9-Months 2019 Earnings Call

13 November 2019

Prof. Dolores J. Schendel, CEO/CSO
Axel Malkomes, CFO/CBO
Dr. Kai Pinkernell, CMO/CDO

"Safe Harbor" Statement

All of the information herein has been prepared by the Company solely for use in this presentation. The information contained in this presentation has not been independently verified. No representation, warranty or undertaking, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information or the opinions contained herein. The information contained in this presentation should be considered in the context of the circumstances prevailing at that time and has not been, and will not be, updated to reflect material developments which may occur after the date of the presentation. The Company may alter, modify or otherwise change in any manner the content of this presentation, without obligation to notify any person of such revision or changes.

This presentation may contain certain forward-looking statements and forecasts which relate to events and depend on circumstances that will occur in the future and which, by their nature, will have an impact on the Company's business, financial condition and results of operations. The terms "anticipates", "assumes", "believes", "can", "could", "estimates", "expects", "forecasts", "intends", "may", "might", "plans", "should", "projects", "will", "would" or, in each case, their negative, or other variations or comparable terminology are used to identify forward-looking statements. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in a forward-looking statement or affect the extent to which a particular projection is realised. Factors that could cause these differences include, but are not limited to, implementation of the Company's strategy and its ability to further grow, risks associated with the development and/or approval of the Company's products candidates, ongoing clinical trials and expected trial results, technology changes and new products in the Company's potential market and industry, the ability to develop new products and enhance existing products, the impact of competition, changes in general economy and industry conditions and legislative, regulatory and political factors. While we always intend to express our best judgment when we make statements about what we believe will occur in the future, and although we base these statements on assumptions that we believe to be reasonable when made, these forward-looking statements are not a guarantee of our performance, and you should not place undue reliance on such statements. Forward-looking statements are subject to many risks, uncertainties and other variable circumstances. Such risks and uncertainties may cause the statements to be inaccurate and readers are cautioned not to place undue reliance on such statements. Many of these risks are outside of our control and could cause our actual results to differ materially from those we thought would occur. The forward-looking statements included in this presentation are made only as of the date hereof. We do not undertake, and specifically decline, any obligation to update any such statements or to publicly announce the results of any revisions to any of such statements to reflect future events or developments.

Medigene – Key information

Company

- Based in Martinsried, near Munich, Germany
- ~ 140 employees
- €60.5 m cash*

Listing

- Frankfurt Stock Exchange (MDG1)
- 24.6 m shares outstanding
- ~ €150 m market cap**

Technology innovation

- **TCR discovery engine**
  Including target antigen selection
- **T cell and TCR functional enhancements**
  Co-stimulatory switch and iM-TCRs
- **Dendritic cell platform**
  Both vaccines and neoantigen identification
- **TCR specific antibodies (TABs)**
  Monitoring and therapeutics

Near-term catalysts

- DC vaccine Phase I/II trial in AML patients, **topline data end of 2019 / early 2020**
- MDG1021 Phase I trial in post-HSCT relapsed patients **to start in H1 2020**
- MDG1011 Phase I/II trial in AML, MDS, MM dose escalation results **end 2020**
- **Validation by strategic partners**
  bluebird bio, Roivant Sciences/Cytovant

*As of 30 September 2019; **as of 11 November 2019; TCR: T cell receptor; DC: Dendritic cell, specialized immune cell; AML: Acute myeloid leukemia; MDS: Myelodysplastic syndrome; MM: Multiple myeloma; HSCT: Hematopoietic stem cell transplantation

Medigene‘s growing immunotherapy pipeline

	Project	Indication (Target)	Preclinical	Phase I	Phase II	Partner
TCR-T	**MDG1011**	AML, MDS, MM (PRAME)				
	MDG1021	Post-HSCT relapse (HA-1)				
	MDG10XX	Solid tumors				
	bluebird bio	Undisclosed (MAGE-A4)				bluebirdbio recode for life
	Cytovant (CVT-TCR-01)	Synovial sarcoma, MM, solid tumors (NY-ESO-1)				ROIVANT SCIENCES
	TCR IIT*	Multiple myeloma (MAGE-A1)				CHARITÉ MDC MAX DELBRÜCK CENTER FOR MOLECULAR MEDICINE
DC	**DC vaccine**	Acute myeloid leukemia (WT-1 / PRAME)				
	Cytovant (CVT-DC-01)	Acute myeloid leukemia (WT-1 / PRAME)				ROIVANT SCIENCES
TAB	**TABs**	T cell leukemias + new applications				

