
Proteins
for Life
2022 Fourth Quarter and Full-Year
Results Webcast
EXPRES²ION
BIOTECHNOLOGIES
Hosted by
HC ANDERSEN CAPITAL

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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.

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

Lundbeck · Coloplast · ALK · AGC Biologics · nsgene

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

Danske Bank · J.P.Morgan · accenture

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

CANCER RESEARCH UK · MOLECULAR BIOPHYSICS SUITE DEPARTMENT OF BIOCHEMISTRY UNIVERSITY OF OXFORD

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

SANOFI PASTEUR · vaxxinity · VAXESS · GeoVax · HOOKIPA PHARMA

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

novo nordisk · ALK · gsk · King's College London · STATENS SERUM INSTITUT

Dr. Mette Thorn, SVP Preclinical Development

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

novo nordisk · symphogen · bioneer · STATENS SERUM INSTITUT · ASTION* Pharma · BioCare COPENHAGEN

Board of Directors

Strong Board competence in support of a pipeline-focused business

Dr. Martin Roland Jensen, Chairman

- PhD. in Molecular and Cell Biology, Univ. of Copenhagen, Denmark
- >35 years biotech industry management and co-founder experience, incl. scientific work in immunology and cancer vaccine development

Dr. Karin Garre, Board Member

- MD, from University of Copenhagen, Denmark
- >25 years bio-industry management and drug development experience from early to late-stage phases and registration

Jakob Knudsen, Board Member

- Law Degree from Univ. of Copenhagen, and MBA, Imperial College, UK
- >25 years commercial experience from international biotech industry

Sara Sande, Board Member

- MSc in Economics, from University of Copenhagen , Denmark
- 20 years leadership experience in high-tech B2B companies, incl. sales excellence, strategy and commercial development

Combined more than 100 years of deep professional experience that supports ExpreS2ion's vision of leadership in the infectious diseases and cancer fields

ExpreS²ion's Business Model

Deep pipeline for value creation and revenue generating CRO business

ExpreS² Platform for Protein Expression

+500 different proteins have been produced with the ExpreS² platform, while posting a success rate exceeding 90% across +100 clients and partners

Novel Pipeline Development

Independent

- Fully-owned development of novel protein therapeutics and vaccines

  ES2B-C001/HER2-cVLP

- After human PoC, targeting partner externally for further development

Collaboration

- Partner with leading research organizations to source and develop novel programs

  EVAXION

  BAVARIAN NORDIC

- Potential to fully acquire programs for independent development

Significant upside potential: intermediate/long-term

Contract Research Organization

Services

- Early-stage R&D
- Protein feasibility, delivery, and transfer to GMP production

Licensing

- Fully out-license technology
- Sell test kits and reagents for research or diagnostic applications

Revenue-generating business: current and long-term payments

Unique Technology Platforms

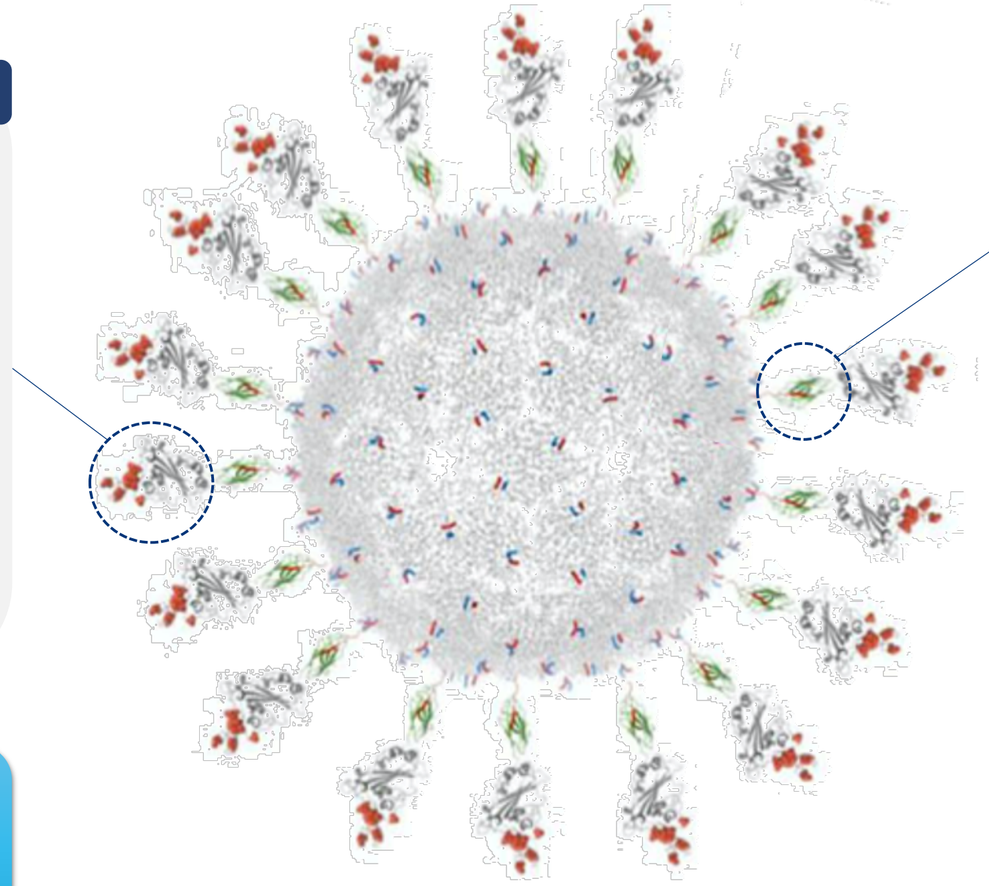
Combines a highly immunogenic antigen with unique presentation technology

