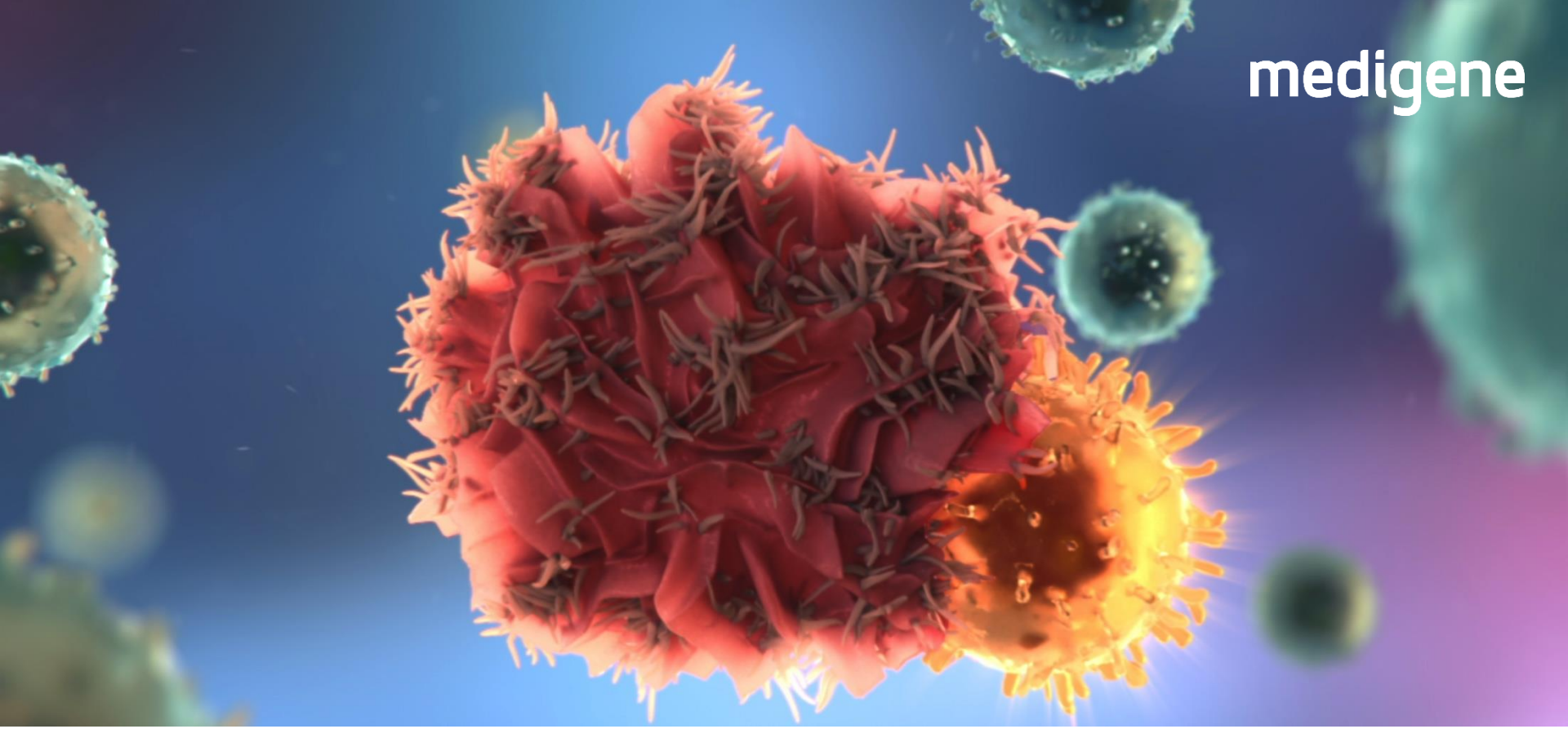

9-months 2017 Earnings Call

November 9, 2017

Prof. Dr. Dolores Schendel, CEO/CSO
Dr. Thomas Taapken, CFO
Dr. Kai Pinkernell, SVP Medical Affairs, CMO

