THE FUTURE OF VACCINES

JEFFERIES GLOBAL HEALTHCARE CONFERENCE
JUNE 2017
FORWARD-LOOKING STATEMENTS

This presentation includes forward-looking statements that involve risks, uncertainties and other factors, many of which are outside of our control that could cause actual results to differ materially from the results discussed in the forward-looking statements. Forward-looking statements include statements regarding our short-term objectives and opportunities, financial expectations for the full year and financial preparedness as of year end, as well as statements concerning our plans, objectives, goals, future events, performance and/or other information that is not historical information. All such forward-looking statements are expressly qualified by these cautionary statements and any other cautionary statements which may accompany the forward-looking statements. We undertake no obligation to publicly update or revise forward-looking statements to reflect subsequent events or circumstances after the date made, except as required by law.
BAVARIAN NORDIC’S GOAL

To develop innovative and safe therapies against cancer and infectious diseases; to improve the health and quality of life for children and adults.

<table>
<thead>
<tr>
<th>CANCER</th>
<th>INFECTIOUS DISEASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROSTVAC</td>
<td>improving survival</td>
</tr>
<tr>
<td>HPV</td>
<td>preventing cancer before it starts</td>
</tr>
<tr>
<td>CV301 &amp; Brachyury in combination therapies</td>
<td>potentially curing cancer</td>
</tr>
<tr>
<td>RSV</td>
<td>protecting the broader population against diseases with no approved therapies</td>
</tr>
<tr>
<td>Smallpox / Ebola</td>
<td>preparation and protection against global pandemic threats</td>
</tr>
</tbody>
</table>
THE BAVARIAN VACCINE PLATFORM

Safe and effective, approved platform

- Applicable to cancer or infectious diseases
- Can stimulate broad and sustained immune responses
- Extremely well tolerated

Based on large viruses which allows for larger payloads

- Ability to encode multiple targets for specific diseases
- Other platforms are much more limited

Validated and Approved manufacturing facility

- Multi-purpose facility capable of producing all clinical materials
- Over 28m doses of Imvamune and 2m doses of MVA-Ebola, to date.

Highly customizable approach to curing diseases
5 major partnerships validating our platform and development activities in infectious disease and oncology
# PIPELINE

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>INDICATION</th>
<th>ONGOING STUDIES</th>
<th>PRECLINICAL</th>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
<th>MARKET</th>
<th>COMMERCIAL RIGHTS</th>
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<tbody>
<tr>
<td><strong>INFECTIOUS DISEASES</strong></td>
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<tr>
<td>IMVAMUNE liquid-frozen 1)</td>
<td>Smallpox</td>
<td>1</td>
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<tr>
<td>IMVAMUNE freeze-dried</td>
<td>Smallpox</td>
<td>-</td>
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<tr>
<td>MVA-BN Filo</td>
<td>Ebola/Marburg</td>
<td>10</td>
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<tr>
<td>MVA-BN RSV</td>
<td>RSV</td>
<td>1</td>
<td></td>
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<tr>
<td>MVA-BN HPV</td>
<td>Chronic HPV Infection</td>
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<tr>
<td><strong>CANCER IMMUNOTHERAPY</strong></td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>PROSTVAC mono</td>
<td>Prostate Cancer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PROSTVAC mono/combo</td>
<td>Prostate Cancer</td>
<td>10</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CV301 + nivolumab</td>
<td>Lung Cancer (NSCLC)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MVA-BN Brachyury</td>
<td>Metastatic Tumors</td>
<td>-</td>
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1) Approved in the European Union under the trade name IMVANEX® and in Canada under the trade name IMVAMUNE®. Phase 3 registration studies are ongoing in the United States.
Our vaccine platform has been found to be a potent stimulator of T-cells directed at particular tumor targets, breaking tolerance and inflaming tumors.

