ACTIVATING THE PATIENT’S IMMUNE SYSTEM TO FIGHT CANCER

3Q 2019

7 November 2019
IMPORTANT NOTICE AND DISCLAIMER

This report contains certain forward-looking statements based on uncertainty, since they relate to events and depend on circumstances that will occur in future and which, by their nature, will have an impact on the results of operations and the financial condition of Targovax. Such forward-looking statements reflect the current views of Targovax and are based on the information currently available to the company. Targovax cannot give any assurance as to the correctness of such statements.

There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in these forward-looking statements. These factors include, among other things, risks or uncertainties associated with the success of future clinical trials; risks relating to personal injury or death in connection with clinical trials or following commercialization of the company’s products, and liability in connection therewith; risks relating to the company’s freedom to operate (competitors patents) in respect of the products it develops; risks of non-approval of patents not yet granted and the company’s ability to adequately protect its intellectual property and know-how; risks relating to obtaining regulatory approval and other regulatory risks relating to the development and future commercialization of the company’s products; risks that research and development will not yield new products that achieve commercial success; risks relating to the company’s ability to successfully commercialize and gain market acceptance for Targovax’ products; risks relating to the future development of the pricing environment and/or regulations for pharmaceutical products; risks relating to the company’s ability to secure additional financing in the future, which may not be available on favorable terms or at all; risks relating to currency fluctuations; risks associated with technological development, growth management, general economic and business conditions; risks relating to the company’s ability to retain key personnel; and risks relating to the impact of competition.
Financials & Highlights

2. Melanoma
3. Next generation ONCOS
4. Mesothelioma
5. Newsflow
TARGOVAX AT A GLANCE

Immune activation by oncolytic viruses
- Addressing the growing need for immune activators to enhance efficacy in combination with other treatments, such as checkpoint inhibitors
- ONCOS clinical stage adenovirus platform targeting hard-to-treat solid tumors

ONCOS-102 lead clinical asset
- One of the furthest developed OVs with >180 patients treated to date
- Four ongoing combination trials with rich news flow the next 3-12 months

Encouraging clinical efficacy demonstrated
- Strong single agent immune activation and clinical data
- 33% ORR in anti PD-1 refractory melanoma in combination with Keytruda
- Promising interim data in mesothelioma in combination with chemotherapy

Corporate highlights
- All assets unencumbered
- Listed on Oslo Stock Exchange: TRVX
- Market cap USD 35m*
### ONCOS DEVELOPMENT STRATEGY

1. **Path-to-market as orphan drug**

   - **Mesothelioma**
     - ~15,000 patients
     - Potential as frontline therapy, limited competition
     - Strong immune activation in monotherapy

2. **Activating CPI refractory tumors**

   - **Anti-PD1 refractory melanoma**
     - No/few alternatives for ~50,000 patients
     - Benchmarking for immune activators, 33% ORR in 9 pts
     - May release a large potential in more indications

3. **Expanding CPI indications**

   - **Peritoneal malignancies**, from ovarian and colorectal cancers
     - >100,000 patients with tumors not responding to CPIs
     - Strong immune activation in monotherapy
     - Intraperitoneal administration may open new indications

4. **Next generation**

   - **Platform expansion in solid tumors**
     - Double transgenes
     - Novel targets and modes of action
     - Ongoing pre-clinical testing

---

1 Patients per year in EUS, US and Japan, Company estimates based on Global Data
ONCOS-102 CLINICAL DEVELOPMENT PROGRAM

1. **Mesothelioma**
   - Phase I/II
   - 31 patients
   - Randomized trial
   - Combination with Keytruda
   - PI at Memorial Sloan Kettering CC
   - Part 1 completed with 33% ORR
   - Part 2 recruiting at four sites
   - Data Jan 2020

2. **Anti-PD1 refractory melanoma**
   - Phase I
   - Up to 21 patients
   - Combination with Keytruda
   - PI at Memorial Sloan Kettering CC
   - Part 1 completed with 33% ORR
   - Part 2 recruiting at four sites

3. **Peritoneal malignancies**
   - Phase I/II
   - Up to ~75 patients
   - Combination with Imfinzi
   - Intraperitoneal administration
   - Collaboration w/ AZ, CRI, Ludwig
   - PI at Memorial Sloan Kettering CC

