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Agenda

**Business overview**

MGN1703 – cancer immune therapy

MGN1601 – therapeutic vaccination against cancer

Key financials, outlook 2014 and summary
Company overview

- Biotechnology company pioneering in cancer immunotherapies and DNA vaccines
- Two unique proprietary lead products
  - MGN1703 – DNA immunomodulator
  - MGN1601 – therapeutic vaccination
- Foundation and IPO in 1998; headquarters in Berlin
- Solid financing and cash inflow from capital increase in February 2014
# MOLOGEN: Pioneering cancer immune therapies

<table>
<thead>
<tr>
<th>MGN1703</th>
<th>MGN1601</th>
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</thead>
<tbody>
<tr>
<td><strong>Immunomodulator and TLR-9 agonist</strong></td>
<td><strong>Therapeutic cancer vaccination</strong></td>
</tr>
<tr>
<td>• Colorectal cancer (mCRC)</td>
<td>• Renal cancer</td>
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<tr>
<td>• Small Cell Lung Cancer (SCLC)</td>
<td>• Other solid tumors</td>
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<tr>
<td>• Other solid tumors</td>
<td>• Successful trial phase I/II</td>
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<td></td>
<td>• Superior safety and tolerability</td>
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<tr>
<td></td>
<td>• Promising overall survival data</td>
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<tr>
<td>• Proof of concept (mCRC)</td>
<td>• Ready to enter phase II study</td>
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<tr>
<td>• Superior safety and tolerability</td>
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</tbody>
</table>
Advanced product pipeline with strong focus on cancer immune therapies

**Oncology**
- MGN1703<sup>1</sup> colorectal cancer
- MGN1703<sup>1</sup> small cell lung cancer
- MGN1703<sup>1</sup> other solid tumors
- MGN1601 renal cancer
- MGN1404<sup>2</sup> malignant melanoma

**Infectious Diseases**
- MGN1331 leishmaniasis
- MGN1333 hepatitis B

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<sup>1</sup> IND (Investigational New Drug) filed in U.S.; safety trial in U.S. completed

<sup>2</sup> Collaboration with Max-Delbrueck-Center for Molecular Medicine and Charité Universitaetsmedizin, Berlin
Agenda

Business overview

**MGN1703 – cancer immune therapy**

MGN1601 – therapeutic vaccination against cancer

Key financials, outlook 2014 and summary
Cancer immunotherapies: Increasing importance

• Success in drug development (Approval of Ipilimumab for advanced melanoma)

• Good clinical data in studies with new immunotherapeutic approaches

• Science Magazine: „Breakthrough of the Year 2013“
Cancer immunotherapy: New megatrend

Chemotherapy
- Fast effect in many patients
- Effect not lasting

Immunotherapy
- Needs time to be effective
- Long-lasting effect in a minority of patients

Source: "Immuno-oncology: The new weapon in the war against cancer, Alistair Campbell; Berenberg Equity Highlights, February 2014"
MGN1703 – ‘Best in Class’ TLR-9 Agonist

- No open ends - protection against degradation
- Only natural DNA components
- No chemical modifications
- High stability

- Broad activation of the immune system
- Only minimal side effects
- No dose-limiting toxicity
- High dosing over long periods of time

Light blue area: recognized by TLR-9 receptor
We activate the immune system to fight cancer

**pDC** plasmacytoid dendritic cell | **mDC** myeloid dendritic cell | **NK cell** natural killer cell | **NKT cell** natural killer T cell
IMPACT study: Outstanding long-term responses

- Double-blind, randomized, placebo-controlled two-arm, multinational phase II trial with 59 patients with mCRC
- Primary endpoint (PFS) provides proof of concept
- Follow-up of four patients who continued MGN1703 treatment in compassionate use programs since no relapse at end of study:
  - Three patients progression free in excess of 32-40 months as of April 2014
  - Excellent safety and tolerability, also when treated long-term
  - Secondary endpoint “overall survival”: results are not yet mature

mCRC metastatic colorectal cancer
IMPACT: Valuable insights

Subgroup analyses showed increased treatment effect

• Potential predictive biomarkers identified:
  • Tumor reduction by prior induction therapy (inclusion criterion)
  • CEA level (stratification factor)
  • Activated NKT cells (stratification factor)
• Long-term responders in excess of two years

Findings from subgroup analyses used to optimize the IMPALA study design

CEA carcinoembryonic antigen - a tumor marker for colorectal cancer | NKT Natural Killer T Cells
IMPALA trial: Pivotal study in mCRC started

- Use of findings from IMPACT trial, e.g. patient stratification based on biomarkers
- Primary endpoint: Overall survival (OS)
- Open-label, randomized controlled two-arm, multinational phase III trial
- 540 patients in more than 100 sites in eight European countries, including TOP 5 European pharma markets

**Trial Treatment Period**

- **Induction CT** (14-28 weeks)
- **PR/CR Responder**
- **Screening/Randomization 1:1**
- **MGN1703**
- **PD**
- **PD**
- **Start of 2nd Line**
- **Induction CT**
- **Control group**
- **PD**
- **MGN1703 with induction CT**
- **PD**

**mCRC** metastatic colorectal cancer | **CT** chemotherapy | **PR** partial response | **CR** complete response | **PD** progressive disease
IMPULSE study in SCLC started

- Participating countries: Austria, Belgium, Germany, Spain
- Primary endpoint: Overall survival (OS)
- Randomized controlled two-arm, multinational trial with 100 patients
- Biomarkers are used as stratification factors: NSE levels and NKTs