Studies from two decades of research have demonstrated our cancer vaccines to be safe and well tolerated and have shown promise in extending overall survival.
PROSTVAC - PATIENT CASE HISTORY ("FRANK")
PUBLISHED 2013 CASE REPORT IN CLINICAL GENITOURINARY CANCER

Gleason grade: 4 + 3 = 7

Trend before radical prostatectomy ( )
Trend after radical prostatectomy. External beam radiation ( )
Trend after first vaccine trial ( )
Trend after second vaccine trial ( )

5.8 months DT (doubling time)
9.6 months DT
28.6 months DT
PROSTVAC - OUR PROSTATE CANCER VACCINE

- PROSTVAC has extended overall survival between 6-10 months, on average, in multiple studies
  - ADT (Xtandi)
  - Chemotherapy
  - Radiation
  - Checkpoint Inhibition

- A 125 patient Phase 2 placebo-controlled trial showed a 9.9 month improvement of overall survival

- A 1297 patient global Phase 3 placebo-controlled trial ongoing
  - Interim look mid-2017
  - Final data before year end

- In 2015, BMS took a global license on PROSTVAC
PROSTVAC PHASE 2 RESULTS
MOST PRONOUNCED SURVIVAL TO DATE IN PROSTATE CANCER

Significantly extended overall survival

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Deaths</th>
<th>Median OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>41</td>
<td>33</td>
<td>16.3</td>
</tr>
<tr>
<td>PROSTVAC</td>
<td>84</td>
<td>57</td>
<td>26.2</td>
</tr>
<tr>
<td>Δ</td>
<td>9.9 months improvement in OS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hazard ratio
0.50 (95% CI 0.32–0.78)
p=0.0019

Pivotal data of approved agents:
Provenge®: ΔOS = 4.1 mo (AS/MS mCRPC)
Zytiga®: ΔOS = 5.2 mo (pre-chemo mCRPC)
Xtandi®: ΔOS = 2.2 mo (pre-chemo mCRPC)

Reference
Package insert Sipuleucel-T, enzalutamide and abiraterone

Overall Survival Analysis of a Phase II Randomized Controlled Trial of a Poxviral-Based PSA-Targeted Immunotherapy in Metastatic Castration-Resistant Prostate Cancer
Kantoff et al., Journal of Clinical Oncology, January 2010
Revised in 2016
**PROSTVAC COMMERCIAL LICENSE WITH BMS**

**Total Deal terms:**
- $60M upfront with up to $975M in total milestones

**Pre-commercial**
- Up to $480M* total prior to approval

**Commercial**
- Sales milestones up to $495M
- Tiered royalties on sales from high teens to mid-twenties

* Based on Phase 2 data
PROSTVAC STUDIES
SPAN PROSTATE CANCER DISEASE LANDSCAPE

Non-metastatic

Metastatic

8 completed

11 ongoing

US$ 4.8B market

Phase 3 study
Monotherapy
Combination study
Completed study

Surgery
LUPRON
DOCETAXEL

PROSTVAC
XTANDI
PROVEGE
ZYTIGA
XGEVA
DOCETAXEL
JEVTANA
XOFIGO
### PROSTVAC MARKET POSITIONING

<table>
<thead>
<tr>
<th>Long term</th>
<th>Medium term</th>
<th>Initial Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monotherapy in the late stage of the disease</td>
<td>Combination with other approved drugs in the space AND earlier in the disease setting</td>
<td>Combination with potentially curative agents, i.e. checkpoint inhibitors</td>
</tr>
</tbody>
</table>

- **$4.8+ B USD market**
- **Initial Application**
- **Monotherapy in the late stage of the disease**
- **Combination with other approved drugs in the space AND earlier in the disease setting**
- **Combination with potentially curative agents, i.e. checkpoint inhibitors**
CV301

Cancer vaccine with potential in multiple solid tumors

Combination treatment with checkpoint inhibitors
CV301 - POTENTIAL IN MULTIPLE SOLID TUMORS

• Our platform is ideal for "immunogenic intensification"
• CV301 is engineered to create T-cells which target CEA and MUC1

• Goal of becoming preferred treatment in combination with any checkpoint inhibitor
  • Strong preclinical evidence of combination synergies

• Only approx. 1 in 5 patients respond to checkpoint inhibitors
  • How can we convert the non-responders?

