
ANNUAL
REPORT
2017
BAVARIAN NORDIC

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.

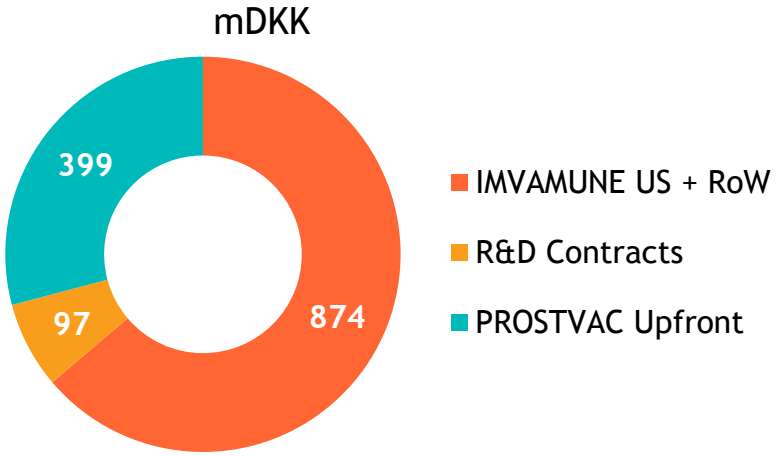
FINANCIALS

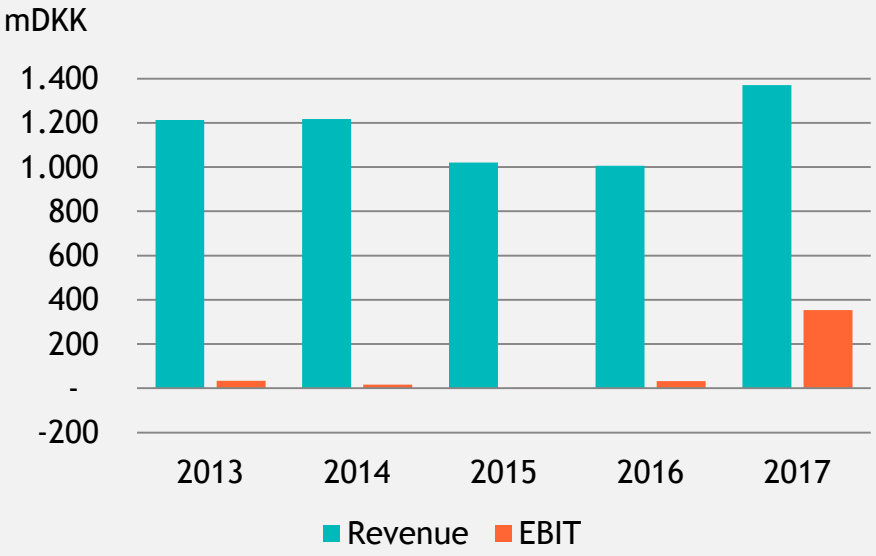
OLE LARSEN, CFO

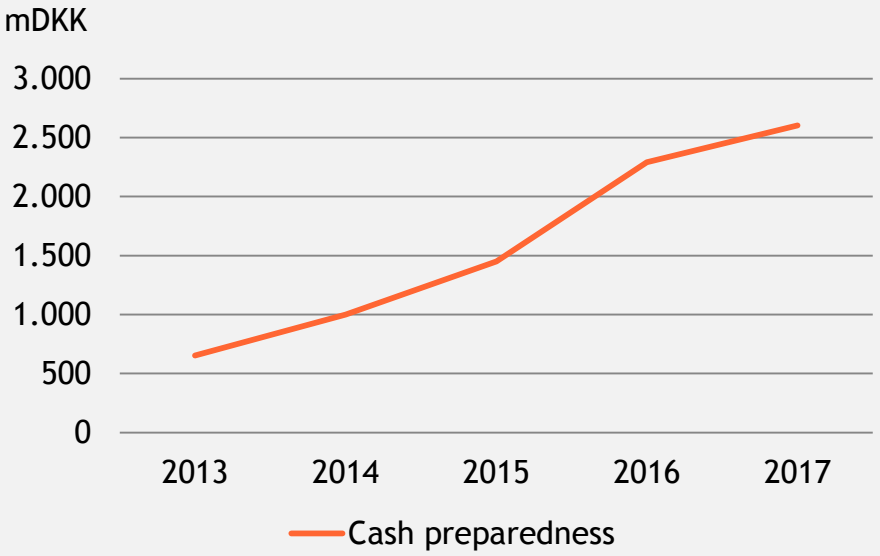
FINANCIAL RESULTS 2017

- Revenues and results were in line with our guidance
- PROSTVAC upfront payment was recognized as income
- Cash preparedness was further strengthened

Revenue 2017







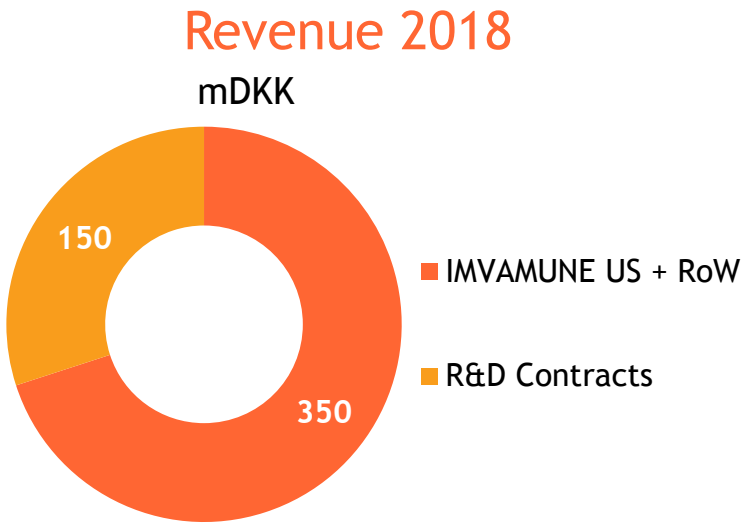
FINANCIAL STATEMENTS

	mDKK		mUSD	
	FY 2017	**FY 2016**	FY 2017	FY 2016
Revenue	1,370	1,007	221	162
Production costs	291	298	47	48
Gross profit	**1,080**	**709**	174	114
Research and development costs	518	463	83	75
Distribution and administrative costs	208	213	33	34
Total operating costs	**726**	**676**	117	109
Income before interest and taxes (EBIT)	**353**	**33**	57	5
Financial income/loss	(51)	7	(8)	1
Income before company tax	**302**	**40**	49	6
Tax	121	9	19	1
Net profit for the period	**181**	**31**	29	5
Cash preparedness (end of period)	**2,604**	**2,292**	419	369

USD/DKK = 6.21

FINANCIAL OUTLOOK 2018

- Lower revenues from IMVAMUNE in 2018 as this reflects the initial vaccine bulk ordered by the U.S.
- R&D costs remain largely unchanged as we continue to invest in our prioritized programs as well as the fill-finish facility
- The majority of the IMVAMUNE revenues from the new U.S. order are delayed until fill-finish facility comes on-line (2021)



	2017	2018		mUSD 2017	2018
mDKK	guidance	actual	guidance	guidance	actual	guidance
Revenue	1,300	1,370	500	209	221	81
EBIT	350	353	(385)	56	57	(62)
Cash preparedness at year-end	2,600	2,604	1,850	419	419	298

USD/DKK = 6.21

Cash preparedness includes cash, cash equivalents, investments in securities and the aggregate amount of undrawn credit lines.

