

Proteins for Life

ExpreS²ion Biotech Holding AB [NASDAQ First North Growth Market: **EXPRS2**] –
a clinical Phase III development stage vaccine company

NON-CONFIDENTIAL PRESENTATION

EXPRE²ION
BIOTECHNOLOGIES

Disclaimer

This presentation does not constitute or form part of any offer or invitation to purchase or subscribe for, or any offer to underwrite or otherwise acquire, any shares or any other securities in ExpreS²ion Biotech Holding AB (the "Company"). Neither shall the presentation or any part of it, nor the fact of its distribution or communication, form the basis of, or be relied on in connection with, any contract, commitment or investment decision in relation thereto.

This presentation contains forward-looking statements, which are subject to risks and uncertainties because they relate to expectations, beliefs, projections, future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts. All statements other than statements of historical fact included in this presentation are forward-looking statements. Forward-looking statements give Company's current expectations and projections relating to its financial condition, results of operations, plans, objectives, future performance and business. These statements may include, without limitation, any statements preceded by, followed by or including words such as "target," "believe," "expect," "aim," "intend," "may," "anticipate," "estimate," "plan," "project," "will," "can have," "likely," "should," "would," "could" and other words and terms of similar meaning or the negative thereof. Such forward-looking statements involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements of Company or the industry in which it operates, to be materially different than any future results, performance or achievements expressed or implied by such forward-looking statements. Given these risks, uncertainties and other factors, recipients of this presentation are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements referred to above speak only as at the date of the presentation. Company will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect future events, circumstances, anticipated events, new information or otherwise except as required by law or by any appropriate regulatory authority.

The information included in this presentation may be subject to updating, completion, revision and amendment and such information may change materially. No person, including Company and its advisors, is under any obligation to update or keep current the information contained in this presentation and any opinions expressed in relation thereto are subject to change without notice. Neither Company nor any of its owners, affiliates, advisors or representatives (jointly the "Disclosers") make any guarantee, representation or warranty, express or implied, as to the accuracy, completeness or fairness of the information and opinions contained in this presentation, and no reliance should be placed on such information. None of the Disclosers accept any responsibility or liability whatsoever for any loss howsoever arising from any use of this presentation or its contents or otherwise arising in connection therewith.

By attending this presentation or by accepting any copy of this document, you agree to be bound by the foregoing limitations.

Management Team

Experienced team with combined >150 years' experience from the *life sciences* industry



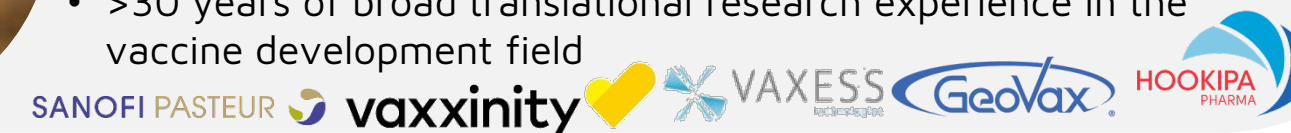
Bent U. Frandsen, CEO

- MSc in Finance/Strategic Management, Copenhagen Business School, Denmark
- >25 years industry finance, business dev. and management experience



Dr. Farshad Guirakhoo, CSO

- PhD in Virology from the Medical University of Vienna, Austria, and an MSc in Genetics from the International Institute for Biophysics and Biochemistry at the University of Tehran
- >30 years of broad translational research experience in the vaccine development field



Keith Alexander, CFO

- MBA, The Wharton School and the University of Pennsylvania, USA
- >20 years of equity research, corporate strategy, asset management and consulting experience



Dr. Mattis F. Ranthe, CMO

- Medical Diploma and PhD in Epidemiology from University of Copenhagen. MSc in Drug Development Science from King's College, London
- Broad clinical and research experience, 7 years in Pharma



Max Soegaard, SVP of R&D and Technology

- PhD in Biochem., UCL, UK, and MSc in Molecular Biology; AU, Denmark
- >20 years academic and industrial research experience



Dr. Mette Thorn, SVP Preclinical Development

- PhD in Immunology, and a MSc in Chem Eng., Tech. Univ of Denmark
- >20 years industrial research experience



Investment Highlights

We turn complex proteins into tomorrow's vaccines



High-potential pipeline of key focus within infections diseases and oncology, backed up by strong intellectual property rights. Targeting sizeable unmet medical needs and markets



Vaccine development platform with strong track record and partner validation and regulatory approved for late-stage clinical development. +500 proteins produced while posting +90% success rate



Global vaccine market continually growing, from USD 34bn (2017), USD 127bn (2021), to USD 202bn (2022) corresponding to 494% growth (2017-2022)



Expres²ion is advancing towards key catalysts during 2023, further de-risking the company's pipeline.