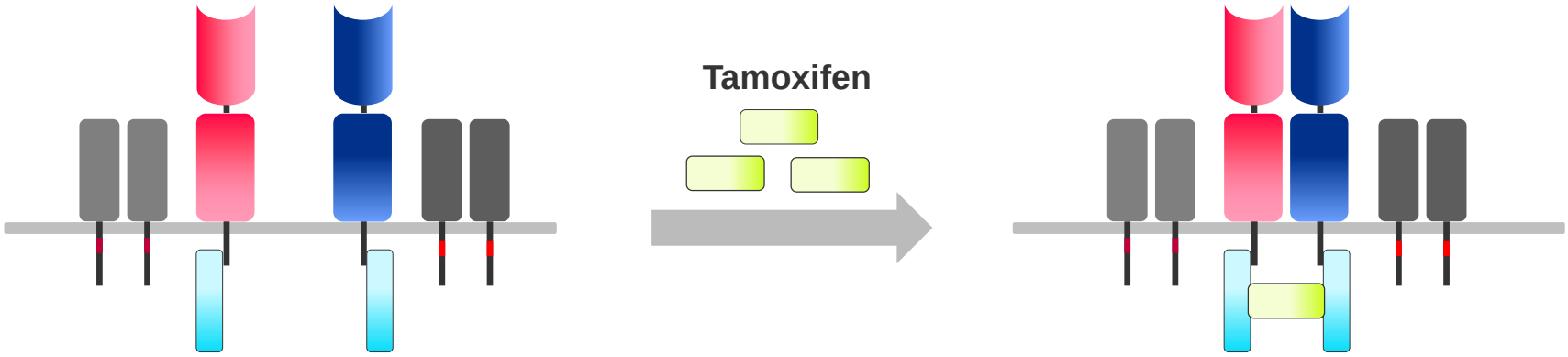
* Investigator-initiated trial (IIT) under the responsibility of Max Delbrück Center and Charité, Berlin

completed; ongoing; in preparation

Clinical trials – key information

- **MDG1011 – ongoing**
  - Product: Autologous TCR-T cells specific for **HLA-A*02:01**-restricted **PRAME**
  - Trial: Phase I/II – dose-escalating, safety/feasibility
  - Indications: Myeloid (AML, MDS) and lymphoid (MM) malignancies
- **MDG1021 – starting H1 2020**
  - Product: Donor TCR-T cells specific for **HLA-A*02:01**-restricted **HA-1**
  - Trial: Phase I – dose escalating, expansion cohort, safety/feasibility
  - Indication: Treatment of hematologic malignancy relapse after allo-HSCT
- **DC Vaccine – topline results (end of 2019 / early 2020)**
  - Product: Autologous DC vaccine WT-1 and PRAME
  - Trial: Open-label Phase I/II – safety/feasibility, efficacy (OS, PFS, TTP)
  - Indication: Prevention of AML relapse

Advancing towards solid tumors – Medigene‘s inducible TCR system (iM-TCR)