A SOLID FOUNDATION

PAUL CHAPLIN, CEO AND PRESIDENT

A SOLID FOUNDATION FOR GROWTH

PROSTVAC Phase 3 failure was a setback, but we have positioned ourselves for growth through:

- Expansion of industry and public partnerships
- Diversification of pipeline
- Strong cash preparedness allows for significant investments in R&D
- Investment in fill-finish facility to secure future supply of IMVAMUNE and other vaccines

Key pipeline assets

- IMVAMUNE
- CV301
- MVA-BN RSV
- Brachyury

Industry partnerships

Janssen Pharmaceutical Companies of Johnson & Johnson

Roche

Bristol-Myers Squibb

OUR STRATEGY IN ACTION

1 **Maintain the global leadership of our smallpox vaccine franchise**

- Awarded freeze-dried contract from BARDA
- Strong efficacy data read out from Phase III
- Investing in fill/finish line securing future manufacturing requirements

2 **Rapidly advance our pipeline of infectious disease programs**

- Completed Phase 2 and outlined development strategy for RSV
- Expanded collaboration with Janssen on HIV & HBV

3 **Establishing a broad and deep cancer immunotherapy franchise**

- Industry and sponsor collaborations for combination studies of CV301 in multiple indications
- Advancing BN-Brachyury into Phase 2

Strong financial position enables executing on strategy going forward

PIPELINE

AMBITIOUS AND WELL-BALANCED PORTFOLIO

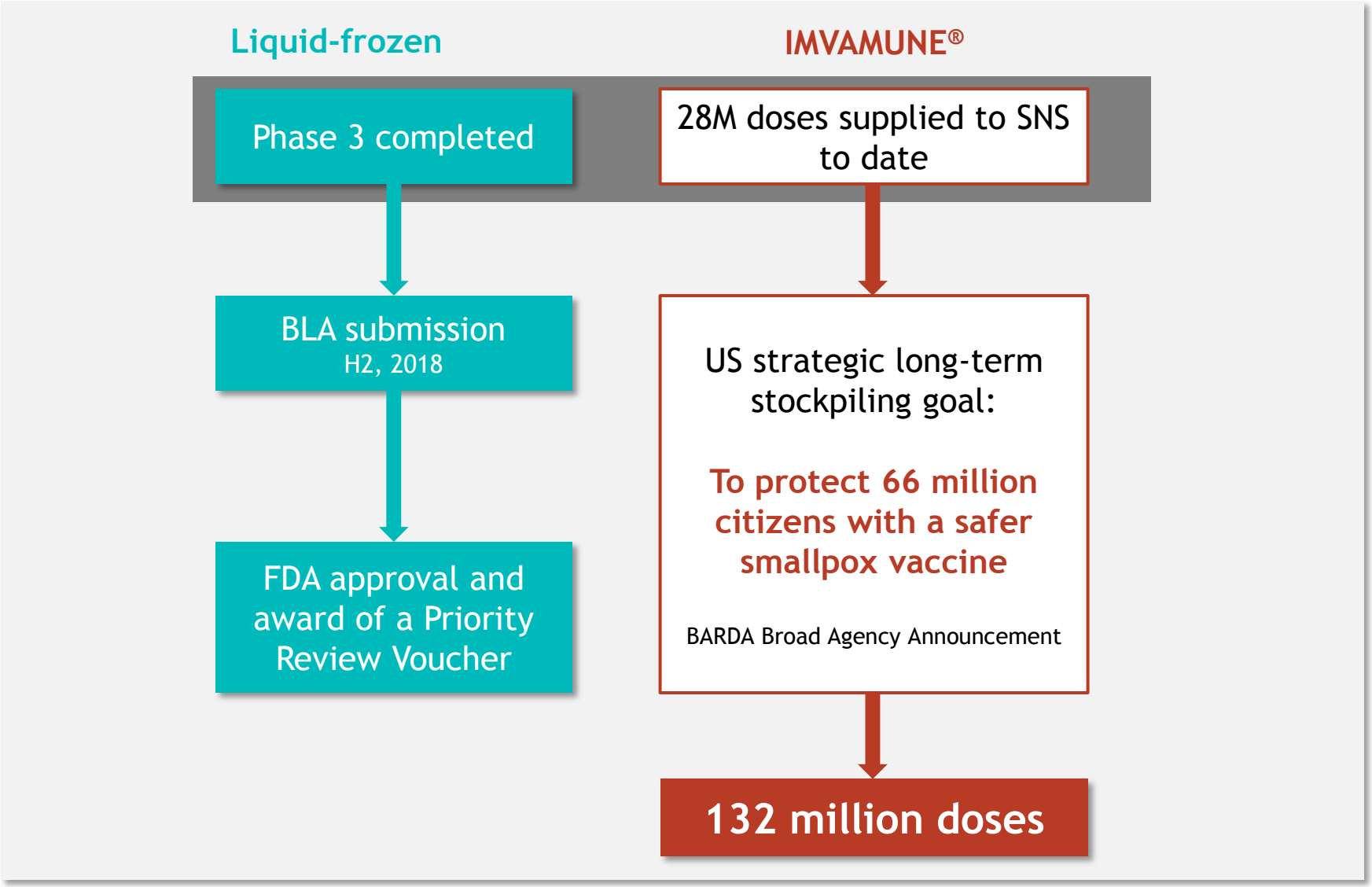
Infectious diseases

Oncology

PRODUCT	INDICATION	PHASE 1	PHASE 2	PHASE 3	PARTNER
IMVAMUNE liquid-frozen [1]	*Smallpox*			File H2 2018	
IMVAMUNE freeze-dried	*Smallpox*				
MVA-BN RSV	*RSV*				
CV301 + pembrolizumab	*Lung cancer (NSCLC)*				
CV301 + atezolizumab	*Bladder cancer*		Planned 2018		
CV301 + durvalumab	*Colorectal cancer*		Planned 2018		
CV301 + nivolumab	*Colorectal cancer*		Planned 2018		
BN-Brachyury	*Chordoma*		Planned 2018		
PROSTVAC combinations	*Prostate cancer*				Bristol-Myers Squibb
MVA-BN Filo + AdVac	*Ebola*				janssen
MVA-BN Filo + AdVac	*Ebola/Marburg*				janssen
MVA-BN HPV + AdVac	*Chronic HPV infection*	Planned 2018			janssen
MVA-BN HIV + AdVac	*HIV1 Infected*	Planned 2018			janssen
MVA-BN HBV + AdVac	*Hepatitis B infected*				janssen