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

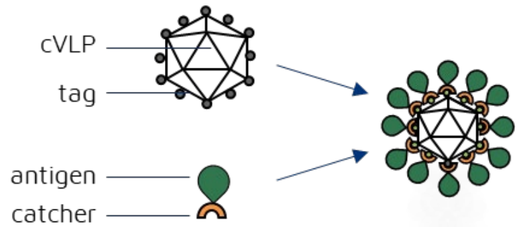
ExpreS2™ technology platform applied to express antigens in all pipeline assets, including therapeutic HER2 vaccine, Covid-19, Influenza, CMV, and Malaria



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



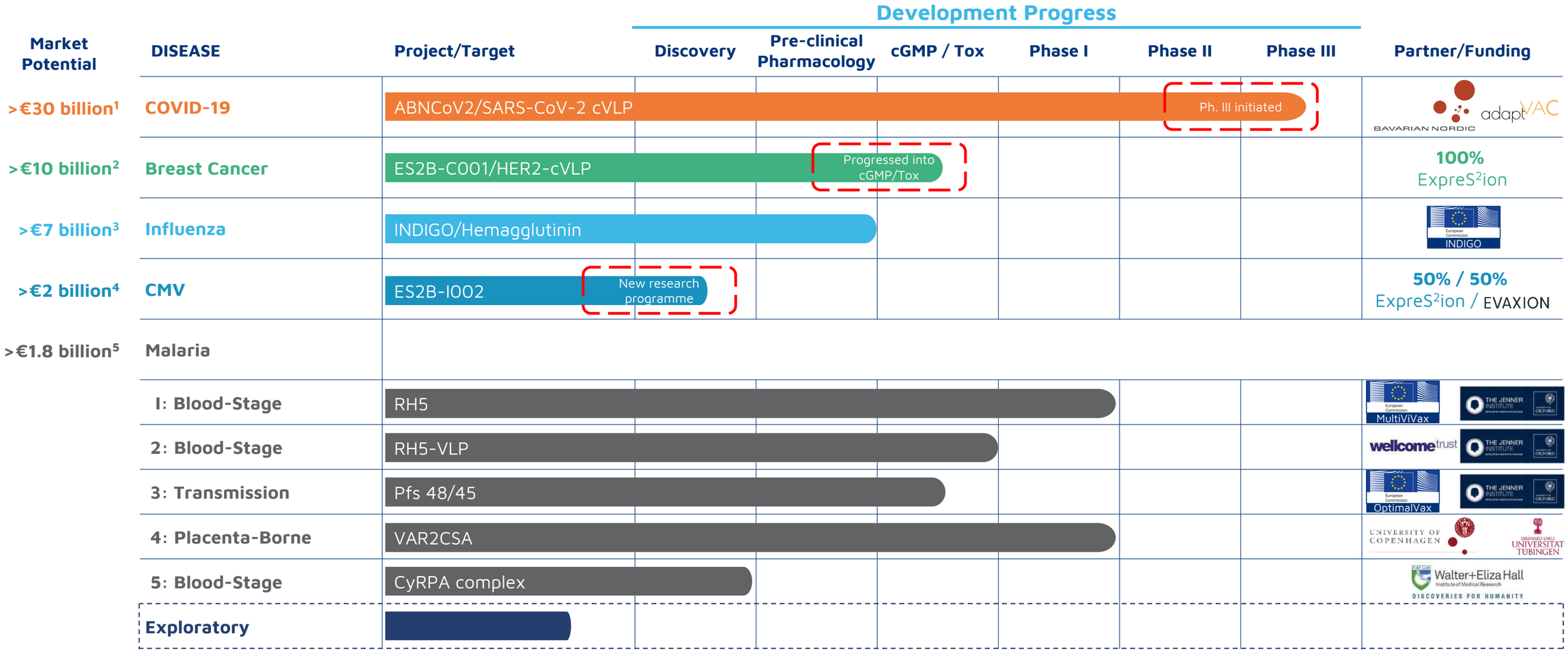
cVLP: Capsid Virus Like Particle

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

[1] Schneider I (1972). "Cell Lines Derived from Late Embryonic Stages of *Drosophila melanogaster*". *J. Embryol. Exp. Morphol.* 27: 363–365.
Note: ExpreS²ion Biotech founders invented an Improved Vector System derived from S2 cells; granted patent until 2032 (US); glyco-engineered S2 cells pending patents until 2040.

Deep Pipeline for Value Creation

Numerous projects across all development stages with additional exploratory focus



[1] 2024 estimate from Evaluate Pharma for top 10 products and other, as of 9 June 2022
[2] Global Data, 2022, for HER2+ breast cancer
[3] Fortune Business Insight, Influenza Vaccine market size 2022-2029, 2022
[4] Market estimate from Moderna, 41st Annual J.P. Morgan Healthcare Conference (Presentation)
[5] Data bridge market research, Global Malaria Vaccines Market – Industry trends and Forecast to 2029, 2022
Note: AdaptVac is a joint venture between ExpreS2ion (34% owned) and NextGen Vaccines (66% owned)

Significant events in 2022

COVID-19

ABNCoV2 COVID-19 Vaccine

Bavarian Nordic have initiated the Phase III study

Phase III study initiated in USA and Europe

- 4,000 previously vaccinated subjects who will receive a booster vaccination with ABNCoV2 or an mRNA-based vaccine, aiming to demonstrate non-inferiority of ABNCoV2 to the licensed mRNA vaccine
- Manufacturing of vaccine bulk for the trial has been completed, filling now ongoing at BN's own manufacturing line
- The trial is supported by funding from the Danish State

Trial initiated 2nd September 2022 with initial data read-out expected mid-2023

ExpreS²ion's partner Bavarian Nordic, a fully integrated vaccines company, plans a rolling submission in 2023, subject to approval and is rapidly moving towards commercial launch in 2023-24.