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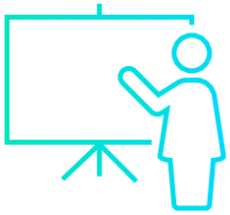
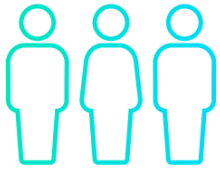
Major events since the beginning of 2017

- Clinical trial authorization application (CTA) submitted for Medigene's first clinical trial with T cell receptor (TCR)-modified T cells, MDG1011

- €20.7 m raised through placement of new shares at institutional investors in the US and Europe and capital increase through contribution in kind to settle third milestone payment for Trianta acquisition



- Automated high throughput screening (HTS) platform for the identification of T cell receptors and its application to identify neoantigens presented at scientific conferences
- Preclinical data presented on Medigene’s first clinical TCR candidate for MDG1011 at AACR Annual Meeting, USA



- “Cancer Research” paper published on a method to enhance adoptive T cell therapies through co-stimulation
- Expanded Supervisory Board and new Scientific Advisory Board

bluebird bio collaboration progressing as planned

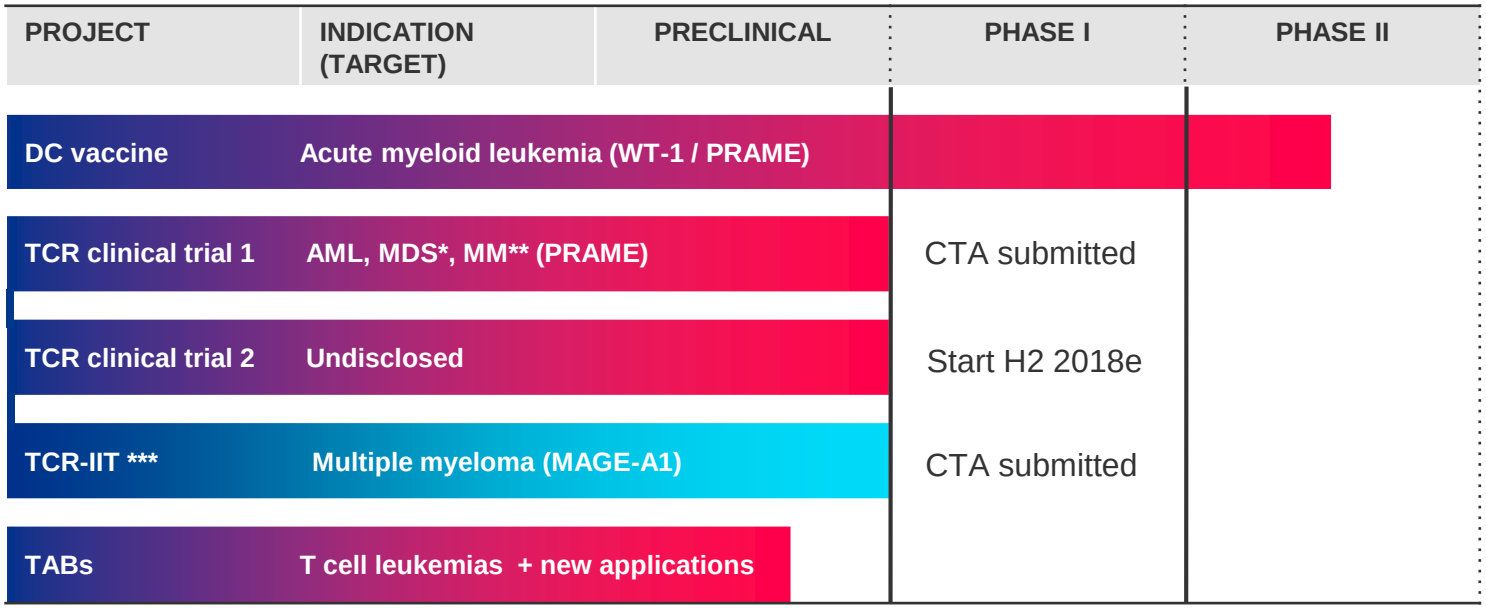
- Progress with bluebird bio is advancing according to plan
- Collaboration is designed to identify up to four T cell receptors against target antigens selected by bluebird bio as clinical development candidates
- Active experimental exchange ongoing with designated scientific teams of both companies in antigen and TCR selection processes
- Initial revenues for R&D work generated
- Currently working on non-clinical characterization of multiple TCR sequences for bluebird