**Compassionate use program**
- 115 patients

**Phase I trial**
- 12 patients
- 7 indications

**Completed**
- Ongoing trials sponsored by Targovax
- Ongoing trials sponsored by partner

Targovax also participates in an ongoing combination trial in Prostate cancer were ONCOS-102 is combined with a dendritic cell vaccine (DCVAC). This trial is sponsored by Sotio, a Czech biotech company.
3Q 2019 HIGHLIGHTS

R&D
- Released data from part 1 in melanoma, with clinical responses in three out of nine patients (33% ORR) and immune activation in all nine patients
- Completed dose escalation in peritoneal malignancies trial in combo with Imfinzi. The expansion part opened for patient enrollment
- Opened Oslo University Hospital as a site in ONCOS-102 trial in melanoma

Post-period
- Targovax was selected for oral presentation at Society for Immunotherapy of Cancer (SITC)
# PROFIT AND LOSS

<table>
<thead>
<tr>
<th></th>
<th>3Q18</th>
<th>4Q18</th>
<th>1Q19</th>
<th>2Q19</th>
<th>3Q19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>External R&amp;D expenses</td>
<td>-17</td>
<td>-21</td>
<td>-19</td>
<td>-22</td>
<td>-14</td>
</tr>
<tr>
<td>Payroll and related expenses</td>
<td>-12</td>
<td>-14</td>
<td>-14</td>
<td>-18</td>
<td>-8</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>-5</td>
<td>-7</td>
<td>-7</td>
<td>-5</td>
<td>-5</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td><strong>-34</strong></td>
<td><strong>-42</strong></td>
<td><strong>-40</strong></td>
<td><strong>-45</strong></td>
<td><strong>-27</strong></td>
</tr>
<tr>
<td>Operating loss</td>
<td>-34</td>
<td>-42</td>
<td>-40</td>
<td>-45</td>
<td>-27</td>
</tr>
<tr>
<td>Net financial items</td>
<td>-1</td>
<td>1</td>
<td>-1</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>Loss before income tax</td>
<td>-35</td>
<td>-41</td>
<td>-41</td>
<td>-46</td>
<td>-26</td>
</tr>
<tr>
<td>Net change in cash</td>
<td>-27</td>
<td>-22</td>
<td>-46</td>
<td>30</td>
<td>-31</td>
</tr>
<tr>
<td><strong>Net cash EOP</strong></td>
<td><strong>173</strong></td>
<td><strong>151</strong></td>
<td><strong>105</strong></td>
<td><strong>135</strong></td>
<td><strong>104</strong></td>
</tr>
</tbody>
</table>
## Profit and Loss

<table>
<thead>
<tr>
<th>NOK m</th>
<th>3Q18</th>
<th>4Q18</th>
<th>1Q19</th>
<th>2Q19</th>
<th>3Q19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>External R&amp;D expenses</td>
<td>-17</td>
<td>-21</td>
<td>-19</td>
<td>-22</td>
<td>-14</td>
</tr>
<tr>
<td>Payroll and related expenses</td>
<td>-12</td>
<td>-14</td>
<td>-14</td>
<td>-18</td>
<td>-8</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>-5</td>
<td>-7</td>
<td>-7</td>
<td>-5</td>
<td>-5</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td><strong>-34</strong></td>
<td><strong>-42</strong></td>
<td><strong>-40</strong></td>
<td><strong>-45</strong></td>
<td><strong>-27</strong></td>
</tr>
<tr>
<td>Operating loss</td>
<td>-34</td>
<td>-42</td>
<td>-40</td>
<td>-45</td>
<td>-27</td>
</tr>
<tr>
<td>Net financial items</td>
<td>-1</td>
<td>1</td>
<td>-1</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>Loss before income tax</td>
<td>-35</td>
<td>-41</td>
<td>-41</td>
<td>-46</td>
<td>-26</td>
</tr>
<tr>
<td>Net change in cash</td>
<td>-27</td>
<td>-22</td>
<td>-46</td>
<td>30</td>
<td>-31</td>
</tr>
<tr>
<td><strong>Net cash EOP</strong></td>
<td><strong>173</strong></td>
<td><strong>151</strong></td>
<td><strong>105</strong></td>
<td><strong>135</strong></td>
<td><strong>104</strong></td>
</tr>
</tbody>
</table>
## TARGOVAX FINANCIAL POSITION