Comparison Arm

- Conducted in the U.S with 3000 subjects
- Will evaluate the safety and tolerability of the vaccine in subjects receiving a single 100 µg dose of ABNCoV2.

Active Arm

- Conducted in Denmark and Belgium with 1000 subjects
- Will receive either a single 100 µg dose of ABNCoV2 or a single 30 µg adult booster dose of mRNA vaccine.

Progression as Planned

Important steps as ES2B-C001 is moving closer to the planned clinical Phase I trial in 2024

GMP Manufacturing

- ✓ GMP (Good Manufacturing Practice) Manufacturers selected and Work Order Statements executed
- ✓ ExpreS^{2}ion's processes for manufacturing of material for HER2 antigen and VLP are transferred to the contract manufacturers
- Development of GMP manufacturing processes are progressing as planned

Good manufacturing practices (GMP)

- Risk management
- Suitable facilities & qualified personnel
- Quality management
- Complaints & Recall
- Personnel training & Competence

Preclinical Safety

- ✓ GLP (Good Laboratory Practice) CRO (Contract Research Organisation) selected, and Master Service Agreement executed
- In accordance with feedback from DKMA (Danish Medicines Agency) nonclinical toxicological studies have been planned in two species (preliminary testing in a rodent and non-human primates, NHP) and toxicological GLP study in NHP
- Both preliminary studies are well underway
- GLP tox-study in NHP on track to start in Q1 2023 with data expected from mid-year

Therapeutic breast cancer vaccine project planning to file clinical trial application for clinical Phase I around end of 2023 -> first dose in human in 2024

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Oncology Scientific Advisory Board

Key Opinion Leaders (KOLs) providing clinical advice on our oncology development programme

Dr. Giuseppe Curigliano, MD, PhD

Associate Professor of Medical Oncology at the University of Milano and the Head of the Division of Early Drug Development at the European Institute of Oncology, Italy (IRCCS). Dr. Curigliano is recognized among the leading experts in the world within the field of HER2 expressing breast cancer and has authored or co-authored more than 650 peer-reviewed scientific papers.

