ACTengine® Clinical Programs – Biological Activity

T cells Robustly Engraft, Persist and Infiltrate into Tumor after Infusion of Low Doses of ACTengine®



- Robust T cell engraftment and persistence post infusion until the end of the observation period as assessed by qPCR*
- Engineered T cells are detectable in serial tumor biopsies post T cell infusion in all evaluable patients by qPCR

Data cut-off – February 16, 2021

ACT * Up to 9 months (data not shown), UD: Undetected, NA: Not available, DL: Dose level, EC1: Enrichment cohort with intermediate dose level between DL1 and DL2 , TBD: To be determined 13

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ACTengine[®] Clinical Programs – Best Overall Response (BOR) Assessment

Disease Control in 9 out of 10 Patients at Dose Level 1 and 2 (below 1 Billion Transduced CD8 T cells)

| | IMA201 | | | IMA202 | | | | IMA | 203 | |
|--|----------------------|--|-------------------------|----------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Patient | 201-DL1-01 | 202-DL1-01 | 202-DL1-02 | 202-EC1-01 | 202-DL2-01 | 202-DL2-02 | 203-DL1-01 | 203-DL1-02 | 203-DL1-03 | 203-DL2-01 |
| Dose level | DL1 | DL1 | DL1 | EC1 | DL2 | DL2 | DL1 | DL1 | DL1 | DL2 |
| Total transduced cells ¹ | 0.11x10 ⁹ | 0.11x10 ⁹ | 0.09x10 ⁹ | 0.19x10 ⁹ | 0.51x10 ⁹ | 0.65x10 ⁹ | 0.12x10 ⁹ | 0.11x10 ⁹ | 0.08x10 ⁹ | 0.35x10 ⁹ |
| Age (gender) | 60 (M) | 33 (M) | 63 (F) | 64 (F) | 68 (F) | 49 (M) | 40 (F) | 63 (M) | 61 (F) | 57 (M) |
| Diagnosis | NSCLC | HNSCC | Squamous Cell Cancer | Melanoma | Squamous Cell Cancer | Melanoma | Head and N | leck Cancer | Ovarian Cancer | Synovial Sarcoma |
| Prior lines of systemic therapy | 4 | 5 | 6 | 4 | 3 | 7 | 6 | 4 | 7 | 2 |
| Prior lines of ICI ² treatment | 1 | 3 | 1 | 2 | 1 | 3 | 2 | - | 1 | ÷ |
| Disease status at infusion | | Patients with recurrent and/or refractory solid tumors | | | | | | | | |
| Best response RECIST1.1 | SD | SD | SD | SD | SD | PD | SD | SD | SD | PR ³ |

Data cut-off – February 16, 2021

¹ Total infused dose of transduced viable CD8 DL: Dose level, EC1: Enrichment cohort with in onfirmed as of data cut-of , SD: stable disease. PD r ACT





⁴ ³ RECIST1.1 response at timepoint of maximum in change of target lesions (week 12): PD due to growth of non-target lesion; ⁴ PR unconfirmed as of data cut-off

ACTengine® IMA204 – Targeting Tumor Stroma

Complete Tumor Eradication in vitro & in vivo1 by Affinity-enhanced IMA204 TCR Candidates



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



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One IMA204 TCR candidate leads to full functionality of both CD8 and CD4 T cells

- Final preclinical safety evaluation of two candidate TCRs ongoing
- IMA204 clinical trial application expected 2021

| ACT | ¹ In vivo data by Jim Riley, University of Pennsylvania, control: non-transduced T cells. TCR avidity and specificity data not shown, available in IMA204 presentation on Immatics website. | |
|-----|--|--|
| | | |

Combating Tumor Heterogeneity & Escape through Multi-Target Approach



A Multi-Step Approach towards Highly Personalized Multi-TCR-T Therapy



ACTengine® IMA200 Series – Summary and Future Directions



First Anti-tumor Activity Consistent with Robust Biological Activity during Early Phases of Dose Escalation

Key Findings



Transient and manageable treatmentemergent adverse events as expected for cell therapies



Robust T cell engraftment and persistence post infusion and tumor infiltration in all evaluable patients



Tumor shrinkage observed in 8/10 patients including one unconfirmed partial response



IMA204: Preclinical data: In vivo tumor eradication by targeting the tumor stroma with high-affinity TCRs

Next Steps

- IMA201, IMA202, IMA203 clinical trials
 - Complete Dose Escalation
 - Initiate Dose Expansion and treat patients at target dose
 - Update on patients treated at target dose expected for 2H2021
- IMA204 clinical trial application in 2H2021
- Preparation of first multi-TCR-T study

ACT ACTengine* programs are supported by a grant of the Cancer Prevention & Research Institute of Texas (CPRIT)

ACTallo® IMA301 – Towards Off-the-shelf ACT



Effective Redirection of $\gamma\delta$ T cells Using $\alpha\beta$ TCR







TCR Bispecifics



TCER[®] – Immatics' TCR Bispecifics

Off-the-shelf Biologics Linking Immune Cells to Tumor Cells



TCER®

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TCER® – Superior Proprietary TCR Bispecific Format

