THE FUTURE OF VACCINES

NEEDHAM HEALTHCARE CONFERENCE

NEW YORK

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.
MULTIPLE LAYERS OF VALUE

1 approved product
8 active programs

2 focus areas
Infectious Disease & Oncology

3 Phase 3 Products
Multiple near-term milestones

$1.2B in US government contracts
$1B in revenues over past 10 years
$975M BMS deal - PROSTVAC
$358M Janssen deals - Ebola and HPV

Validated Platform (NIH, BARDA, BMS, Janssen)

Expertise in T-Cell Stimulation & Antibody Response

Broad Pipeline & Late-Stage Candidates

Strong Revenue Base to Re-Invest in Clinical Pipeline
STRONG FINANCIAL PERFORMANCE DRIVEN BY SALES AND PARTNERSHIP

• Consistent with previous years we have generated revenues above DKK 1 billion and recorded a break-even result

• Cash preparedness was significantly strengthened and has more than tripled over the last three years
FINANCIAL SUMMARY AND OUTLOOK

Revenue 2016

mUSD
- IMVAMUNE US + RoW: 120
- IMVAMUNE Holdback: 11.6
- R&D Contracts: 13.5

Revenue 2017

mUSD
- IMVAMUNE US + RoW: 115
- PROSTVAC Upfront: 14.3
- R&D Contracts: 57

<table>
<thead>
<tr>
<th>mDKK</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Revenue</td>
<td>142</td>
<td>143</td>
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<tr>
<td>EBIT</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Cash preparedness at year-end</td>
<td>326</td>
<td>325</td>
</tr>
</tbody>
</table>

Cash preparedness includes cash, cash equivalents, investments in securities and the aggregate amount of undrawn credit lines.
STRONG PROGRESS IN 2016
DRIVEN BY MULTIPLE LAYERS OF VALUE

• Expansion, advancement and diversification of pipeline
• Continued strong financial performance
• Significant pipeline news flow expected in 2017

Key value drivers in 2017 and beyond

IMVAMUNE  PROSTVAC
CV301  MVA-BN RSV

Existing & future partnerships

- Janssen
- National Cancer Institute
- Bristol-Myers Squibb
- Roche
- BARDA
LIVE VIRUS VACCINE PLATFORM
VALIDATED AND MODULAR APPROACH EMPLOYING POXVIRUSES

Antigenic Complexity
- Low
  - Wide Variety of Target Diseases

High
- Vectors
- Antigens
- Promoters
- Co-Stimulatory Molecules (TRICOM)

Recombinant Poxviruses

Customized Immunogenicity
- Simple
- Target Multiple Antigens for a Single Disease
- Complex

Widely Applicable Technology for Infectious Disease and Cancer Immunotherapy
66 million American lives require a safer smallpox vaccine

BARDA Broad Agency Announcement 2010

Bavarian Nordic is one of only two biotechnology companies that have successfully navigated the US Government development and procurement process to recognize >$1B in revenues to date... and potentially $2B more in coming years
SUCCESSFUL PARTNERSHIP WITH THE U.S. GOVERNMENT
MORE THAN $1.2 BILLION IN R&D AND SUPPLY CONTRACTS TO-DATE

IMVAMUNE® liquid-frozen
- R&D & Supply Contracts
  - 20 million doses
  - $679m
  - 2003 - 2012
- Supply Contract
  - 8 million doses
  - $228m
  - 2013

IMVAMUNE® freeze-dried
- R&D Contract
  - $95m
  - 2009-2011
- Bulk Supply
  - $233m
  - 2015-2016

Long-term stockpiling goal
- 132 million doses
- Stockpile Re-supply
  - 20 million doses
  - 2013
  - 2015-2016
  - 2015-2020

20 million doses
$679m
2003 - 2012
20 million doses
$228m
2013
20 million doses
$95m
2009-2011
20 million doses
$233m
2015-2016
132 million doses
- 2020

BAVARIAN NORDIC
PREPARING FOR THE NEXT GENERATION OF IMVAMUNE SMALLPOX VACCINE

- Completed enrollment of the final Phase 3 study of liquid-frozen formulation required prior to submission for U.S. approval
  - Data read out H2 2017
  - Submission of BLA in Q2 2018 with fast-track designation
  - Approval and receipt of Priority Review Voucher

- Contract award with USG expected in 2017
- Purchasing additional bulk and/or vaccine doses moving towards the initial 20 million dose stockpile
Our RSV vaccine can derive a broad antibody and T-cell response, as well as mucosal and humoral protection—something which has never been seen in a singular vaccine to date.

Phase 1 data demonstrated safety and tolerability.

Data from 400 subject Phase 2 trial anticipated summer 2017.
RSV - A SIGNIFICANT OPPORTUNITY

• Reported promising Phase 1 data
• Completed enrollment of a Phase 2 study in 400 elderly subjects
• Results are expected in mid-2017 and will provide important information for larger efficacy studies
• Also exploring pediatric population

MVA-BN RSV - a highly differentiated approach

• Encodes two main surface proteins F & G
• Encodes the G surface protein from both RSV subtype A&B - poor cross reactivity between RSV subtypes
• Encodes two highly conserved internal RSV proteins (N & M2) - good inducers of T cell responses

\[ F_{(A)} \quad G_{(A)} \quad G_{(B)} \quad N \quad M2 \]
RSV PHASE 1 POSITIVE TOP LINE RESULTS

Randomized, placebo controlled study, 63 healthy subjects

Safety
• No unexpected and/or serious adverse reactions

• Vast majority of events represent local and systemic reactions typical for vaccines - reported as mild to moderate and resolved rapidly without intervention (≤5 days)