**Standard first-line chemotherapy for Extensive Disease SCLC**

<table>
<thead>
<tr>
<th>Induction CT</th>
<th>PR/CR Responder</th>
<th>Screening/ Randomization 3:2</th>
<th>Experimental arm: 5th cycle of platinum based CT followed by MGN1703 maintenance</th>
<th>PD</th>
<th>Start of 2nd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 cycles of platinum-based therapy</td>
<td></td>
<td></td>
<td></td>
<td>PD</td>
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</tr>
</tbody>
</table>

**Trial Treatment Period**

- **Induction CT**
  - 4 cycles of platinum-based therapy

- **Screening/ Randomization 3:2**
  - 

- **Experimental arm**
  - 5th cycle of platinum based CT followed by MGN1703 maintenance

- **Control group**
  - 5th cycle of platinum based CT followed by local practice

**Start of 2nd Line**

**Notes:**

- SCLC small cell lung cancer
- NSE neuron specific enolase - a tumor marker for lung cancer
- NKT Natural Killer T cells
- CT chemotherapy
- PR partial response
- CR complete response
- PD progressive disease

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MGN1703: Successful safety trial in the U.S.

- Placebo-controlled, double-blind phase I study in healthy volunteers
- Favorable safety, tolerability and pharmacokinetic profile
- Consistent immune activation
- Investigational New Drug (IND) application approved by FDA for MGN1703 in solid tumors

IND enables inclusion of the U.S. in the future MGN1703 development program

FDA US Food and Drug Administration
# MGN1703 – Milestones

## Metastatic Colorectal Carcinoma (mCRC)

<table>
<thead>
<tr>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017 / 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPALA (Phase III trial) First patient in PEP: OS</td>
<td>IMPACT (Phase II trial) OS data expected</td>
<td>IMPALA Recruitment completed</td>
<td>IMPALA Primary analyses (OS), Filing/Approval</td>
</tr>
</tbody>
</table>

## Small Cell Lung Cancer (SCLC)

- **IMPULSE** (randomized, controlled trial) First patient in PEP: OS
- IMPULSE Recruitment completed
- IMPULSE Primary analyses (OS)

**PEP** primary endpoint | **OS** overall survival

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Agenda

Business overview

MGN1703 – cancer immune therapy

**MGN1601 – therapeutic vaccination against cancer**

Key financials, outlook 2014 and summary
Therapeutic vaccination against cancer – MGN1601

Orphan Drug Status in EU
MOLOGEN AG

ASET: Promising data from renal cancer trial with tumor vaccine MGN1601

• Primary endpoints met: safety and tolerability
• Open-label, proof-of-principle, multi-center phase I/II trial
• 19 patients with advanced renal cell carcinoma who failed prior systemic therapies
• Final data set presented in a poster at ASCO GU and CIMT in H1 2014:
  ➤ Favorable safety and tolerability profile
  ➤ Promising overall survival data in subgroup of patients
  ➤ One patient with disease control for 48 weeks
  ➤ One patient with long-term partial response for more than 120 weeks

CIMT Association for Cancer Immunotherapy, Germany
Agenda

Business overview

MGN1703 – cancer immune therapy

MGN1601 – therapeutic vaccination against cancer

Key financials, outlook 2014 and summary
Key financials H1 2014: Strong cash inflow from capital increase

### Balance Sheet

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Cash &amp; cash equiv.</td>
<td>22.9</td>
<td>14.8</td>
<td>55%</td>
</tr>
<tr>
<td>Balance sheet total</td>
<td>23.9</td>
<td>15.9</td>
<td>50%</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>93%</td>
<td>94%</td>
<td>(1%)</td>
</tr>
</tbody>
</table>

### Income Statement

<table>
<thead>
<tr>
<th>[in € million]</th>
<th>H1 2014</th>
<th>H1 2013</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D expenses</td>
<td>(5.9)</td>
<td>(2.8)</td>
<td>111%</td>
</tr>
<tr>
<td>EBIT</td>
<td>(7.9)</td>
<td>(4.3)</td>
<td>84%</td>
</tr>
<tr>
<td>Cash flow from operating activities</td>
<td>(6.5)</td>
<td>(3.8)</td>
<td>71%</td>
</tr>
<tr>
<td>Cash flow from financing activities</td>
<td>14.7</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Monthly cash burn</td>
<td>1.3</td>
<td>0.6</td>
<td>117%</td>
</tr>
</tbody>
</table>

- Balance sheet dominated by cash inflow from capital increase of around € 16 million
- Preparation of IMPALA and start of IMPULSE studies main drivers of increased R&D costs
- Monthly cash burn increased accordingly
- CF from financing activities includes capital increase
FY 2014: outlook and forecast confirmed

- Development of product pipeline well on track
  - Intensify clinical development of MGN1703:
    - pivotal study in colorectal cancer and
    - randomized study in small cell lung cancer
  - MGN1601: plan and prepare continuative study in renal cancer
- Partnering discussions ongoing
- Loss expected at a higher level compared to 2013
  - Clinical trials progress will lead to increased R&D expenses
Lead products: Unique profile and huge market potential

MGN1703  MGN1601

- First-line maintenance
- Long-term treatment
- Usable for various indications
- Superior safety and tolerability
- Suitable for mono- and combination therapy
- Patient selection via biomarker

Blockbuster Potential
Corporate calendar and contact details

- **November 13, 2014**
  Quarterly Report as of September 30, 2014

- **November 25, 2014**
  German Equity Forum 2014
  Analyst and Investor Conference,
  Frankfurt/Main

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