Dr. Ulrik Lassen, MD, PhD

Professor at University of Copenhagen, Department of Clinical Medicine. In 2017, he was appointed Head of the Department of Oncology at Copenhagen University Hospital, Rigshospitalet, Denmark. As a Clinical Oncologist he has been working with Phase 1 Oncology trials since 2005 and is ESMO board certified in Medical Oncology. Dr. Lassen has (co-)authored ~300 peer reviewed publications.

Dr. Daniel Lenihan, MD, FACC, FESC, FIC-OS

Dr. Lenihan has been active in cardio-oncology, for over 25 years. He has previously held positions at MD Anderson Cancer Center in Houston, Texas, Vanderbilt University in Nashville, Tennessee, and Washington University in St Louis, Missouri. His current research projects include early phase clinical trials in cardio-oncology, heart failure and amyloidosis. Dr. Lenihan serves as editor on several scientific journals and has authored or co-authored more than 210 peer-reviewed scientific papers.

Dr. Michael Andersson, MD, DMSci

Dr. Andersson is a Clinical Oncologist working as consultant at the Breast Oncology Unit in the Copenhagen University Hospital, Rigshospitalet, Denmark since 1998. He has special interest in HER2-positive breast cancer and has published on and been Principal Investigator in several national and international studies of HER2-positive early and metastatic breast cancer. Dr. Andersson has authored or co-authored more than 140 peer reviewed publications.

Dr. Javier Cortes, MD, PhD

Doctor in Medical Oncology, and Head of the International Breast Cancer Centre (IBCC) in Barcelona. Dr. Cortes He is an active member of the Spanish, European, and American Societies of Medical Oncology (SEOM, ESMO, ASCO), and is a member of expert panels that develop the treatment guidelines for metastatic breast cancer. He is the author of more than 380 publications.

Dr. Rupert Bartsch, MD

Associate Professor of medicine at the Medical University of Vienna in Austria and serves as the director of the Breast Cancer Programme at the Department of Oncology. Dr. Bartsch has a longstanding clinical and scientific focus on breast cancer and brain metastases. Together with his colleagues, he has published over 150 articles in peer-reviewed journals.

CYTOMEGALO-
VIRUS
(CMV)