iM-TCRs carry

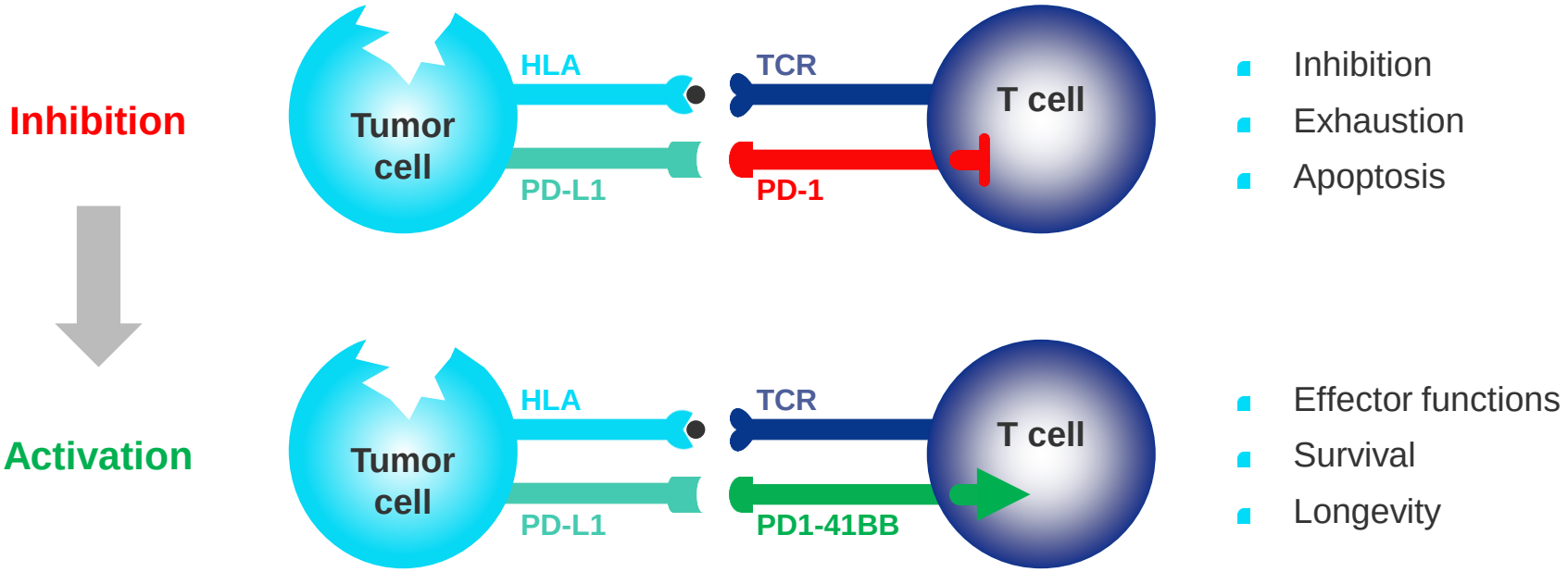
- Mutations that inhibit natural TCRαβ pairing
- Mutated tails

Tamoxifen

- Well-known and well-characterized drug
- Dimerizes mutated tails leading to TCRαβ pairing

iM-TCR displayed on T cell surface **only after** exposure to tamoxifen

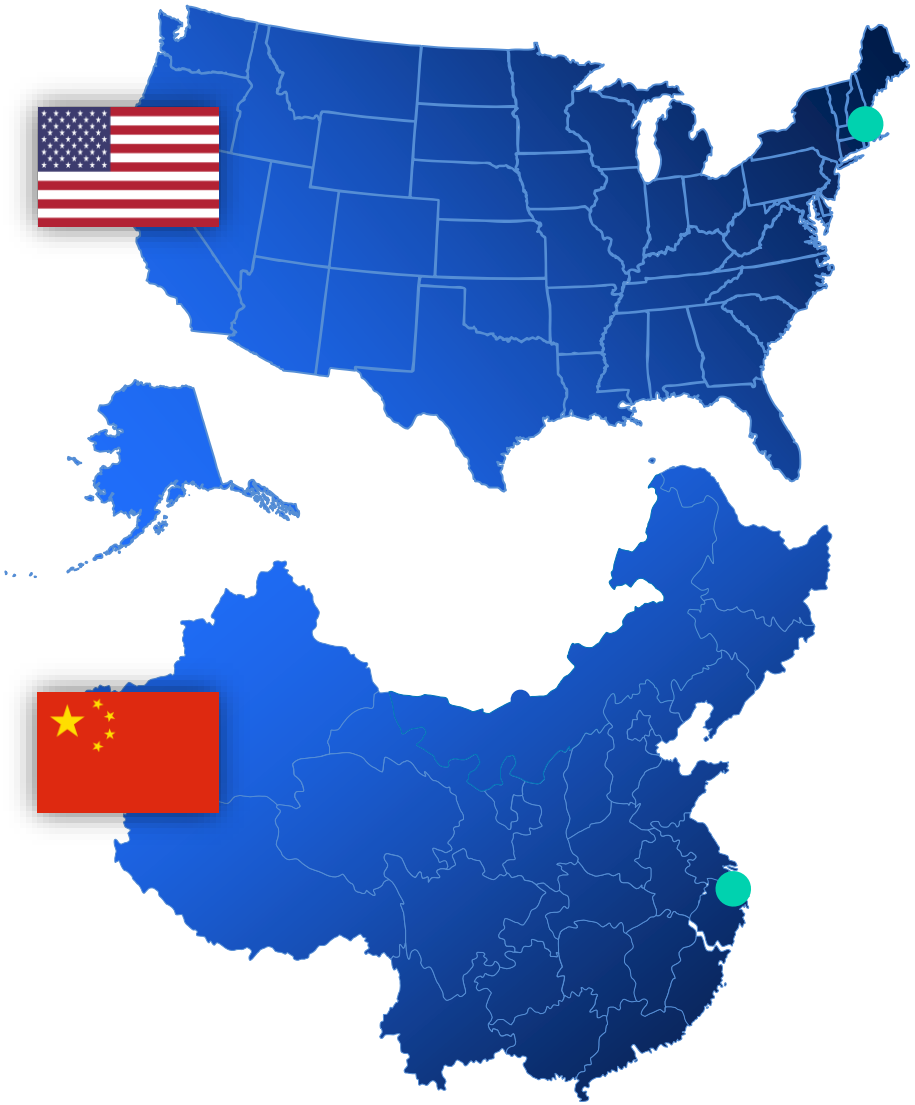
Advancing towards solid tumors – Co-stimulatory switch receptor PD1-41BB