Presentations on HTS platform and neoantigens at scientific conferences

- **CRI-CIMT-EATI-AACR Conference in Mainz, Germany, two posters:**
  - First poster reported of a semi-automated method for the isolation and initial characterization of neoantigen-specific T cell receptors (TCRs)
  - Second poster described Medigene's PRAME-specific TCR for adoptive T cell immunotherapy of cancer
- **Immuno-Oncology Summit in Boston, USA, presentation:**
  - Approaches for improving selection of neoantigens for use in immunotherapy of cancer
  - Automated in vitro testing could reveal better neoantigens that activate more effective killer T cell responses
- **CAR-TCR Summit in Boston, USA, presentation:**
  - Demonstration of Medigene's automated high throughput screening (HTS) platform for identifying T cell receptors (TCRs)

Immunotherapy Pipeline, Clinical Progress and Outlook

Progress of immunotherapy pipeline



* Myelodysplastic syndromes
** Multiple myeloma
*** Investigator-initiated trial (IIT) of a publicly funded collaboration between MDC, Charité and Medigene.

Additional IITs utilizing Medigene's DC vaccine technology are ongoing at
LMU Munich (Phase I/II in AML) and Oslo University Hospital (Phase II in prostate cancer)

Planned phase I/II trial with TCR immunotherapy MDG1011

- Medigene expects to run one of the first German clinical trials of T cell receptor (TCR)-modified T cells
- Three blood cancer indications are included: acute myeloid leukemia (AML), myelodysplastic syndrome (MDS) and multiple myeloma (MM)
- CTA submitted on July 10 to the German authority – the Paul-Ehrlich-Institute (PEI)
- GMP-compliant manufacturing license: ongoing
- Final study design will be made available after CTA approval by PEI
- Medigene expects to start this trial by year end 2017

MDG1011 Phase I/II study

Target:

- PRAME (**Pr**eferentially Expressed **A**ntigen in **Me**lanoma)
- PRAME is a well characterized tumor antigen overexpressed in multiple hematological and solid tumor indications

MDG1011:

- T cells expressing a HLA-A2:01 restricted T-cell receptor (TCR) specific for PRAME
- Has demonstrated favorable preclinical safety and efficacy

Clinical trial outline, pending regulatory discussion and approval:

- Planned is a combined Phase I/II safety and feasibility
- Disease indications are acute myeloid leukemia (AML), myelodysplastic syndrome (MDS), multiple myeloma (MM); all in advanced stages
- Phase I part: dose escalation, testing up to 4 dose cohorts in a 3+3 design
- Phase II part: will expand the dose cohort from Phase I and include a prospective control group of HLA-02:01 negative subjects

DC trial in AML: Phase II part ongoing

- Trial design:
  - **Phase I/II:** open-label, prospective, non-randomized trial
  - **20 AML patients:** 6 phase I + 14 phase II, complete remission after chemotherapy, not eligible for allo-transplantation
  - Patients selected with AML expressing the vaccine antigens: **WT-1** with or without **PRAME**
  - **Continuous vaccination for 2 years** or until progression/ death
  - Primary objectives: **feasibility** and **safety**
  - Secondary objectives: overall survival (**OS**), progression free survival (**PFS**), control of minimal residual disease (**MRD**), time to progression (**TTP**), induction of **immune responses**
- Medigene expects to complete recruitment for this study soon in 2017
- Final read-out of clinical data expected in 2019