### Operations

<table>
<thead>
<tr>
<th>Description</th>
<th>NOK million</th>
<th>USD million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash end of 3Q</td>
<td>104</td>
<td>11</td>
</tr>
<tr>
<td>Net cash flow - total 3Q</td>
<td>31</td>
<td>3</td>
</tr>
<tr>
<td>Annual run rate - last four quarters</td>
<td>136</td>
<td>15</td>
</tr>
</tbody>
</table>

### The share

<table>
<thead>
<tr>
<th>Description</th>
<th>NOK million</th>
<th>USD million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Cap - at share price NOK ~5</td>
<td>320</td>
<td>35</td>
</tr>
<tr>
<td>Daily turnover - 6 month avg.</td>
<td>1.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Analyst coverage:
- DNB, H.C. Wainwright, Arctic, ABG Sundal Collier, Redeye, Edison
Melanoma

3. Next generation ONCOS
4. Mesothelioma
5. Newsflow
# ONCOS-102 ANTI-PD1 REFRACTORY MELANOMA PART 1

## 33% ORR AND ROBUST IMMUNE ACTIVATION

### Patient population
- Advanced, unresectable melanoma with disease progression following prior treatment with anti-PD1
- Typically treated with 2-3 immunotherapies prior to inclusion
- Median age 73 years (40-87)
- Poor prognosis, with few treatment alternatives

### Treatment regime
- 3 ONCOS-102 injections followed by 5 months of Keytruda

### Clinical data
- Safety: Well tolerated, no major concerns
- **33% Overall response rate (ORR) after 6 months** by RECIST 1.1 and irRECIST
  - 1 Complete Response (CR)
  - 2 Partial Responses (PR)
- Robust systemic and local immune activation
**ONCOS-102 + KEYTRUDA DATA IN CONTEXT**

**ANTI-PD1 REFRACTORY MELANOMA BENCHMARK DATA**

<table>
<thead>
<tr>
<th>Therapy</th>
<th>CR</th>
<th>PR</th>
<th>ORR</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONCOS-102</strong></td>
<td>11%</td>
<td>22%</td>
<td>33%</td>
<td>(3/9)</td>
</tr>
<tr>
<td><strong>Cavatak</strong></td>
<td>0%</td>
<td>36%</td>
<td>36%</td>
<td>(4/11)</td>
</tr>
<tr>
<td><strong>SD-101</strong></td>
<td>3%</td>
<td>18%</td>
<td>21%</td>
<td>(6/29)</td>
</tr>
<tr>
<td><strong>Entinostat</strong></td>
<td>2%</td>
<td>17%</td>
<td>19%</td>
<td>(10/53)</td>
</tr>
<tr>
<td><strong>CMP-001</strong></td>
<td>3%</td>
<td>19%</td>
<td>22%</td>
<td>(15/69)</td>
</tr>
<tr>
<td><strong>Lifileucel</strong></td>
<td>3%</td>
<td>35%</td>
<td>38%</td>
<td>(25/66)</td>
</tr>
<tr>
<td><strong>Tilsotolimod</strong></td>
<td>6%</td>
<td>26%</td>
<td>32%</td>
<td>(11/34)</td>
</tr>
</tbody>
</table>

**Comment**

- **Checkmate Pharma, TLR-9 agonist**
- **Dynavax, TLR-9 agonist**
- **Syndax Pharma, HDAC inhibitor**

**Most pats CTLA4 naïve, 10-20% ORR expected**

- **Merck (Viralytics), Oncolytic virus, up to 20 injections**
- **Idera, TLR-9 agonist**

**SOURCE:** Targovax market analysis, August 2019
MELANOMA PART 2 IS RECRUITING

UP TO 12 PATIENTS: 12 ONCOS-102 INJECTIONS COMBINED WITH 5 MONTHS KEYTRUDA

Part 1:
3 ONCOS-102 injections

Part 2:
12 ONCOS-102 injections

CPO: Cyclophosphamide
ORAL PRESENTATION AT SITC BY DR. SHOUSHTARI

- SITC (Society for Immunotherapy of Cancer) 2019 Annual Meeting
- Dr. Alexander Shoushtari, MSKCC, NYC
- 9 November, 17:30 EST, National Harbor, MD, US