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Potency and stability of proprietary TCER® format is superior to six alternative TCR Bispecific formats¹

| TCER [®] ¹ Based on co | mparative preclinical testing |
|--|-------------------------------|
|--|-------------------------------|

TCER[®] – Preclinical POC for IMA401

IMA401 Targeting MAGEA4/8 Results in Tumor Eradication of Established Tumors

Preclinical Proof-of-Concept Data:

- High affinity TCR (2 nM) after >10,000-fold affinity-maturation via yeast display
- High potency at low concentrations in vitro and in vivo in two independent xenograft tumor models (NSCLC and melanoma)¹
- Distinguished specificity & broad therapeutic window (≥ 1,000-fold concentration difference between tumor vs. healthy cell reactivity)
- · Favorable pharmacokinetics with 10-11 days terminal half-life in mice

Favorable CMC Characteristics:

· Positive purity & stability characteristics with high production yields (>2 g/L)



Study day -14: transplantation of tumor cells Study day 1: human PBMC transplantation & start of IMA401 weekly treatment

TCER® ¹ Patient-derived LXFA 1012 (NSCLC, adenocarcinoma) tumor xenograft model in NOG mice; data not shown from cell line-derived Hs695T (melanoma cell line) tumor xenograft model in NOG mice



Advancing TCER® IMA401 Towards Clinical Development

Recent Achievements and Intended Next Steps for IMA401



CMC

- Manufacturing process development & pilot run completed
- Formulation development completed
- Next step: GMP run scheduled for 2Q2021

Regulatory

- Successful scientific advice with German regulatory authority¹
- Next step: Development on track for clinical trial application YE 2021

Clinical

 Basket trial with adaptive design for dose escalation & expansion cohorts Next step: First-in-human clinical trial in preparation

TCER® ¹ Equivalent to FDA pre-IND Meeting







Discovery Platforms

XPRESIDENT® – Discovery of True Cancer Targets

Quantitative, Ultra-Sensitive Mass Spectrometry Expertise Developed over Two Decades



3. Crypto-targets/Neoantigens: Novel target class which includes RNA-edited peptides & non-classical neoantigens

Technology ¹Target expression on cancer tissue with high target levels per tumor cell but not or to a far lower extent on normal tissues

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MAGEA4/8 Target in IMA201 and IMA401 Programs

Unique Target Discovery and Characterization Capabilities





>5-fold higher target density¹ than a commonly used MAGEA4 target peptide

| Technology | 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 | |
|------------|---|--|
|------------|---|--|

Development of the Right TCR – XCEPTOR®



Unique Cross-Talk between Target and TCR Discovery







Corporate Information & Milestones



Robust IP Portfolio Immatics' Patent Estate – Territorial Coverage



Strong, Focused and Highly Integrated Trans-Atlantic Organization





Houston, Texas, 80 FTEs



Tübingen, Germany, ~150 FTEs



Senior Leadership, Research and Development (Adoptive Cell Therapy), CMC, Clinical Operations, Regulatory Affairs, QA/QC, HR, Investor Relations Senior Leadership, Research and Development (XPRESIDENT®, XCEPTOR®, TCER®), Translational Development, Clinical Operations, Finance, HR, IT, QM

Munich, Germany, 20 FTEs



Senior Leadership, Business Development, Intellectual Property, Regulatory Affairs, Communications

FTE status as of YE2020

Experienced Global Leadership Team Across Europe and the US





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



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



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

Signature Dx)



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



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



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



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



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



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

Upcoming R&D Milestones in 2021

| | | 1H 2021 | 2H 2021 |
|--------------------------|---|-------------|---------|
| ACTengine® | IMA201, 202, 203: Initial Ph1a dose escalation read-out | | |
| | IMA201, 203: Additional Ph1a read-out | | |
| | IMA202: Initial Ph1b dose expansion read-out | | |
| | IMA204: IND [*] submission | | |
| TCER® | IMA401: IND [*] submission | | |
| | IMA402: Preclinical PoC & start GMP mf. activities | • | |
| | | | |
| Corporate *IND: May be i | nvestigational drug application with FDA or analogous clinical trial application (CTA) to a European regula | tory agency | |

Immatics Key Take-Aways

- Broadly positioned in TCR therapeutics space with two distinct treatment modalities: ACT & TCR Bispecifics
- ACTengine[®] (TCR-T) IMA200 Clinical Series
 - Proprietary cell manufacturing resulting in younger T cells for better engraftment & persistence
 - First anti-tumor activity observed in three TCR-T trials at early phases of dose escalation next readout in 2H21
- TCER® Leading TCR Bispecifics platform with antibody-like stability and half-life
 - Clinical trial application on track in 4Q21 for IMA401 program against high density target
- Differentiated target and TCR discovery platforms secured by a broad patent estate including >200 prioritized targets
- Multiple strategic collaborations with world-leading industry players incl. Amgen, Genmab, BMS and GSK
- Strong cash position of approx. US\$ 285m (as of December 31, 2020) with cash reach into 2023





Thank you

www.immatics.com