- COVID-19 vaccine clinical Phase III read-out mid-2023. Moving towards commercial launch in 2023-24.

Unique Technology Platforms

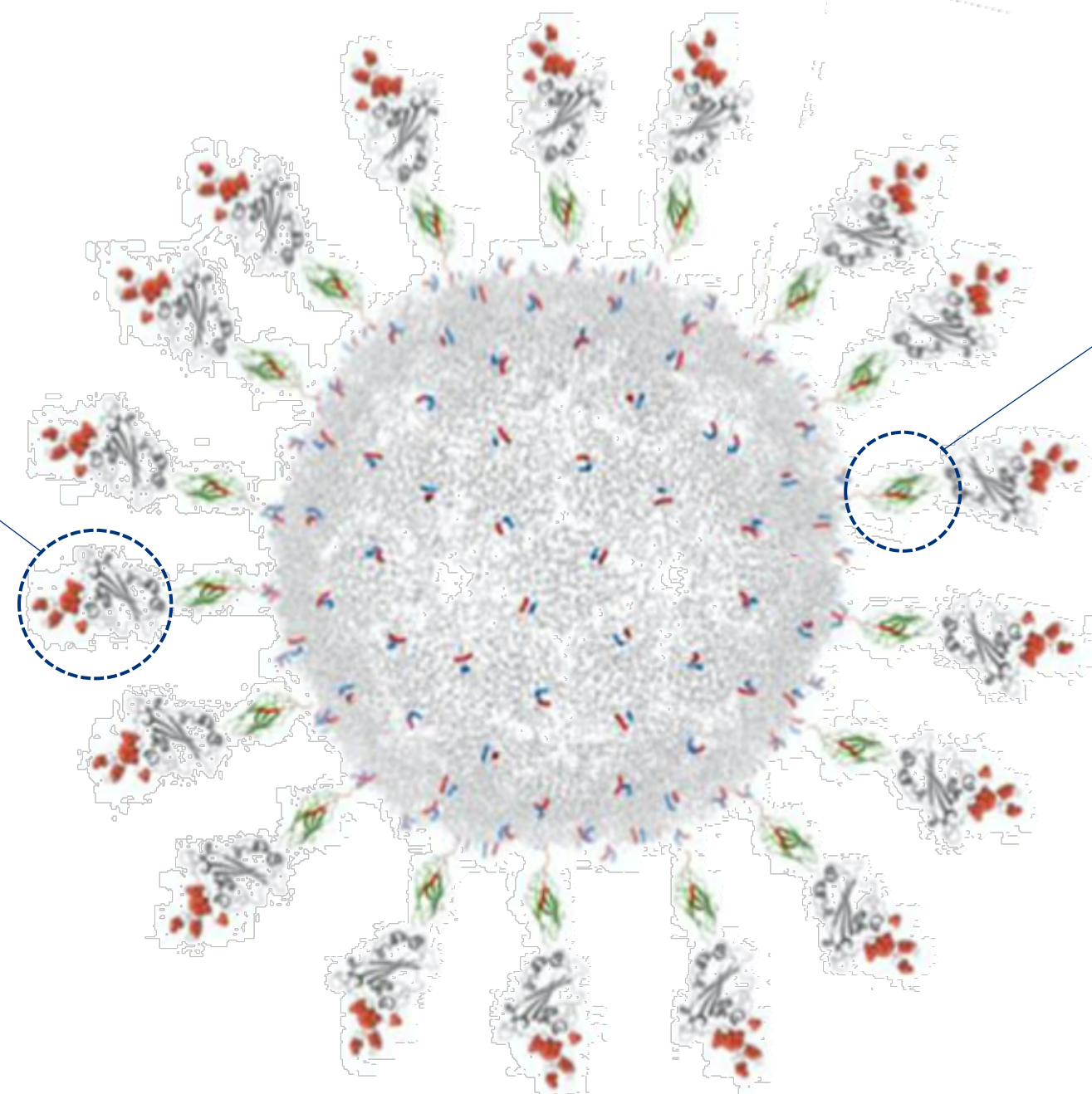
Combines a highly immunogenic antigen with unique presentation technology

ExpreS² platform

- Combines S2 cells with patented expression vectors (add a specific gene into a target cell and command the cell to produce the gene encoded protein), adapted culture agents and reagents (stimulating cell growth)
- Produces the complex surface proteins (antigens), which are critical to immune system recognition and response