<table>
<thead>
<tr>
<th>Carcinoma</th>
<th>CEA</th>
<th>MUC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal</td>
<td>&gt;90%</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Pancreatic</td>
<td>&gt;95%</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Lung&lt;sup&gt;1&lt;/sup&gt;</td>
<td>70%</td>
<td>&gt;80%</td>
</tr>
<tr>
<td>Breast</td>
<td>50%</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Bladder</td>
<td>70%</td>
<td>&gt;90%</td>
</tr>
</tbody>
</table>
CV301 - ENHANCING THE CURES WE SEE TODAY
BIVALENT VACCINE FOR MULTIPLE CANCERS

Exploring synergies in combination with checkpoint inhibitors

**Non-small cell lung cancer**
- Ongoing proof-of-concept study of CV301 plus OPDIVO
- Collaboration with BMS to supply OPDIVO at no cost

**Bladder cancer**
- Collaboration with Roche to supply TECENTRIQ at no cost for planned Phase 2 study

**Other indications**
- Bavarian Nordic retains all commercial rights in lung, bladder, colorectal, breast, ovarian, gastric, liver and renal cancer

BN sponsored

Bristol-Myers Squibb

Roche

Exploring combinations in company collaborations or with NCI
COMPLETE TUMOR REGRESSION
FROM POXVIRUS-BASED IMMUNOTHERAPY COMBINED WITH PD-1 & LAG-3 BLOCKADE

CT26-HER2 solid tumor model:
MVA-BN-HER2 immunotherapy (s.c.) and/or anti-PD1 + anti-LAG3 antibody (i.p.)
Q2wks x2 (d1 and 15)

Durable response after mice were re-challenged
RSV represents a high unmet medical need; similar disease burden and death rate in the elderly population as influenza.

Phase 1 data demonstrated safety and tolerability.

Data from 400 patient Phase 2 trial anticipated summer 2017.
## RSV - LARGE, UNSERVED PATIENT POPULATION

### Disease Burden

<table>
<thead>
<tr>
<th>Adults 65 and older, USA</th>
<th>RSV</th>
<th>Influenza*</th>
<th>Pneumonia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of infections</td>
<td>2,400,000</td>
<td>2,900,000</td>
<td>1,300,000</td>
</tr>
<tr>
<td>Hospitalizations</td>
<td>200,000</td>
<td>260,000</td>
<td>340,000</td>
</tr>
<tr>
<td>Deaths</td>
<td>14,000</td>
<td>15,000</td>
<td>22,000</td>
</tr>
</tbody>
</table>

* Average of 3 past seasons, 2010-2013; includes vaccine averted cases


### Summary

- **RSV**
  - No approved prophylactic vaccine
  - 2,400,000 infections
  - 200,000 hospitalizations
  - 14,000 deaths

- **Influenza**
  - 2,900,000 infections
  - 260,000 hospitalizations
  - 15,000 deaths

- **Pneumonia**
  - 1,300,000 infections
  - 340,000 hospitalizations
  - 22,000 deaths

- **Global Market**
  - $5.4B USD
  - $6B USD

- **Prevnar**
  - Global annual sales
BUILDING A UNIVERSAL RSV VACCINE
WHY ARE WE DIFFERENT?

• RSV represents a high unmet medical need; similar disease burden and death rate in the elderly population as influenza
• Historical vaccine development provided incomplete protection
  • Possibly related to:
    • Lack of T cell production
    • Lack of mucosal protection
    • Poor duration of protection

• Our platform allows for broad protection against multiple targets
• Boosting the natural immunity we all possess

MVA-BN RSV - a highly differentiated approach

• By encoding 5 distinct targets of RSV, we have built our vaccine to equip the immune system with enough information to protect against a potential infection, regardless of serotype (A or B)
“Bioterrorism is a much larger risk...” - Bill Gates

“With nuclear weapons, you’d think you would probably stop after killing 100 million. Smallpox won’t stop. Because the population is naïve, and there are no real preparations. That, if it got out and spread, would be a larger number.”