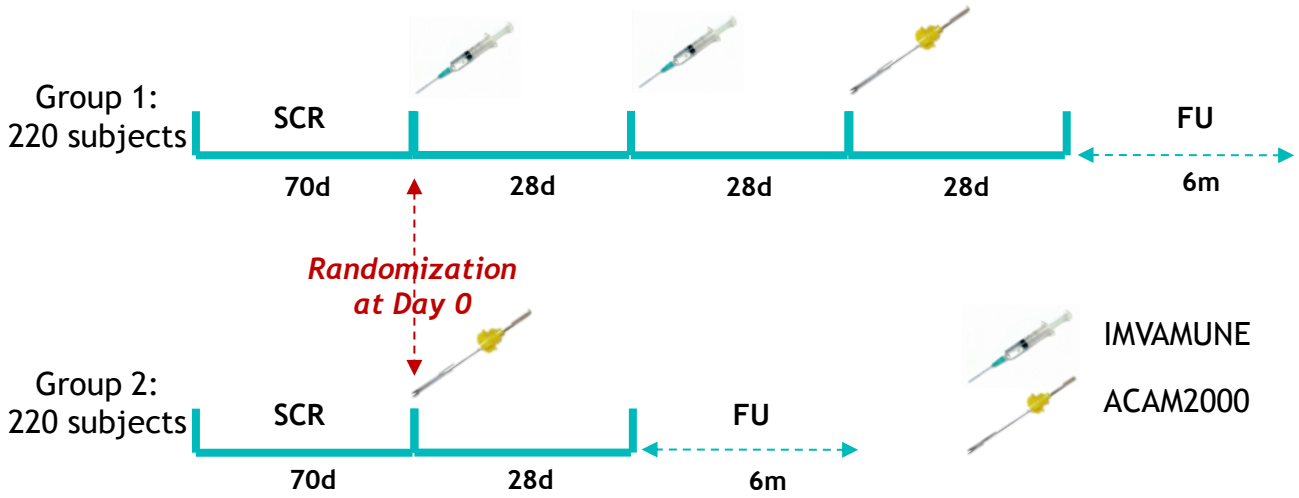
1) Approved in Canada and the European Union (marketed as IMVANEX® in the EU). Phase 3 completed in the U.S.