100% ownership

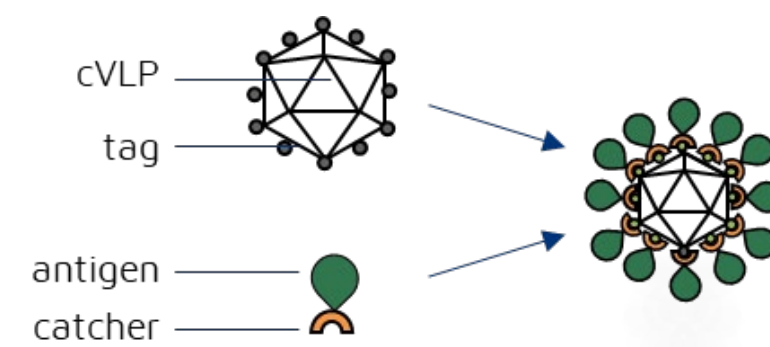
ExpreS²™ technology platform applied to express antigens in all pipeline assets, including therapeutic HER2 vaccine, Covid-19, Influenza, CMV, and Malaria



Particle (VLP) technology

- AdaptVac's proprietary virus-like particles (VLP) technology securely attaches our proteins to the surface of a capsid (outer protein protective shell of a virus), mimicking a virus to elicit an immune response

34% ownership

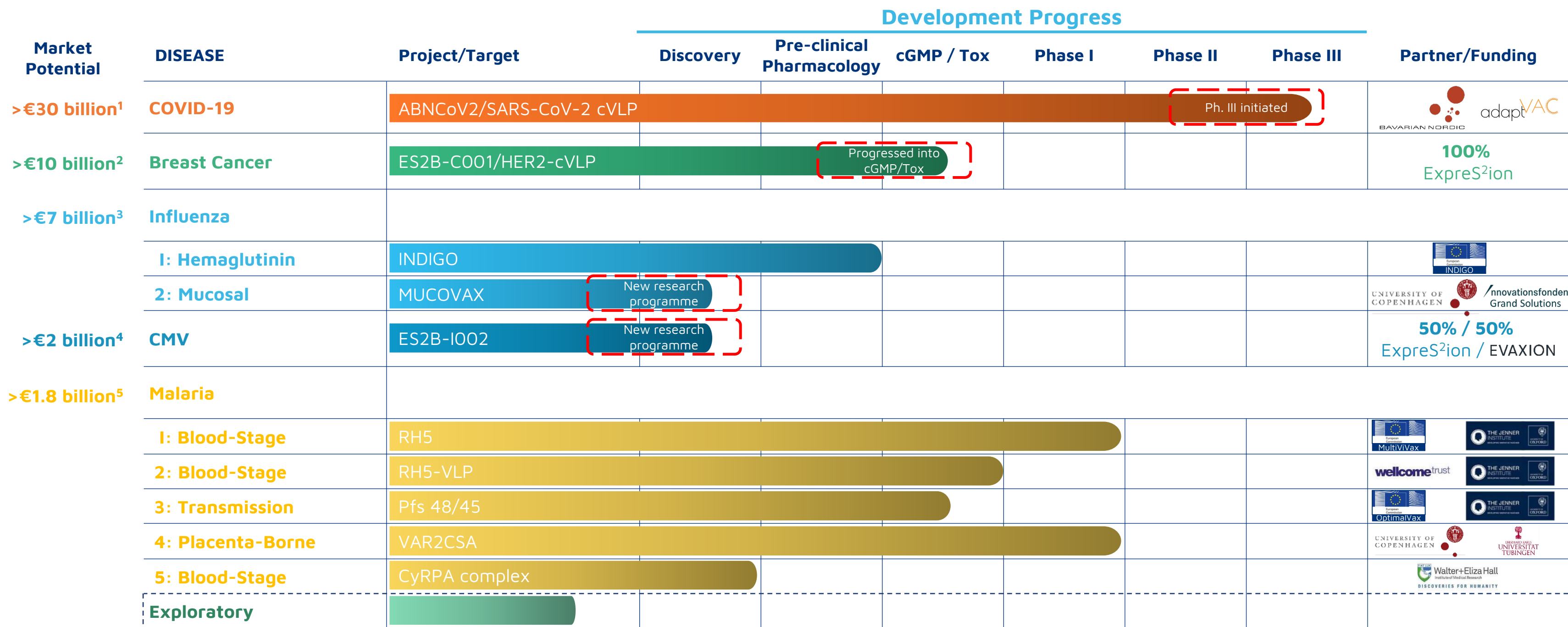


cVLP: Capsid Virus Like Particle

Same technology platform applied for the therapeutic HER2 vaccine and COVID-19 vaccine ABN-CoV2

Deep Vaccine Pipeline for Value Creation

Numerous projects across all development stages with additional exploratory focus