“It doesn’t take much biology expertise nowadays to assemble a smallpox virus. Biology is making it way easier to create these things.”
SUCCESSFUL PARTNERSHIP WITH THE U.S. GOVERNMENT
MORE THAN $1.2 BILLION IN R&D AND SUPPLY CONTRACTS TO-DATE

US strategic long-term stockpiling goal, as outlined by BARDA.

132 million doses

IMVAMUNE® freeze-dried

R&D Contract
$95m
2009-2011

Bulk Supply
$233m
2015-2016

Stockpile Re-supply
20 million doses
- 2020

IMVAMUNE® liquid-frozen

R&D & Supply Contracts
20 million doses
$679m
2003 - 2012

Supply Contract
8 million doses
$228m
2013

20 million doses
$679m
2003 - 2012

$228m
2013

20 million doses
$228m
2013
OUR COLLABORATION WITH JANSSEN

- Janssen completed a submission for Emergency Use Assessment and Listing for the Ebola vaccine to the WHO
  - Phase 1, 2 and 3 studies ongoing
- HPV vaccine to start clinical trials in 2017
- Janssen retains option to license two additional disease targets
ANTICIPATED SELECTED MILESTONES

**IMVAMUNE**
- Expected award for freeze-dried IMVAMUNE
- Top-line data for Phase 3 non-inferiority study
- Approval and Priority Review Voucher

**RSV**
- MVA-BN RSV Phase 2 dosing study read out
- Select ideal dosing regimen and carry forward into second RSV season
- Establish meeting with FDA to determine appropriate registration pathway

**JANSSEN**
- Initiate HPV Phase 1 study in cervical cancer
- Potential expanded collaboration on two additional infectious disease targets
- Data from Ebola prime-boost vaccine regimen

**PROSTVAC**
- Phase 3 top-line data including interim analyses
- Data from NCI-sponsored Phase 2 trials

**CV301**
- Initiate Phase 2 study with Roche in bladder cancer
- CV301 + checkpoint inhibitor proof-of-concept studies in additional indications

**BRACHYURY**
- MVA-BN Brachyury Phase 2 initiation
Our efficient and cost effective business model allows for significant investment in R&D

- $150M in annual revenues
- 5th straight year with breakeven result
- Cash position tripled in past 3 years
- ~$75M invested in R&D annually
FINANCIAL SUMMARY AND OUTLOOK

Q1 financials as expected

- Revenues in Q1 2017 were largely derived from the sale of IMVAMUNE bulk drug substance to U.S. Government
- Remaining ~600mDKK related to IMVAMUNE expected over Q2 and Q3
- FY revenue and EBIT expectations maintained

<table>
<thead>
<tr>
<th></th>
<th>mDKK 3m 2017</th>
<th>mUSD 3m 2017</th>
<th>mDKK 3m 2016</th>
<th>mUSD 3m 2016</th>
<th>mUSD FY2017E</th>
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<tbody>
<tr>
<td>Revenue</td>
<td>198</td>
<td>28</td>
<td>23</td>
<td>3</td>
<td>187</td>
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<tr>
<td>EBIT</td>
<td>(3)</td>
<td>0</td>
<td>(153)</td>
<td>(22)</td>
<td>50</td>
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<tr>
<td>Cash preparedness at year-end</td>
<td>2,448</td>
<td>352</td>
<td>1,365</td>
<td>196</td>
<td>345</td>
</tr>
</tbody>
</table>

Cash preparedness includes cash, cash equivalents, investments in securities and the aggregate amount of undrawn credit lines. USD/DKK = 6.96 (as of March 31, 2017) All numbers are approximate.
SAVE THE DATE
SEPTEMBER 21, 2017

BAVARIAN NORDIC CAPITAL MARKETS DAY
LE PARKER MERIDIEN HOTEL
NEW YORK CITY