Financial Report 9M 2017

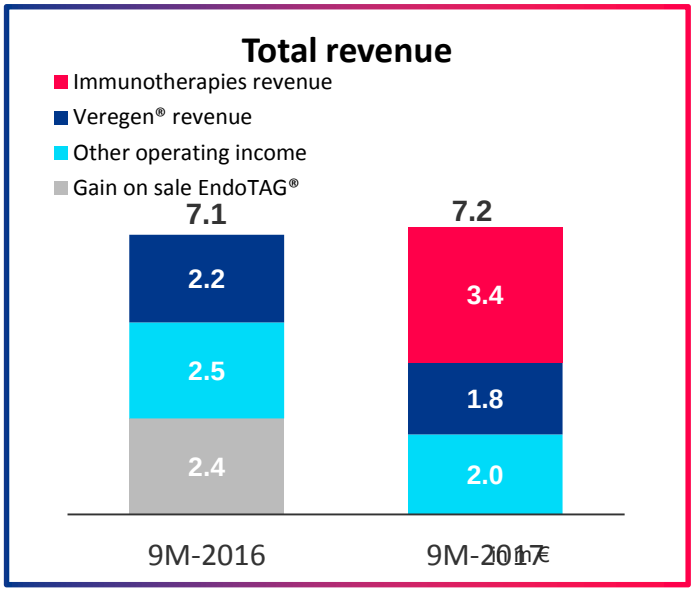
Issuance of new shares to complete Trianta/ Medigene Immunotherapies GmbH acquisition

- CTA submission on 10 July triggered third and final milestone payment of €2m for Trianta/Medigene Immunotherapies GmbH acquisition (total purchase price € 9.7m)
- Payment to former contributing shareholders of Trianta
- Medigene issued 182,335 new shares on 7 September 2017 from authorized capital (approx. 0.8% of the share capital) to settle this payment
- The number of these new shares was calculated on the basis of the volume-weighted average price (VWAP) of Medigene shares in the 30-day period prior to and the 30-day period from 10 July 2017. The calculated VWAP was EUR 10.97
- The subscribers of the new shares agreed to a lockup period of 14 months

Financial overview for the first 9 months of 2017

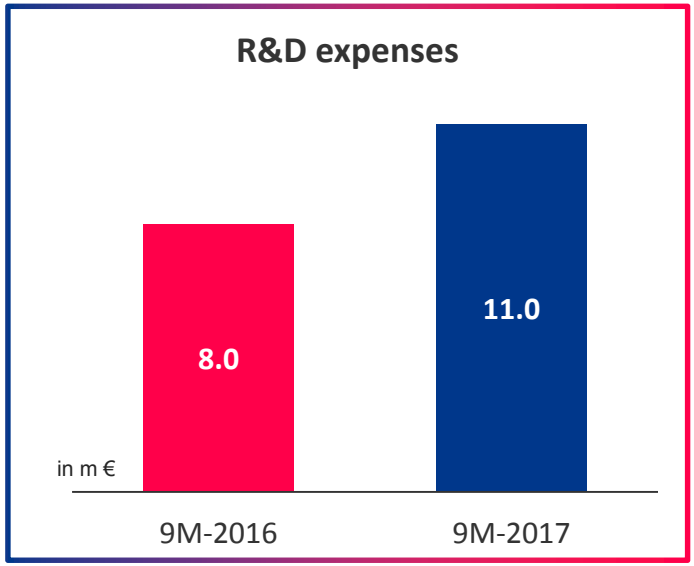
€ 3.4m	**Growing revenues from immunotherapies (bluebird bio)**
+39%	**Increase in R&D expenses due to progress in clinical programs**
€ 7.2m	**Revenues in line with last year, despite one-time effect from EndoTAG® sale in 2016**
€ 55.4 m	**Cash & cash equivalents after successful capital raise in May 2017**
€ -10.1m	**Increase in EBITDA loss as planned due to one-time effect EndoTAG® sale in 2016 and increased R&D expenses**
	**Confirmation of financial guidance 2017**