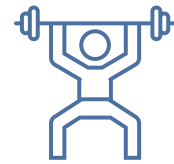


Significant events in last 6 months



ABNCoV2 – Next generation COVID-19 vaccine

Strong boosting effect across
variants of concern



Durability across
variants of concern

High level of protection –
no need for adjuvant



Stability at room temperature

Similar increase in NAbs for Wuhan
and Omicron



Next milestones: 12-month durability
data and Phase III results



Partnership with Bavarian Nordic

ABNCoV2 is out-licensed with near-term revenue streams supporting ExpreS²ion

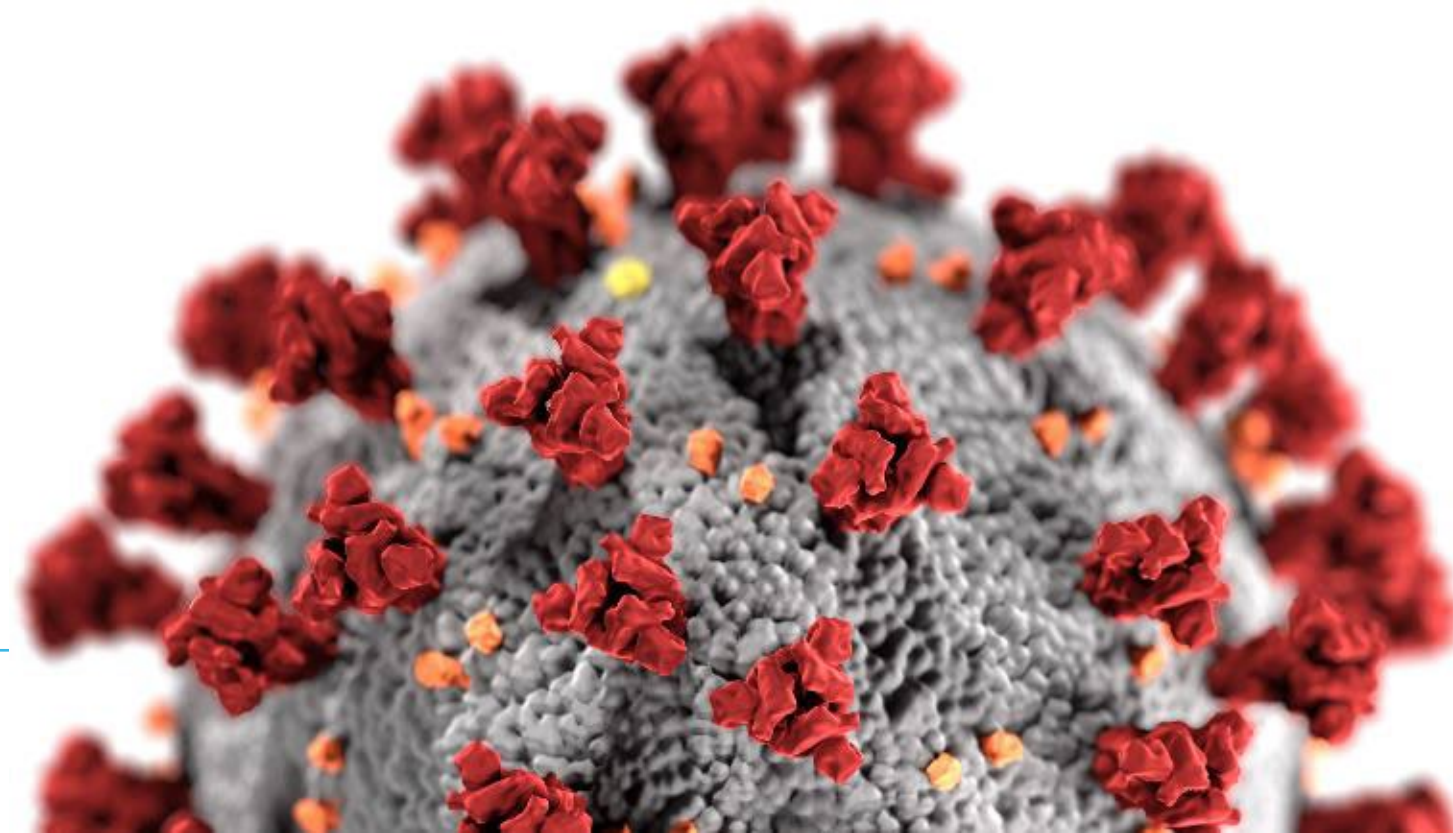
AdaptVac receives from Bavarian Nordic

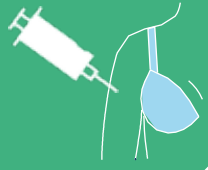
- EUR 4 million upfront (paid in July 2020)
- Up to EUR 136 million in development and sales milestones
- Single- to double-digit-% royalties of Bavarian revenues



ExpreS²ion receives from AdaptVac

- 34% ownership of AdaptVac
- Up to EUR 2 million in commercial milestone payments
- Lower double-digit percentage of AdaptVac royalties





Breast Cancer - The Most Common Cancer

1 in 8

women will be diagnosed with invasive breast cancer in her lifetime

~25%

are HER2-positive, which is associated with more aggressive tumors and reduced survival.