- Key Opinion Leader event hosted by White & Case and Solebury Trout
- Dr. Alexander Shoushtari, MSKCC, NYC
- 15 November, 14:00 EST, NYC, US
Next generation ONCOS

4. Mesothelioma
5. Newsflow
## NEXT GENERATION ONCOS VIRUSES HAVE DOUBLE TRANSGENES AND DISTINCT MODES OF ACTION

<table>
<thead>
<tr>
<th>Mode of action</th>
<th>Target tumors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONCOS-210 &amp; -212</strong></td>
<td></td>
</tr>
<tr>
<td><em>Inhibition of tumor growth and vascularization</em></td>
<td></td>
</tr>
<tr>
<td>• Interfere with tumor’s ability to break down surrounding tissue</td>
<td>• Highly invasive or metabolic tumors</td>
</tr>
<tr>
<td>• Induce cell cycle arrest</td>
<td></td>
</tr>
<tr>
<td>• Inhibit angiogenesis</td>
<td></td>
</tr>
<tr>
<td><strong>ONCOS-211</strong></td>
<td></td>
</tr>
<tr>
<td><em>Counteract immune-suppressive tumor microenvironment</em></td>
<td></td>
</tr>
<tr>
<td>• Decrease inhibitory factors from tumor microenvironment</td>
<td>• “Cold” uninflamed tumors</td>
</tr>
<tr>
<td>• Activate T-cells</td>
<td></td>
</tr>
<tr>
<td><strong>ONCOS-214</strong></td>
<td></td>
</tr>
<tr>
<td><em>Enhanced cell killing properties</em></td>
<td></td>
</tr>
<tr>
<td>• Induce immunogenic cell death</td>
<td>• High-stroma tumors</td>
</tr>
<tr>
<td>• Extend cell killing ability to neighboring non-infected cells</td>
<td></td>
</tr>
</tbody>
</table>
### NEXT GENERATION ONCOS VIRUSES HAVE DOUBLE TRANSGENES AND DISTINCT MODES OF ACTION

<table>
<thead>
<tr>
<th>Mode of action</th>
<th>Target tumors</th>
</tr>
</thead>
</table>
| **ONCOS-210 & -212**  
*Inhibition of tumor growth and vascularization* | | |
| o Interfere with tumor’s ability to break down surrounding tissue | o Highly invasive or metabolic tumors |
| o Induce cell cycle arrest | |
| o Inhibit angiogenesis | |
| **ONCOS-211**  
*Counteract immune-suppressive tumor microenvironment* | | |
| o Decrease inhibitory factors from tumor microenvironment | o “Cold” uninflamed tumors |
| o Activate T-cells | |
| **ONCOS-214**  
*Enhanced cell killing properties* | | |
| o Induce immunogenic cell death | o High-stroma tumors |
| o Extend cell killing ability to neighboring non-infected cells | |
TUMOR GROWTH INHIBITION CONFIRMED IN IMMUNO-DEFICIENT MICE, SHOWING SUPERIORITY OF DOUBLE-TRANSGENE VIRUSES

Effect on tumor volume, melanoma model

Days after tumor cell engraftment

ONCOS treatment

Volume (mm³)

ONCOS-210
ONCOS-212
ONCOS-207 (TIMP-2)
ONCOS-209 (PADI1)

Mock

ONCOS-207 + ONCOS-209
ONCOS-210 AND -212 TRANSGENES ACT SYNERGISTICALLY

Tumor volume efficacy ratio
observed / expected

Synergistic effect
Additive effect
Anti-synergistic effect

1.97
2.16

ONCOS-210
ONCOS-212

1. In vivo tumor volume reduction double vs single transgene
DOSE DEPENDENT TUMOR RESPONSES AND IMPROVED SURVIVAL OBSERVED IN IMMUNE-COMPETENT MICE

Effect on tumor volume

Survival curves

- Mock
- ONCOS-210 (low)
- ONCOS-212 (low)
- ONCOS-207 (low)
- ONCOS-209 (low)
- ONCOS-210 (high)
- ONCOS-212 (high)
NEXT GENERATION ONCOS PROGRAM STATUS AND PLANS