SUCCESSFUL PARTNERSHIP WITH THE U.S. GOVERNMENT



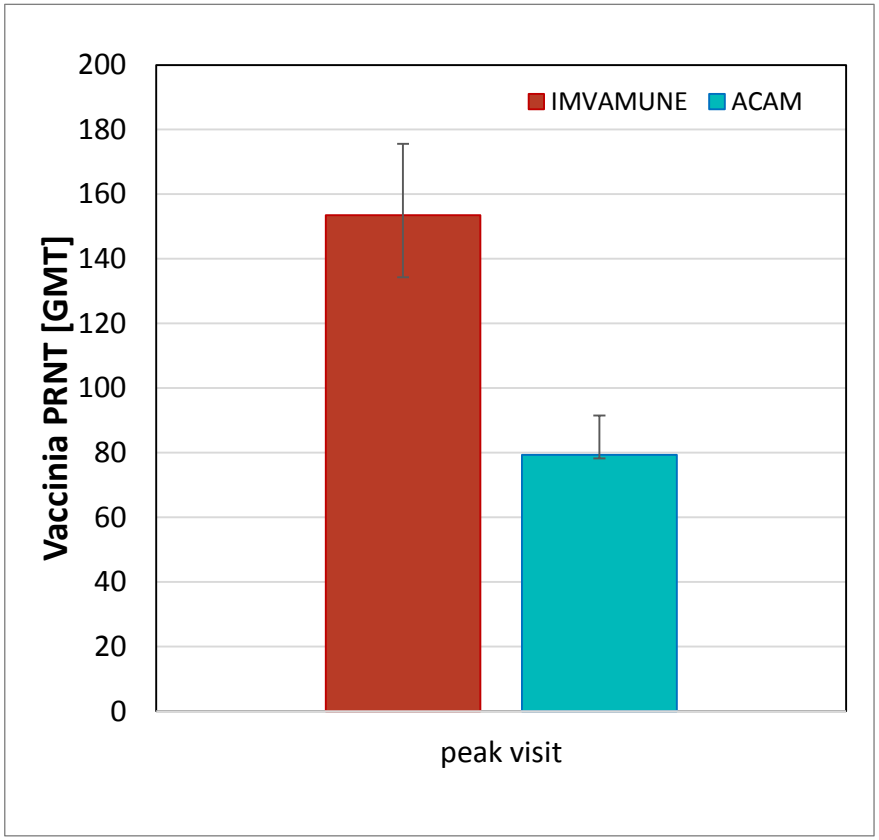
PHASE III (POX-MVA-006) TRIAL DESIGN

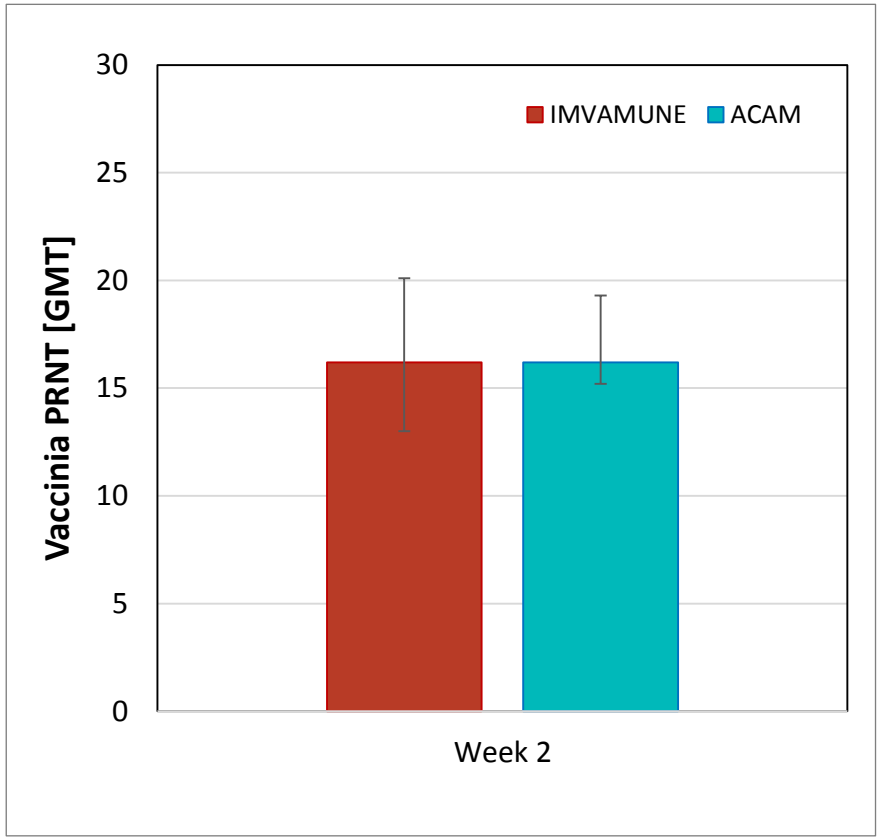
- Randomized Phase III pivotal trial performed at military sites in South Korea
- Total 440 (2 groups of 220) healthy, vaccinia-naïve subjects
- Co-primary Objectives to demonstrate
  - Non-inferiority of the neutralizing antibody responses induced by IMVAMUNE and ACAM2000 at Peak Visits (immunogenicity)
  - Attenuation of the ACAM2000 vaccine "take" following IMVAMUNE vaccination (efficacy)



SCR = Screening; FU = Follow Up

IMMUNE RESPONSE DATA – PRIMARY ENDPOINT



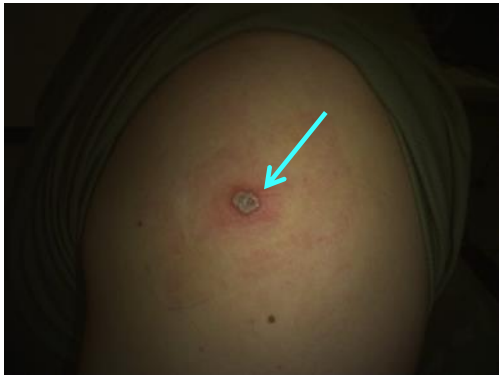


Requirement to demonstrate non-inferiority of IMVAMUNE to ACAM in PRNT (peak visit):
the lower (two-sided) 95% CI limit of the GMT ratio (IMVAMUNE/ACAM) is above 0.5 (predefined non-inferiority margin).

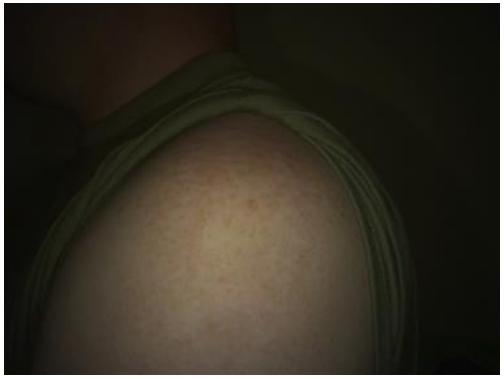
Vaccinations: IMVAMUNE (week 0, week 4), ACAM (week 0)

EFFICACY DATA – CO-PRIMARY ENDPOINT

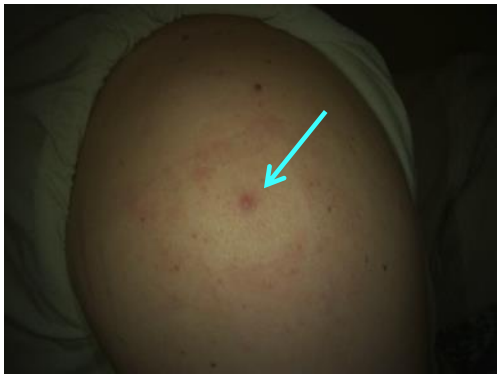
- The absence or attenuation of a vaccine take following re-vaccination with a traditional (replicating) smallpox vaccine was a historical measure that the vaccinee was protected against smallpox



A Full vaccine take[1] following vaccination with ACAM2000. A 93% Full & 4% partial[2] vaccine take rate was observed in the subjects vaccinated with ACAM2000



No take was observed in the majority of the subjects that had been previously vaccinated with IMVAMUNE



The ACAM2000 take was attenuated in 23% of the subjects previously vaccinated with IMVAMUNE

[1] Full vaccine take : a maximum central lesion diameter ≥5mm at the 6 to 8 day visit after scarification
[2] Partial take : a maximum central lesion diameter <5mm at the 6 to 8 day visit after scarification

IMVAMUNE PHASE 3 SUCCESSFULLY COMPLETED

- **Study met both primary endpoints, thus demonstrating non-inferiority to ACAM2000, the current U.S. licensed smallpox vaccine**
  - Peak neutralizing antibodies induced by IMVAMUNE were shown to be 2-fold higher than those stimulated by ACAM2000
  - Primary vaccination with IMVAMUNE resulted in a highly attenuated take (reduction in lesion size), and in fact prevented the vaccine take in the majority of subjects re-vaccinated with ACAM2000