Overcoming inhibitory signals in the tumor milieu through **additional co-stimulation** and **reduced inhibition**

PD-1 / PD-L1: Checkpoint inhibitors; 41BB: Activator of T cells

Partnerships validate Medigene's technologies



TCRs

bluebird bio

- 6 TCR discovery projects for defined antigen/HLA combinations
- Worldwide development and commercial rights and exclusive license for IP
- **First TCR lead for MAGE-A4/HLA-A2 selected for clinical development starting in 2020**
- Potential 'Biodollars': up to $1.5 bn plus royalties

DCs & TCRs

Roivant/Cytovant

- Research-stage TCR specific for the target NY-ESO-1; clinical indications chosen
- **DC vaccine program for AML**
- Discovery projects for 2 further TCRs tailored for Asian population
- License rights for Greater China, South Korea and Japan
- Potential 'Biodollars': up to $1 bn plus royalties

Financial review and outlook – Financial guidance 2019 confirmed

	9M 2019	GUIDANCE 2019
Total revenues	€6.9 m	€10-11 m
R&D expenses	€16.5 m	€24-29 m
EBITDA loss	€18.6 m	€23-28 m

- Liquid assets and time deposits as of 30 September 2019 amounted to €60.5 m
- Medigene has sufficient financial resources for beyond the forecasting horizon of two years
- No milestone payments or cash inflows are included from existing or future partnerships or transactions

Expected development milestones

2019

- **Clinical trials**
  - ✓ Treatment of patients in 1st dose cohort of Phase I MDG1011 trial and expansion of clinical trial sites
  - ✓ Interim analysis of Phase I/II DC vaccine trial (1-year-treatment)
- **Pre-clinical**
  - ✓ iM-TCR
  - ✓ Data on bluebird bio TCR candidate
  - ✓ Data on neoantigen-based TCR therapies
  - ✓ Characterization of PRAME-specific TCR
- **Business development**
  - ✓ In-licensing of PD1-41BB co-stimulator
  - ✓ Sale of Veregen®
  - ✓ Clinical trial agreement with LUMC

2020

- **Clinical trials**
  - Topline data on Phase I/II DC vaccine trial (2-years-treatment)
  - MDG1011 Phase I dose escalation trial in AML, MDS, MM three dose cohorts complete
  - Start Phase I clinical trial of MDG1021 in post-HSCT relapsed patients with LUMC
  - bluebird bio to start Phase I clinical trial of MAGE-A4 TCR
- **Pre-clinical**
  - Characterization of new TCR candidates
  - Optimization of future TCR therapies for solid tumors
- **Business development**
  - Continue pre-clinical development with bluebird bio and Roivant/Cytovant

LUMC: Leiden University Medical Center, Netherlands

Thank you!

Questions & Answers

Medigene AG
Lochhamer Straße 11
82152 Planegg / Martinsried
Germany

T +49 - 89 - 20 00 33 - 0
F +49 - 89 - 20 00 33 - 2920
investor@medigene.com
www.medigene.com

Listed on Frankfurt Stock Exchange (MDG1, Prime Standard)