685,000

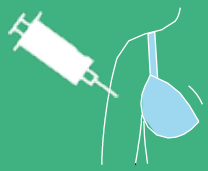
deaths worldwide in 2020 due to breast cancer¹

Global market size expected to growth to **USD 32 billion** by 2026³

1. Breast Cancer Research Foundation (<https://www.bcrf.org/breast-cancer-statistics-and-resources>)

2. Mitri Z et al. The HER2 Receptor in Breast Cancer: Pathophysiology, Clinical Use, and New Advances in Therapy (Chemother Res Pract. 2012; 2012: 743193)

3. Mordor Intelligence, breast cancer therapeutics market, 2021.



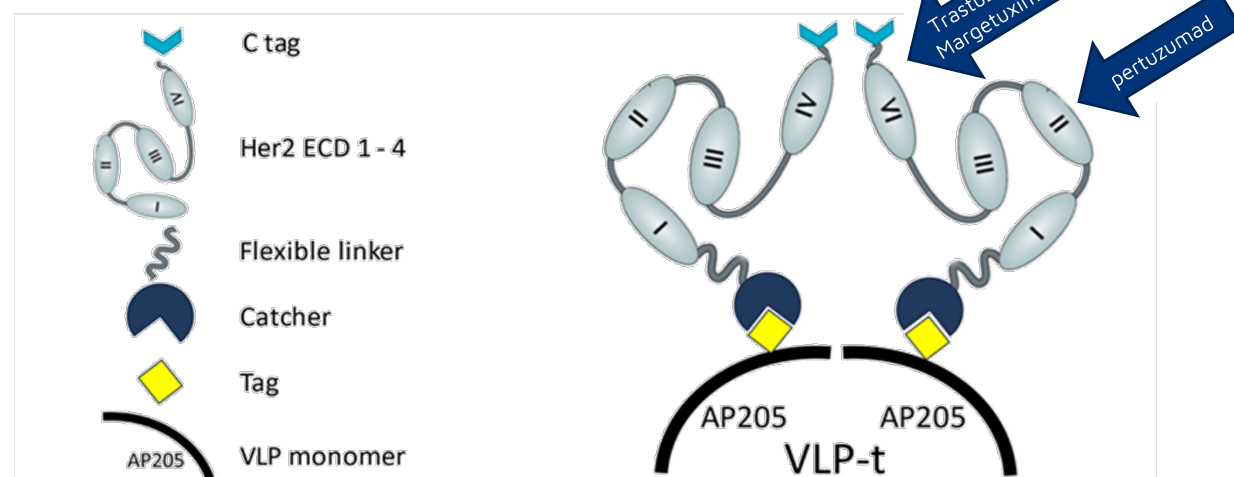
Current Breast Cancer treatments

The ES2B-C001 vaccine can offer significant benefits compared to current treatment options

Existing therapies

Monoclonal antibodies are the cornerstone of treatment for HER2+ breast cancer (>USD 11bn sales)¹

- Target the HER2 receptor on tumor cells to reduce proliferation and induce tumor cell destruction

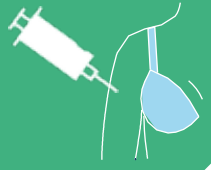


Significant drawbacks exist with existing therapies²

- **Resistance** to monoclonal antibodies may develop
- **Potential for cardiac toxicity**
- **Repeated administration required**: 28-day half-life requires administration every 3rd week until remission or resistance develops, costs USD 30-50k