- **BLA filing expected in second half of 2018**

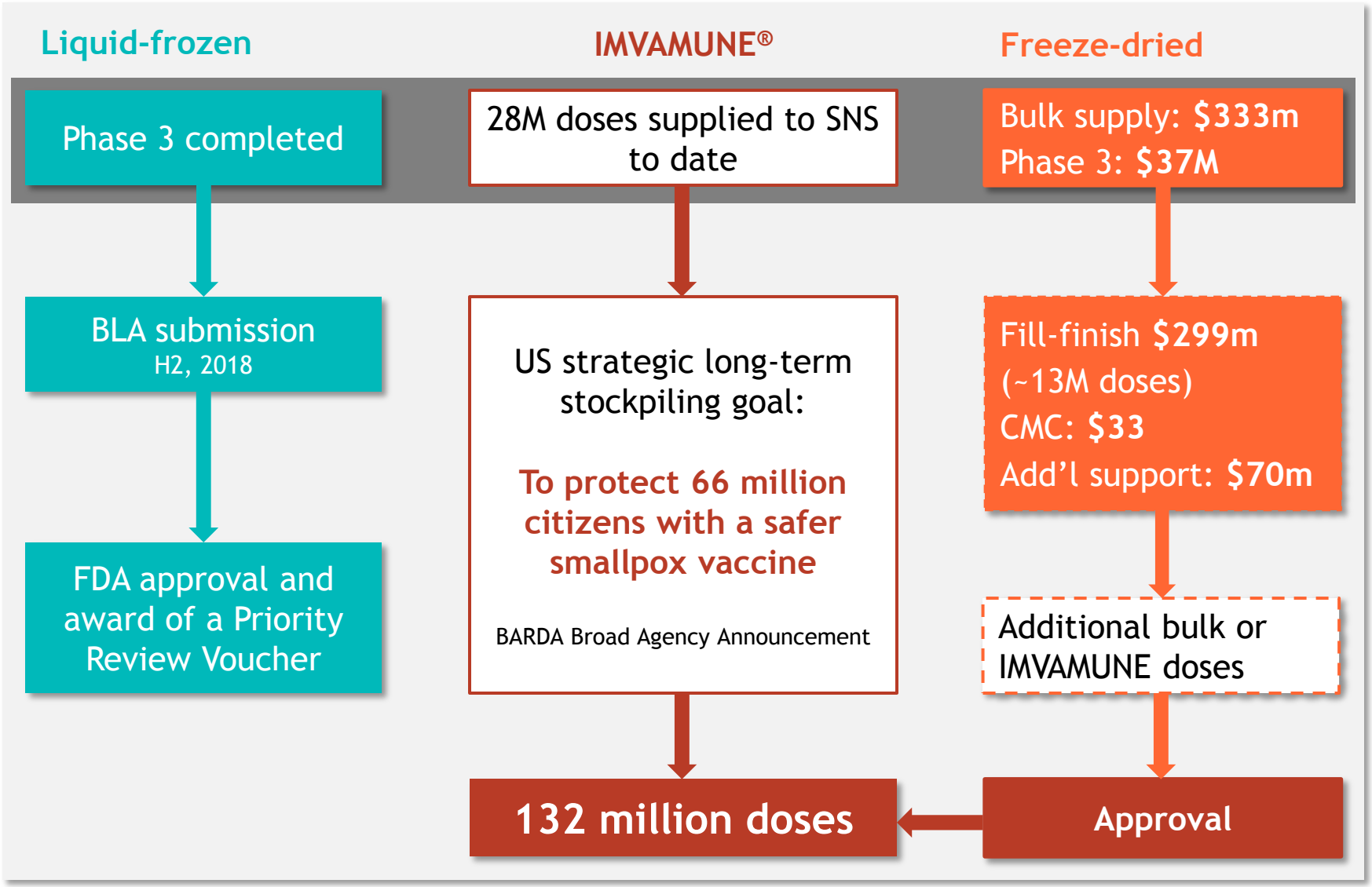
IMVAMUNE (liquid-frozen) Phase 3 program

Lot-consistency study, n=4,000
Antibody responses and safety of three consecutive manufacturing lots vs. placebo

Non-inferiority study, n=440
Comparison of efficacy endpoints between IMVAMUNE and ACAM2000

SUCCESSFUL PARTNERSHIP WITH THE U.S. GOVERNMENT

$1.8 BILLION IN R&D AND SUPPLY CONTRACTS TO-DATE



ESTABLISHMENT OF FILL-FINISH CAPACITY

Taking full control of value chain in manufacturing

- BN will invest approx. USD 75 million in a fill-finish line at its existing facility in Denmark
- Contract options of USD 33 million for process transfer and validation of the new manufacturing line
- Secures deliverables for future supply orders and pipeline assets
- Capacity for handling both liquid-frozen and freeze-dried products

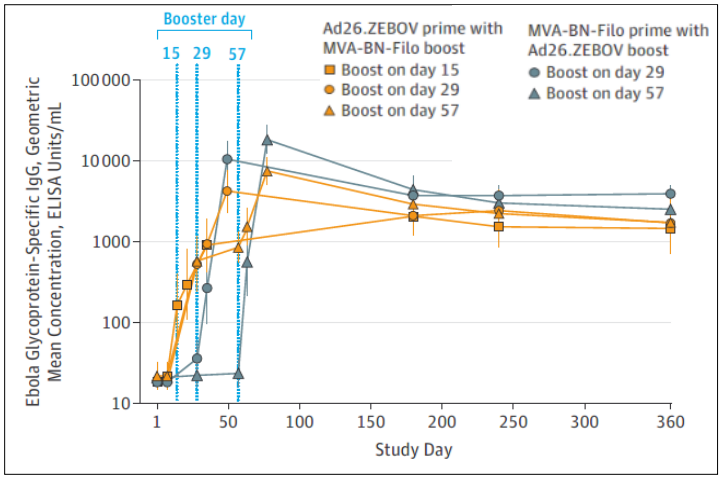
OUR COLLABORATION WITH JANSSEN

A LONG-TERM VALUE DRIVER

Prime-boost vaccine regimen with sustained response

- Combinations of Janssen's AdVac + MVA-BN have demonstrated prolonged protection in clinical studies with activity seen out to one year.

- This data has been key to extending our collaboration into three additional indications:



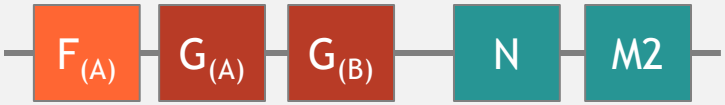
MVA-BN Filo (Ebola)	Phase 3 ongoing
MVA-BN HPV	Phase 1 in 2018
MVA-BN HIV	Phase 1 in 2018
MVA-BN HBV	

Potential milestone payments of ~$1BN + royalties

AT THE FOREFRONT OF RSV VACCINE DEVELOPMENT

Balanced vaccine construct

Encodes 5 distinct targets of RSV to provide protection against multiple antigens providing a balanced T-cell and antibody response