• Low incidence of local and systemic reactions typical for vaccines and comparable between age groups

Immunogenicity
• Dose response and differences between age groups was observed in the immune responses

• Antibodies against RSV significantly boosted in the majority of subjects
  - 2-fold increase in both IgG and IgA in elderly
  - Boosted neutralizing antibodies against both RSV subtypes (A&B)

• T cell responses were boosted in all elderly subjects
  - 3-5 fold increase in T cell responses (F, G, N proteins & whole RSV)
  - Robust T cell response
MVA-BN RSV - PHASE 1 FOLLOW-UP DATA

RSV antibody response by IgA ELISA (GMT)

RSV antibody responses by PRNT (A strain)

vaccinations given at week 0 and week 4
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
PRIME/BOOST PSA TARGETED “OFF THE SHELF” CANCER VACCINE

Heterologous prime/boost regimen

**V**
- Vaccinia or MVA + Fowlpox
- Subcutaneous administration

**F**
- PSA
  - CEA, MUC-1
  - HER-2
  - Brachyury
  - Tumor antigens with epitopes enhanced for HLA binding
  - Prostate, lung, head & neck, bladder, colorectal, breast, ovarian and renal cancers

**V**
- TRICOM (TRIad of COstimulatory Molecules)
  - Enhance T-Cell activation in synergistic manner
  - Strengthen the anticancer immune response

**F**
- Safe and well tolerated (11 clinical trials)
- Injection site reactions and flu-like symptoms

PROSTVAC PRIME/BOOST PSA TARGETED “OFF THE SHELF” CANCER VACCINE

BAVARIAN NORDIC
The first and second interim analyses of the Phase 3 study have been completed and the study continues as planned.

Interim #3 and final analysis expected before year-end.

Three new Phase 2 studies of PROSTVAC were initiated during the year.

Now 10 ongoing trials and additional trials are in the planning.

Data from combination studies are expected from 2017 and onwards.

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**PROSPECT Phase 3 Trial**

A Randomized, Double-blind, Global Phase 3 Efficacy Trial of PROSTVAC in Metastatic Castration-Resistant Prostate Cancer (N=1,297)

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<th>Interim Analysis</th>
<th>Events</th>
<th>Percentage</th>
<th>Estimated Timing</th>
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<td>214</td>
<td>40%</td>
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<td>#2</td>
<td>321</td>
<td>60%</td>
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<td>#3</td>
<td>427</td>
<td>80%</td>
<td>Mid-2017</td>
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<tr>
<td>Final</td>
<td>534</td>
<td>100%</td>
<td>2H 2017</td>
</tr>
</tbody>
</table>

Primary endpoint: Overall survival.
CV301 CANCER IMMUNOTHERAPY
EXPLORING SYNERGIES IN COMBINATION WITH OTHER IMMUNE-MODULATING AGENTS

Lung cancer
• Proof-of-concept study of CV301 plus nivolumab initiated
  • Second-line treatment, potential for first-line treatment
  • Bristol-Myers Squibb to supply nivolumab at no cost

Bladder cancer
• Agreement with Roche to supply atezolizumab for planned study in bladder cancer

MVA-BN
Fowlpox
TRICOM

CEA
MUC-1

CV301

NCSLC
BN sponsored

Bladder
BN sponsored

Other indications
Exploring combinations in company collaborations or with NCI

Lung, Breast, Colorectal, Ovarian, Gastric, Bladder, Liver and Renal cancer
PROOF-OF-CONCEPT STUDY OF CV301 & NIVOLUMAB IN NSCLC

Phase 1
Safety CV301 single agent (n=18)
Single dose combination with nivolumab (n=22)

Phase 2
Multi-center trial
Up to 20 sites in USA
Randomization
CV301 + nivo (n=60) nivo (mono) (n=60)

Endpoints
• Safety, tolerability
• Primary endpoint: OS
• Secondary endpoints: ORR, DOR, PFS, Immune effects
CV301 + ATEZOLIZUMAB (ANTI PD-L1) IN 2ND LINE METASTATIC BLADDER CANCER

- Single-arm, combination of standard therapy (atezolizumab) + CV301
- Primary Endpoint: Improve OS compared with historical control (7.9 months)
- Secondary Endpoints = Early indicators possible:
  - objective response rate (control = 19%),
  - progression free survival (control median = 2.1 months)
- Exploratory = biomarker discovery
  - Inform future trial design and other indications
OUR COLLABORATION WITH JANSSEN

- Janssen completed a submission for Emergency Use Assessment and Listing for the Ebola vaccine to the WHO
  - Phase 3 studies ongoing
  - Initiated Phase 1 study of a multivalent vaccine (Ebola, Sudan and Marburg viruses)
- HPV vaccine to start clinical trials in 2017
- Janssen retains option to license two additional disease targets
ANTICIPATED SELECTED MILESTONES

IMVAMUNE
- U.S. RFP 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
- MVA-BN RSV additional study initiations

JANSSEN
- Initiate HPV Phase 1 study in cervical cancer
- Potential expanded collaboration with Janssen on two additional infectious disease targets
- Data from Ebola prime-boost vaccine regimen
- Ebola vaccine pending approval for emergency use by WHO

PROSTVAC
- Phase 3 top-line data including interim analyses
- Initiate NCI-sponsored Phase 2 study in combination with ipilimumab and nivolumab
- Data from NCI-sponsored Phase 2 trials

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

BRACHYURY
- MVA-BN Brachyury Phase 2 initiation
SAVE THE DATE
SEPTEMBER 21, 2017

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