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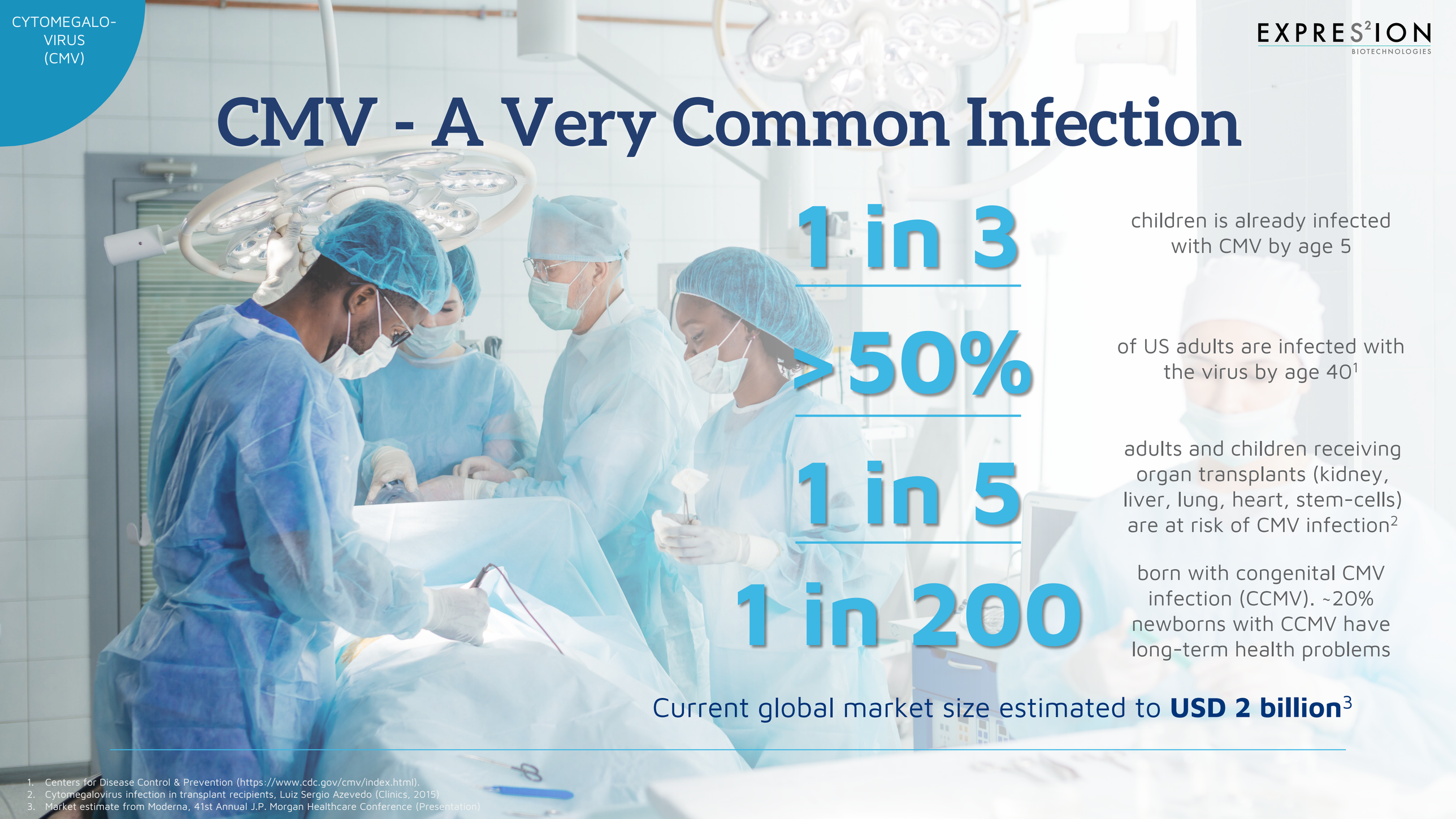
CMV - A Very Common Infection



1 in 3

children is already infected with CMV by age 5

>50%

of US adults are infected with the virus by age 40[1]

1 in 5

adults and children receiving organ transplants (kidney, liver, lung, heart, stem-cells) are at risk of CMV infection[2]

1 in 200

born with congenital CMV infection (CCMV). ~20% newborns with CCMV have long-term health problems

Current global market size estimated to **USD 2 billion**[3]

1. Centers for Disease Control & Prevention (https://www.cdc.gov/cmv/index.html).
2. Cytomegalovirus infection in transplant recipients, Luiz Sergio Azevedo (Clinics, 2015)
3. Market estimate from Moderna, 41st Annual J.P. Morgan Healthcare Conference (Presentation)

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EVAXION

Uniting Forces in CMV Vaccine Research

ExpreS²ion and Evaxion Biotech new vaccine research partnership since December 2022

- **Vaccine Discovery Collaboration Agreement** announced Dec. 6th, 2022
- Research partnership with focus on discovery and development of a **novel CMV Vaccine**
- Joint research efforts in discovery phase for ~2 years
  - EVX: AI Platform[1], including RAVEN™
  - ES2B: ExpreS2™ platform and know how in vaccine production and development
  - EVX: Early establishment of Immunogenicity, e.g., induction of neutralizing Abs in preclinical models
  - POC protection studies in Guinea pig model of congenital infection, TBD
- 50:50 cost sharing during discovery phase
- **Selection of vaccine candidate**, expected in 2025
  - ES2B first option to in-license CMV vaccine asset
  - ES2B sponsors development onwards thereafter

AI = Artificial Intelligence - Using AI, Evaxion (EVX) simulates the human immune system and generate predictive models to identify and develop next-generation medicines