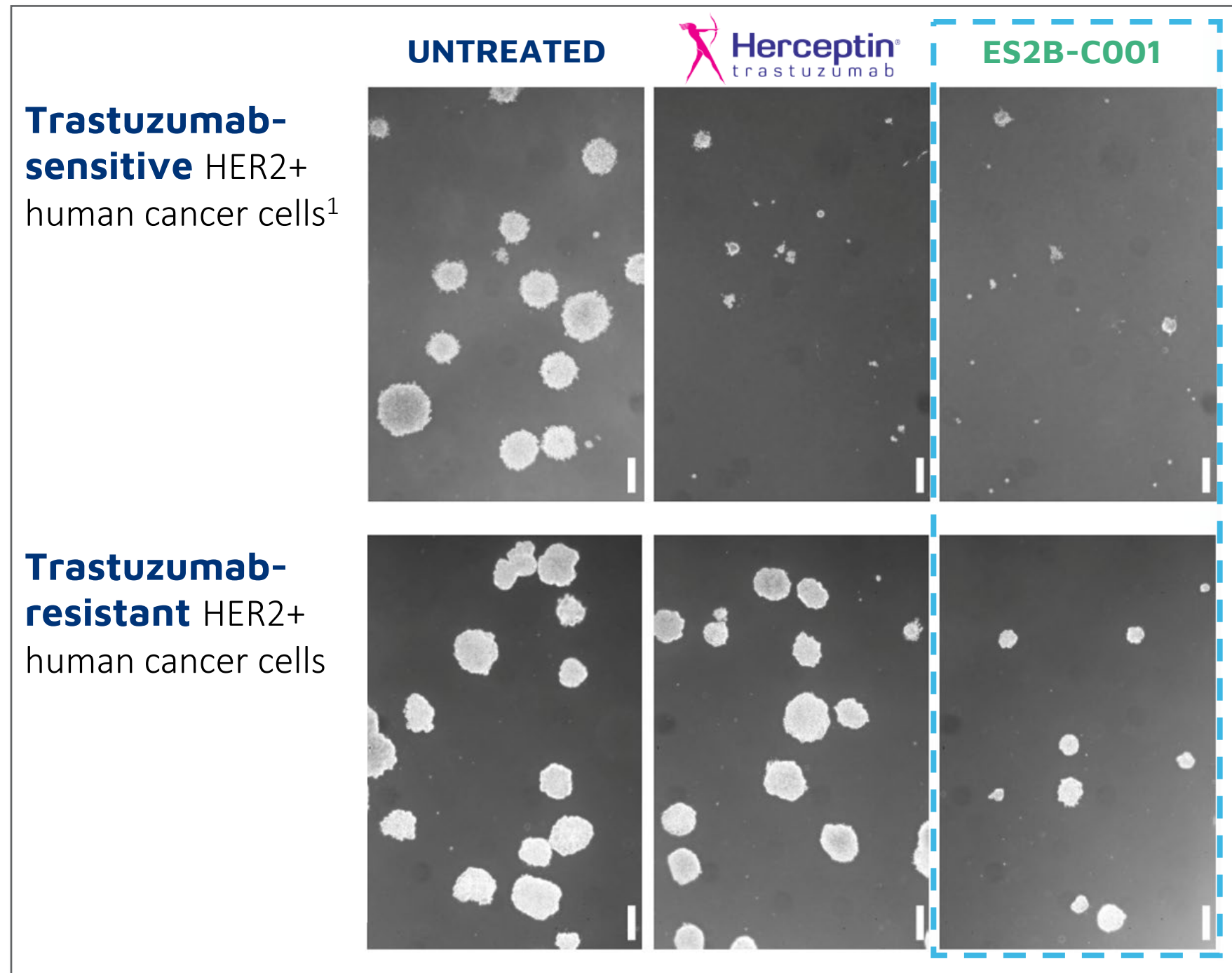
Expres²ion's HER2-targeted vaccine approach offers potential to overcome some of the drawbacks through *internal polyclonal antibody production*

Monoclonal antibodies target one epitope. ES2B-C001 with four subdomains generates a broad polyclonal antibody response



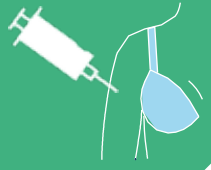
ES2B-C001 Overcomes Herceptin Resistance

The soft agar human cancer cell growth inhibition assay provides *in vitro* evidence



Both Herceptin (trastuzumab) and ES2B-C001 inhibited growth in the trastuzumab-sensitive cells

Only ES2B-C001 inhibited growth in the trastuzumab-resistant cells; cells were unresponsive to Herceptin