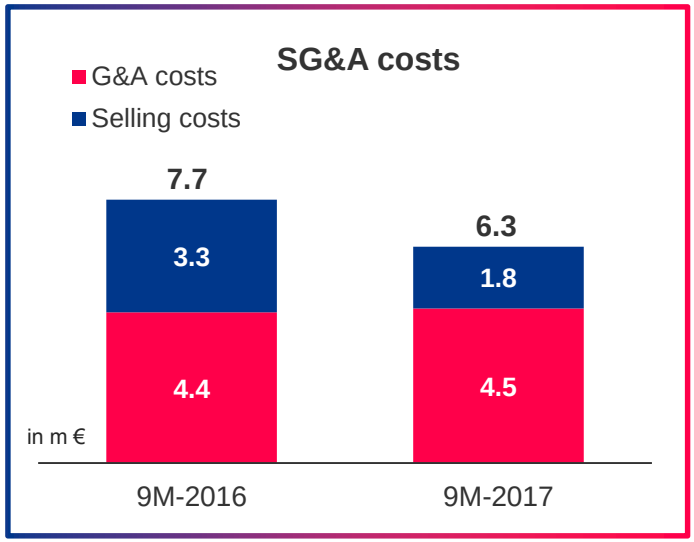
First revenues from core business immunotherapies



- Revenue of €3.4 m from bluebird bio (9m 2016: €0)
- Total revenue reflecting immunotherapies and non-core business:
  - Last year's sale of EndoTAG® (€2.4 m)
  - Decreased Veregen® revenues (-20%)

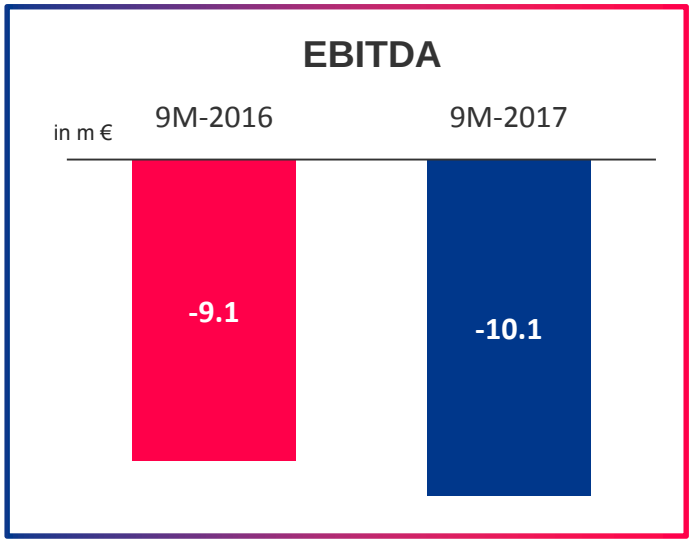
Increase in R&D expenses by 39% due to progress in clinical programs

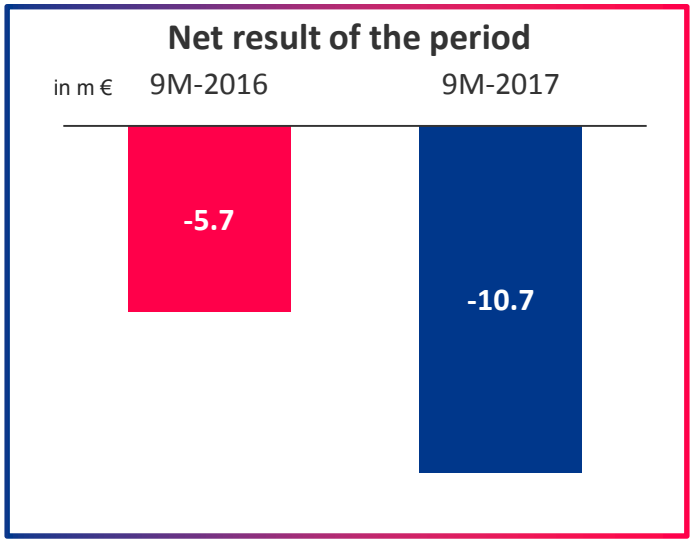




- Preparation of clinical TCR study, establishment of GMP-compliant manufacturing process at CMO, achieving general clinical readiness for MDG1011 study
- Completion of expansion of TCR discovery platform
- Lower selling costs for Veregen