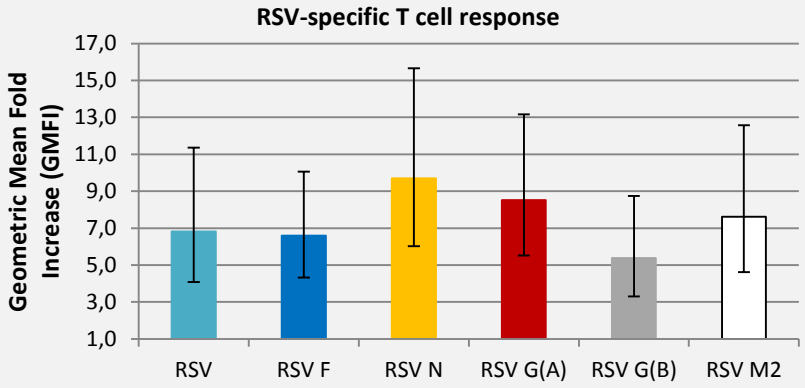


Competitive advantages

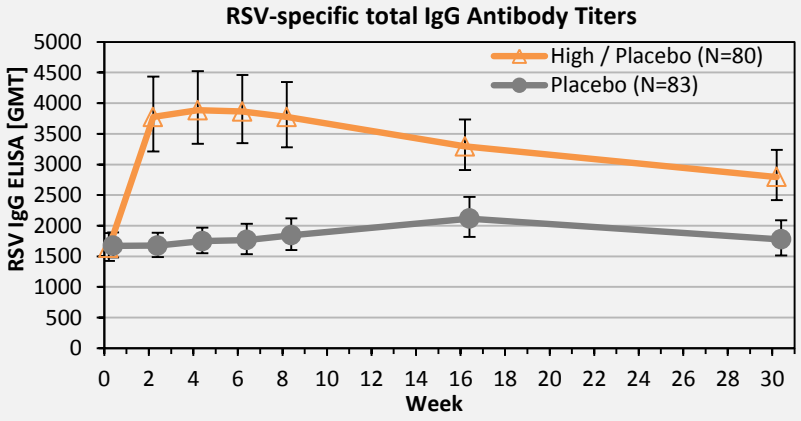
Designed to mimic natural RSV infection:

- Induction of T-cells and antibodies against RSV
- Induction of mucosal immunity
- Durable immune response lasting an RSV season

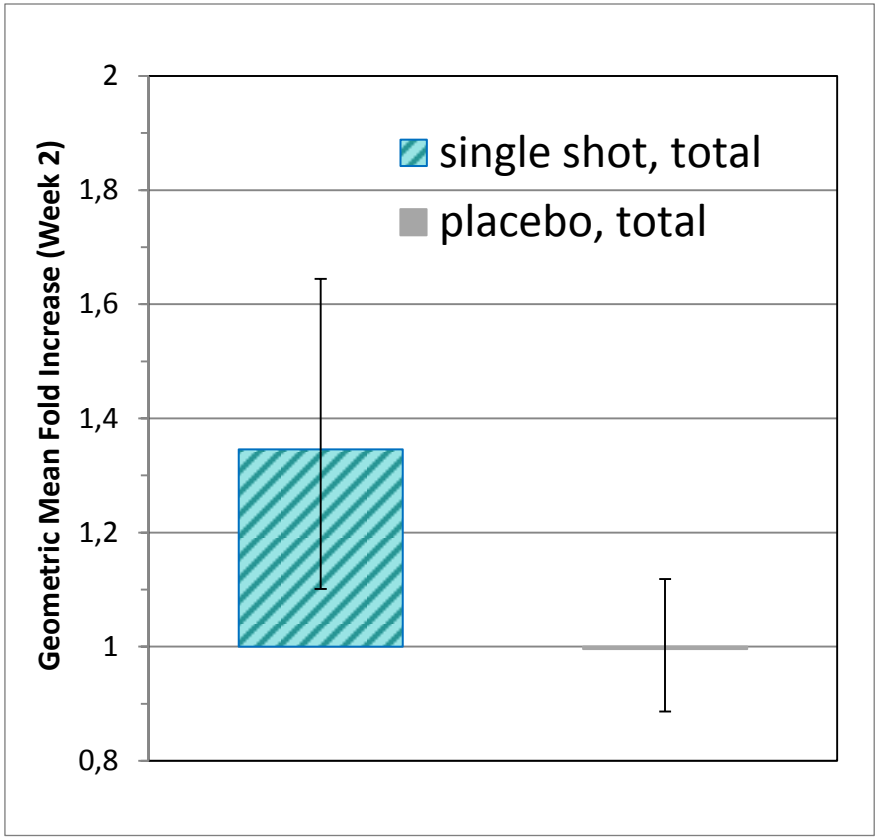
Robust T-cell responses demonstrated in Phase 1 and 2 studies

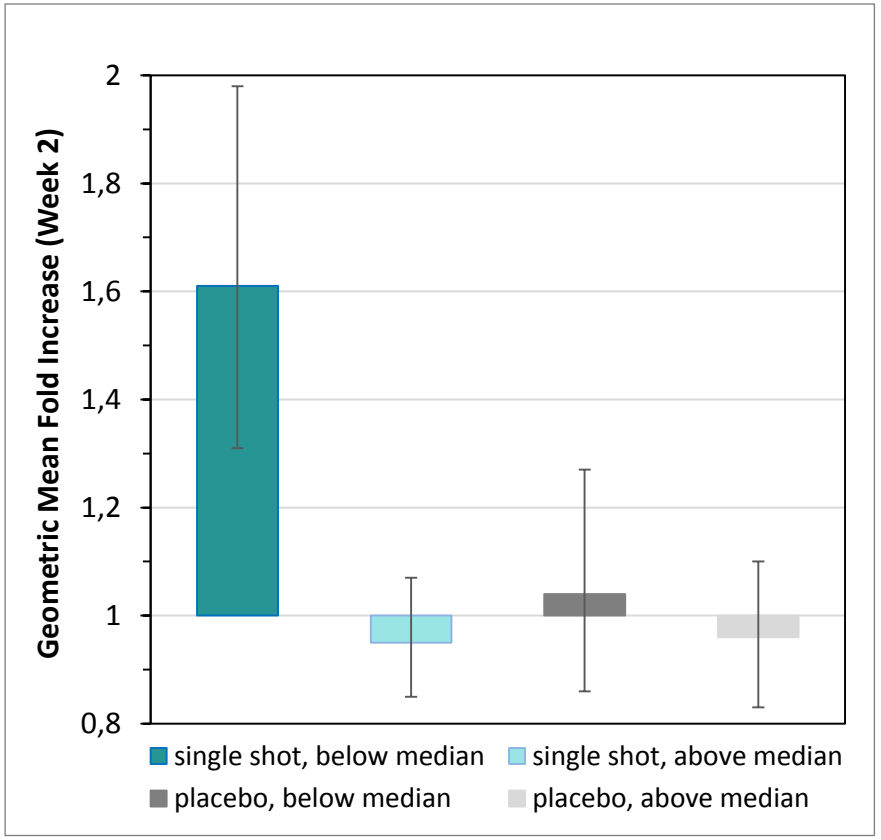


Strong antibody responses demonstrated over a full RSV season (Phase 2)