Status and conclusions so far:

*In vivo* anti-tumor potency of ONCOS-210 and -212 has been demonstrated in immuno-deficient and immuno-competent mouse models

- The ONCOS backbone can effectively carry double transgenes
- Two transgenes seem more potent than one
- Double transgenes show synergistic activity

Next Steps:

- Further experiments to validate mode of action are currently ongoing
- Data to be presented at suitable scientific conferences in 2020
- Selection of a clinical candidate
4

Mesothelioma

5. Newsflow
RATIONALE FOR ONCOS-102 GO-TO-MARKET STRATEGY IN MESOTHELIOMA

**Become frontline therapy**
- Preclinical data and phase I results indicate activity in mesothelioma
- Ongoing randomized trial combining with chemo
- Good safety profile

**Orphan Drug Designation**
- High unmet medical need; orphan drug designation
- 7-10 year market exclusivity
- Opportunity for accelerated regulatory routes to market

**Limited competition**
- Few other viruses in development
- ONCOS-102 most advanced
- CPIs are potential combinations
ONCOS-102 IN MALIGNANT PLEURAL MESOTHELIOMA

PHASE I/II STUDY DESIGN IN COMBINATION WITH SOC

**Patient population**
Advanced malignant pleural mesothelioma
1st - 3rd line

**Safety lead-in (n=6)**
ONCOS-102 plus SoC chemotherapy (6 cycles)

- **Experimental group**
  (n=14)
  ONCOS-102 plus SoC (6 cycles)

- **Control group**
  (n=11)
  SoC (6 cycles)
Newsflow
**RICH NEAR-TERM NEWS FLOW**

**ONCOS program pipeline overview**

<table>
<thead>
<tr>
<th>Product candidate</th>
<th>Preclinical</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Next expected event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONCOS-102</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesothelioma</td>
<td>Combination w/ pemetrexed/cisplatin</td>
<td></td>
<td></td>
<td></td>
<td><strong>January 2020</strong> Randomized data</td>
</tr>
<tr>
<td>Melanoma</td>
<td>Combination w/ Keytruda</td>
<td></td>
<td></td>
<td></td>
<td><strong>1H 2020</strong> Part 2 data</td>
</tr>
<tr>
<td>Peritoneal metastasis</td>
<td>Collaborators: Ludwig, CRI &amp; AZ Combination w/ Imfinzi</td>
<td></td>
<td></td>
<td></td>
<td><em>Update by collaborator</em></td>
</tr>
<tr>
<td>Prostate</td>
<td>Collaborator: Sotio Combination w/ DCvac</td>
<td></td>
<td></td>
<td></td>
<td><em>Update by collaborator</em></td>
</tr>
<tr>
<td><strong>Next-gen ONCOS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 new viruses</td>
<td>Double transgene</td>
<td></td>
<td></td>
<td></td>
<td><strong>1H 2020</strong> Pre-clinical data</td>
</tr>
</tbody>
</table>
### Upcoming events

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Nov</td>
<td>Society for Immunotherapy of Cancer (SITC), National Harbor, MD, US</td>
</tr>
<tr>
<td>11-13 Nov</td>
<td>BIO-Europe, Hamburg, Germany</td>
</tr>
<tr>
<td>15 Nov</td>
<td>KOL event, NYC, US</td>
</tr>
<tr>
<td>3-5 Dec</td>
<td>Oncolytic Virotherapy Summit, Boston, US</td>
</tr>
<tr>
<td>11-14 Dec</td>
<td>ESMO-IO, Geneva, CH</td>
</tr>
<tr>
<td>11 Dec</td>
<td>DNB Healthcare seminar, Oslo, NO</td>
</tr>
<tr>
<td>13-16 Jan</td>
<td>Trout Management Access, San Francisco, US</td>
</tr>
</tbody>
</table>

### Upcoming milestones

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Details</th>
</tr>
</thead>
</table>
| Jan 2020: | ONCOS-102 phase I/II trial in unresectable malignant pleural mesothelioma  
– *Six month ORR and immune data* |
| 1H 2020:  | ONCOS-102 phase I trial in checkpoint inhibitor refractory advanced melanoma  
– *Part 2 data* |