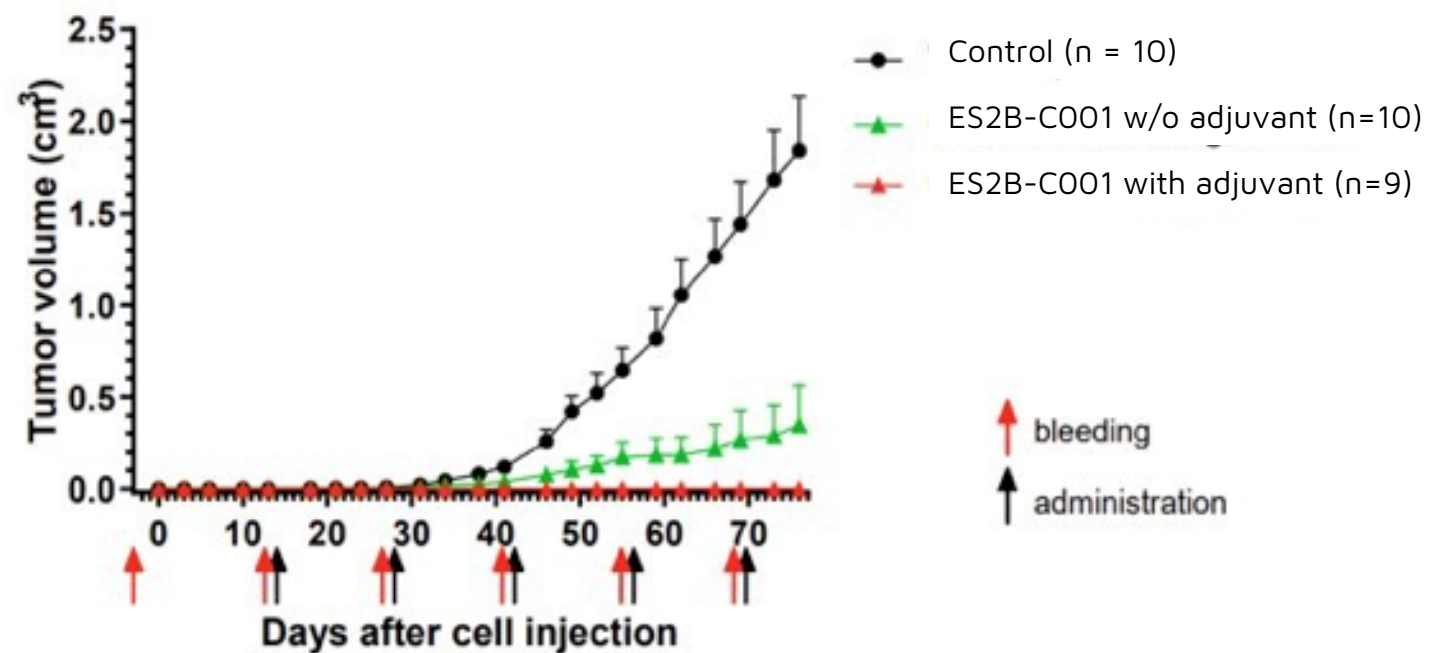
ES2B-C001 Preclinical Proof-of-Concept

ES2B-C001 has demonstrated animal proof-of-concept

Effectively inhibited tumor development

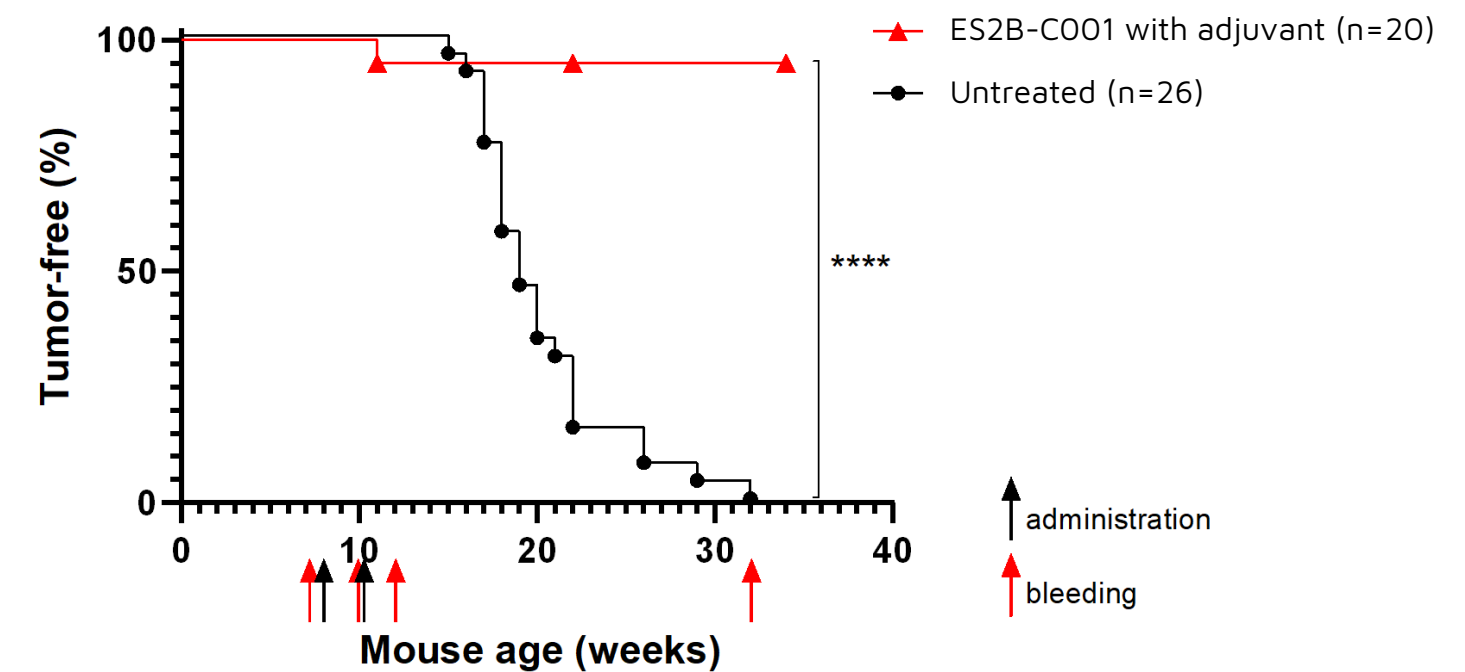
Prevented tumor development with 95% efficiency