VACCINATION WITH MVA-BN RSV INDUCES MUCOSAL IGA RESPONSES AGAINST RSV

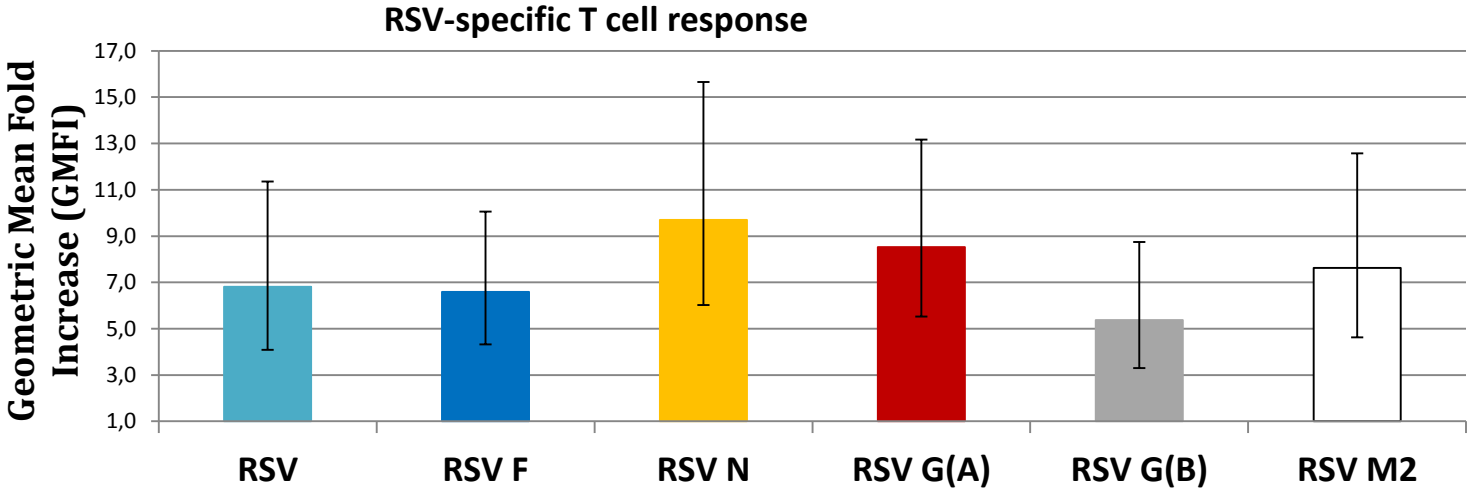




Boosting effects were more pronounced in individuals with a lower baseline mucosal IgA at the time of vaccination, suggesting that the vaccine has the desired effect of boosting memory responses against RSV in patients with a poor underlying immunity.

PREVENTION AND CLEARANCE OF RSV
BOTH ARE KEY TO A SUCCESSFUL VACCINE

- **Published data indicate two of the strongest correlates of protection in RSV infections are:**
  - Presence of pre-infection nasal IgA correlates strongly with protection against infection in challenge studies [1]
  - Virus-specific $CD8^+$ T-cells emerging in peripheral blood and lung tissue correlated with declining viral titres once infected [2]
  - A deficient RSV F-specific T cell responses contribute to susceptibility to severe RSV disease in the elderly [3]



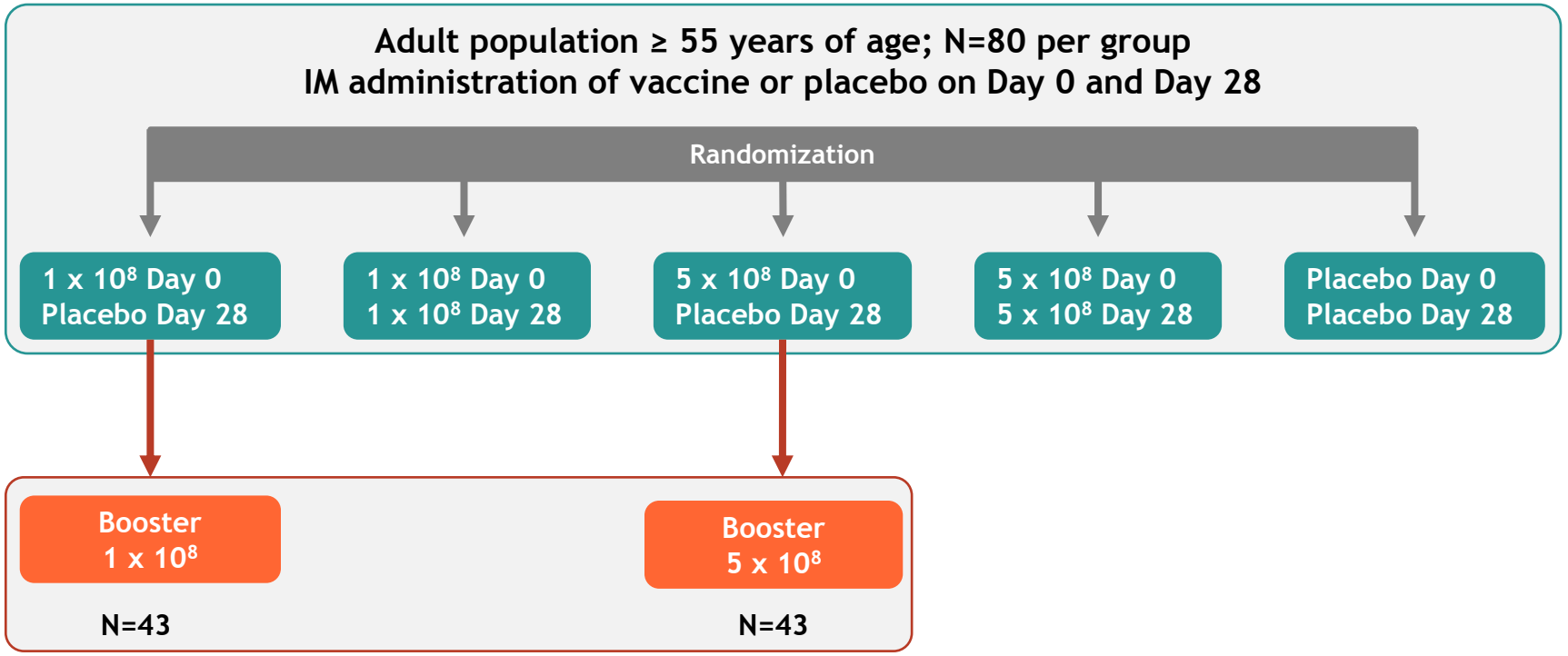
In vaccinated individuals MVA-BN RSV has demonstrated the ability to generate serum & nasal IgA as well as virus specific T-cells in peripheral blood

1. Am J Respir Crit Care Med. 2015 May 1; 191(9): 1040–1049.
2. *Nature Communications* **6**, Article number: 10224 (2015)
3. Clin. Vacc. Immunol. 2013, 20: 239-247.