Intensified R&D activities led to increased EBITDA loss





Differences EBITDA to previous period

- Lower revenues from non-core business
- Partially compensated by bluebird revenues
- Increase of operating costs (mainly in R&D)

Difference net result to previous period

- Mainly due to sale of financial assets in 2016 (net gain €4.2 m)

Financial guidance for 2017 confirmed

	2016	9M 2017	GUIDANCE 2017
Total revenue	€ 9.7m	€ 7.2m	€ 8-10m
R&D expenses	€ 11.5m	€ 11.0m	€ 16-18m
EBITDA loss	€ 12.3m	€ 10.1m	€ 16-18m
Cash usage		€ 16.6m	€ 23-27m

- Cash & cash equivalents as of September 30, 2017: €55.4 m
- Sufficient financial resources beyond the forecast horizon of two years and to the time points that data from DC trial and TCR trials become available

Next steps

MDG1011, Medigene's first TCR trial:

- Clinical trial authorization
- Study start

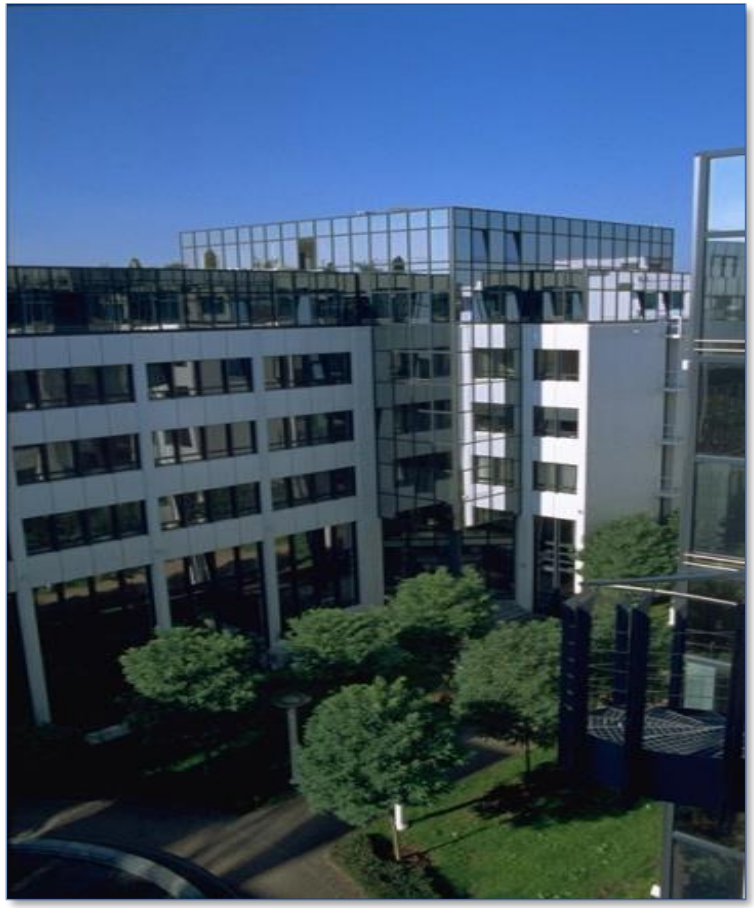
TCR IIT, Berlin:

- Clinical trial authorization
- Study start

DC trial in AML, Oslo:

- Completion of enrollment
- Final read-out in 2019

Progress in bluebird collaboration



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