Advancing Towards Key Catalysts

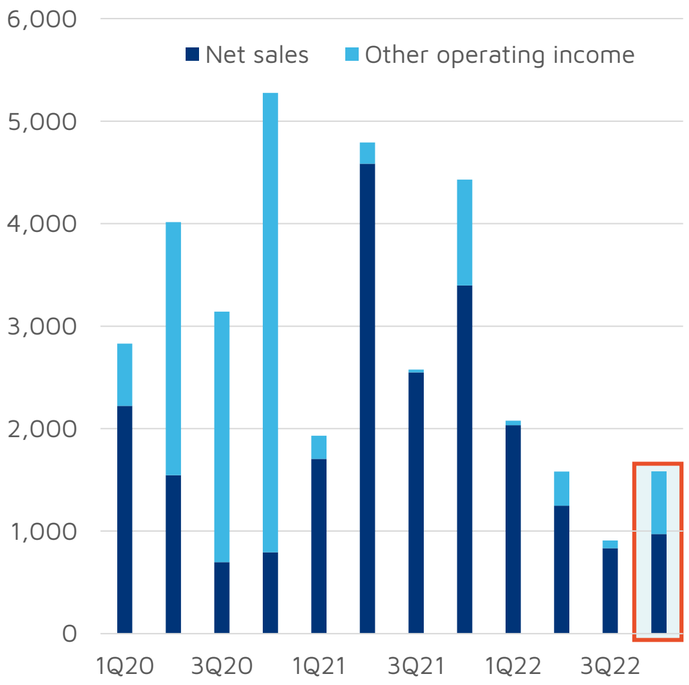
	2022	2023	2024	2025
COVID-19 (ABNCoV2)	✓ BN Phase II study readout H1 2022 ✓ BN Phase III study initiation Q3 2022	BN Phase III initial readout BN initiating rolling submission BN ready for market launch (subject to regulatory approval)	Royalties from sales?	
BREAST CANCER (ES2B-C001)	✓ Preclinical animal proof-of-concept results H1 2022 ✓ Preliminary preclinical safety studies initiated	✓ GMP manufacturing processing ✓ Initial readout from preliminary nonclinical tox-studies GLP nonclinical tox-study in NHP	Filing of clinical study application Initiation of first in human clinical study 2024	Out-licensing window opens pending human data
INFLUENZA (INDIGO)	✓ Advance/support further development of one or more candidates in 2022	cGMP/Preclinical safety studies initiation (subject to new grant funding)		
CYTOMEGALOVIRUS (ES2B-I002)	✓ Establish 50/50% partnership on cytomegalovirus vaccine with Evaxion	Early research on CMV vaccine target, applying AI	Preclinical testing of immunogenicity of CMV vaccine target	Selection of lead CMV vaccine candidate
MALARIA	✓ RH5 Additional phase I study in a malaria endemic region in Africa launched during 2021, with alternative adjuvant	Pfs 48/45 phase I study initiation 2023 (pending University of Oxford) RH5-VLP phase I initiation 2023 (pending University of Oxford) 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

Financials

Operating Income

Operating income, SEK `000s



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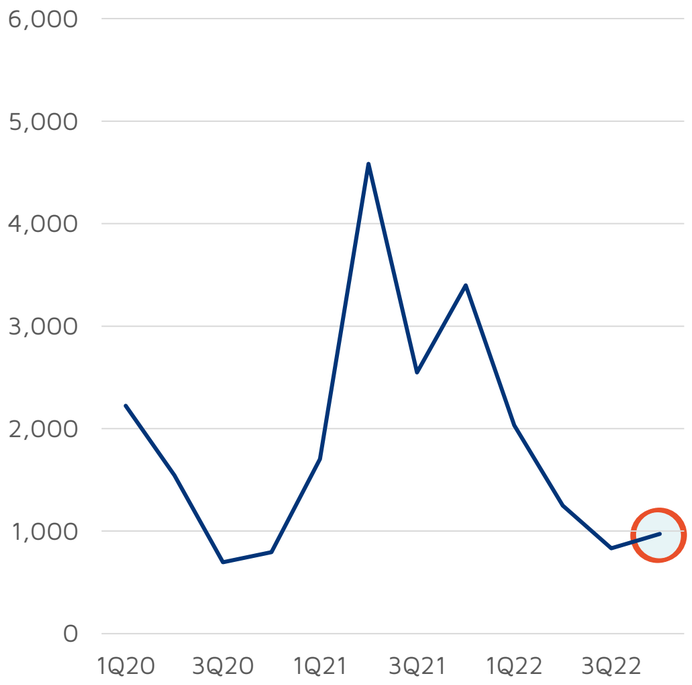
Net sales, SEK `000s