Tumor growth in FVB mice
(HER2-intolerant)



Kaplan-Meier survival curves

**** $p < 0.0001$ by the log-rank test



- Two weeks after the inoculation of tumor cells, the first vaccine administration was given. Repeated every 2nd week during the study
- **ES2B-C001 formulated in an adjuvant totally blocks tumor development. ES2B-C001 without adjuvant partly blocks tumor development** and if tumors develop, growth is significantly inhibited
- At mouse age 6-8 weeks, 2 vaccinations with 2 weeks interval were administered to Delta16 mice
- **Two vaccinations prevented tumor development with 95% efficiency** as compared to a control group, where all mice spontaneously developed tumors

Note: FVB mice are mice being challenged with tumors, while Delta16 mice spontaneously develop tumors and have been inoculated with tumor cells to accelerate tumor development

Advancing Towards Key Catalysts

	2022	2023	2024	2025
COVID-19 (ABNCoV2)	<ul style="list-style-type: none"> ✓ BN Phase II study readout H1 2022 ✓ BN Phase III study initiation Q3 2022 	<ul style="list-style-type: none"> BN Phase III initial readout BN initiating rolling submission 	<ul style="list-style-type: none"> BN ready for market launch (subject to regulatory approval) 	<ul style="list-style-type: none"> Royalties from sales?
BREAST CANCER (ES2B-C001)	<ul style="list-style-type: none"> ✓ Preclinical animal proof-of-concept results H1 2022 ✓ Preliminary preclinical safety studies initiated 	<ul style="list-style-type: none"> ✓ GMP manufacturing processing ✓ Initial readout from preliminary nonclinical tox-studies 	<ul style="list-style-type: none"> GLP nonclinical tox-study in NHP Filing of clinical study application 	<ul style="list-style-type: none"> Initiation of first in human clinical study 2024 Out-licensing window opens pending human data
INFLUENZA (INDIGO/MUCOVAX)	<ul style="list-style-type: none"> ✓ Advance/support further development in INDIGO of one or more candidates in 2022 	<ul style="list-style-type: none"> ✓ Grant award for the MUCOVAX project for intranasal vaccine 	<ul style="list-style-type: none"> cGMP/Preclinical safety studies initiation on INDIGO (subject to new grant funding) 	<ul style="list-style-type: none"> Selection of lead influenza vaccine candidate for the MUCOVAX project
CYTOMEGALOVIRUS (ES2B-I002)	<ul style="list-style-type: none"> ✓ Establish 50/50% partnership on cytomegalovirus vaccine with Evaxion 	<ul style="list-style-type: none"> Early research on CMV vaccine target, applying AI 	<ul style="list-style-type: none"> Preclinical testing of immunogenicity of CMV vaccine target 	<ul style="list-style-type: none"> Selection of lead CMV vaccine candidate
MALARIA	<ul style="list-style-type: none"> ✓ RH5 Additional phase I study in a malaria endemic region in Africa launched during 2021, with alternative adjuvant 	<ul style="list-style-type: none"> Pfs 48/45 phase I study initiation 2023 (pending University of Oxford) 	<ul style="list-style-type: none"> RH5-VLP phase I initiation 2023 (pending University of Oxford) 	<ul style="list-style-type: none"> RH5 phase I study readout H2 2023

Note: Timeline for ABNCoV2 is based on Bavarian Nordic's communicated timeline, and is subject to potential revision



Thank you!

Proteins
for Life

EXPRES²ION
BIOTECHNOLOGIES