PHASE 2 BOOSTER STUDY: DATA MID 2018

Key objectives of booster study

- Obtain clarity on long-term durability of immune response (12 months)
- Evaluate effect of a single booster dose after primary vaccination with a single shot using same doses as in the main study (N=86)



DEVELOPING A HUMAN CHALLENGE TRIAL FOR RSV

Succeeding where others have not:

- Prior human challenge studies based on a substantially weakened strain of RSV (memphis37) which has highly variable infection rates (range 33%-77%)
- BN has identified a primary isolate of RSV and has partnered with a WW leader in human challenge studies (SGS) to develop a more virulent RSV challenge

BN is exploring the feasibility of using this strain in a MVA-BN RSV vaccine efficacy trial this year:

While still awaiting data from the Phase 2 booster study, BN is currently developing a phase 3 field efficacy protocol and preparing to meet with regulators to discuss an appropriate pathway to licensure.

CV301 – THE STRATEGY UNFOLDS

- During 2018, four Phase 2 trials will evaluate the combination of CV301 and checkpoint inhibitors across three indications

Non-small cell lung cancer (NSCLC)

Proof-of-concept study of CV301 plus KEYTRUDA (pembrolizumab) as first-line maintenance therapy (n=176)

Colorectal & Pancreatic cancers

Phase 2 study of CV301 plus IMFINZI (durvalumab) and maintenance chemotherapy (n=54)

Bladder cancer Roche

Phase 2 study of CV301 plus TECENTRIQ (atezolizumab) (n=60)

Colorectal cancer Bristol-Myers Squibb

Phase 2 study of CV301 plus OPDIVO (nivolumab) in micro satellite stable mCRC (n=74)

Other potential indications

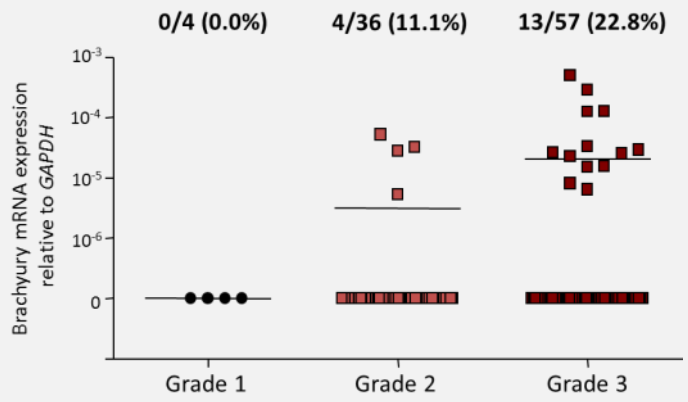
In addition to NSCLC, bladder and colorectal, Bavarian Nordic retains all commercial rights in pancreatic, breast, ovarian, gastric, liver and renal cancer

BN-BRACHYURY: DRUGGING THE "UNDRUGGABLE"

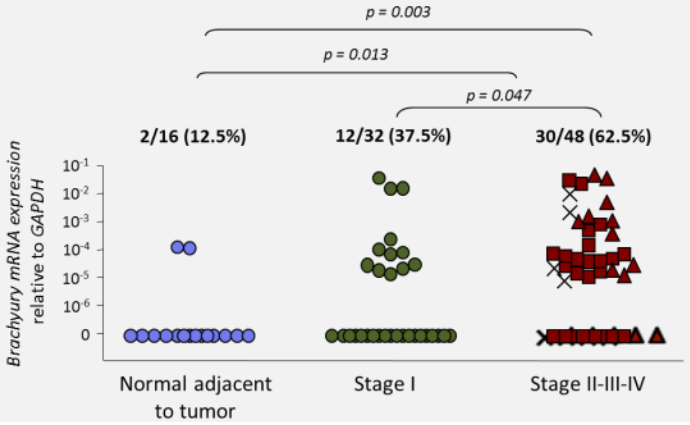
What is brachyury?

- Brachyury is responsible for epithelial to mesenchymal transition (EMT), which is a major driver of metastasis
  - Brachyury is not expressed in most normal tissue
  - Brachyury expression is highly correlated with metastatic disease, and multi-drug resistance

BRACHYURY EXPRESSION IN BREAST TUMOR TISSUES CORRELATES WITH TUMOR GRADE



BRACHYURY EXPRESSION IN LUNG TUMOR TISSUES CORRELATES WITH TUMOR STAGE



A Phase 1 study of 38 patients receiving MVA-BN Brachyury showed presence of brachyury specific T cells in vast majority of patients, post-treatment*

*Heery CR, Gulley J, et al. Clin Cancer Research

BN-BRACHYURY

POTENTIAL REGISTRATION PATHWAY IN ULTRA ORPHAN CANCER: CHORDOMA

Ongoing Phase 1 study is evaluating safety of prime-boost

Phase 2 planned to initiate Q3 2018

- Combination with radiation in advanced metastatic chordoma
  - Primary endpoint: Objective response rate (radiation alone <5% ORR at 6 months)
  - Potential for Breakthrough Designation

Population

- Patients with advanced, incurable chordoma
- At least 1 measurable lesion eligible for radiation therapy

Stage 1

- 12 patients
- Only proceed to stage 2 if at least 2 objective responses occur

Stage 2

- Enroll additional 13 patients.
- ORR goal = 20% (5/25 patients)

ANTICIPATED SELECTED MILESTONES

IMVAMUNE

- Filing of BLA (H2, 2018)
- Award of Priority Review Voucher upon approval (2019)

RSV

- Results from booster-study (H1, 2018)
- Decide on the feasibility of a human challenge study (H2, 2018)

JANSSEN

- Initiate Phase 1 study of MVA-BN HIV+AdVac (H2, 2018*)
- Initiate Phase 1 study of MVA-BN HPV+AdVac (H2, 2018*)

** Janssen is responsible for the clinical development*

CV301

- Initiate Phase 2 study in combination with atezolizumab in bladder cancer (mid 2018)
- Initiate Phase 2 study in combination with durvalumab in colorectal cancer (H1, 2018)
- Initiate Phase 2 study in combination with nivolumab in colorectal cancer (H1, 2018)
- Initial Phase 2 results (ORR) from combination with pembrolizumab in NSCLC (H2, 2018)

BRACHYURY

- Results from Phase 1 booster study (H2, 2018)
- Initiate Phase 2 study in Chordoma (H2, 2018)
- Initiate Phase 2 study in second indication (H2, 2018)

PROSTVAC

- Initial results from combination study of PROSTVAC and nivolumab in mCRPC (H1, 2018)

Q&A