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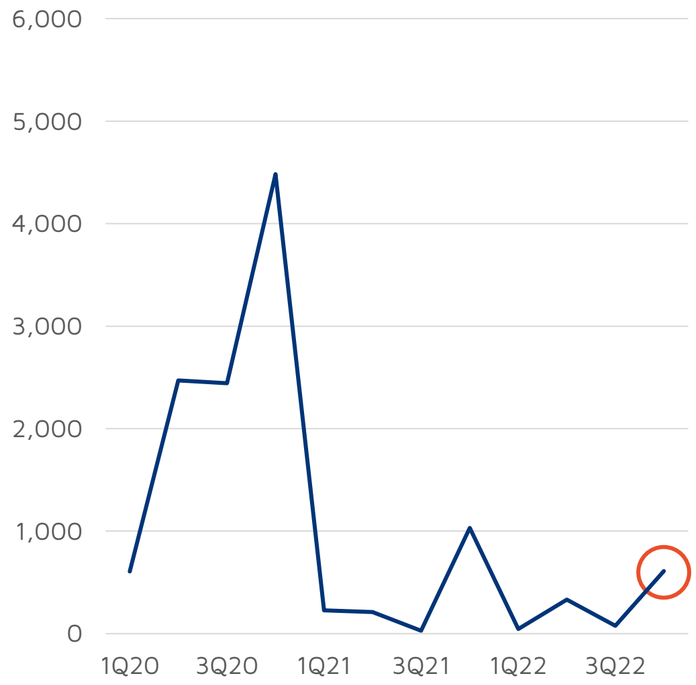
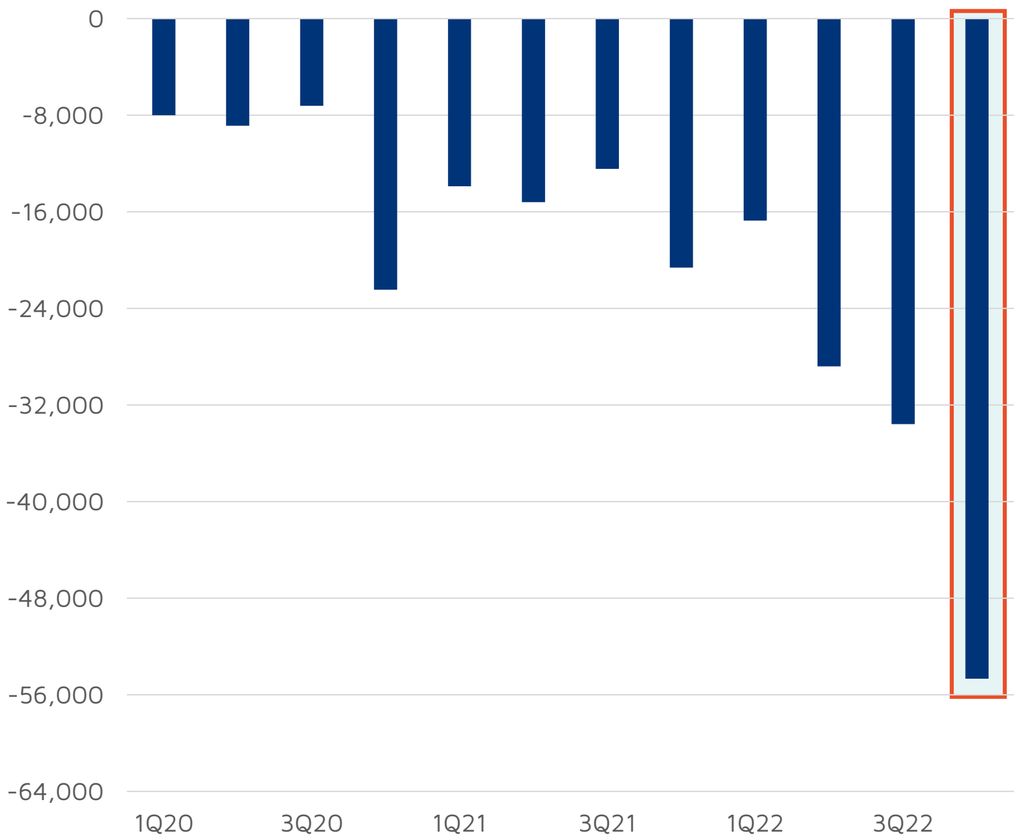
Other operating income, SEK `000s



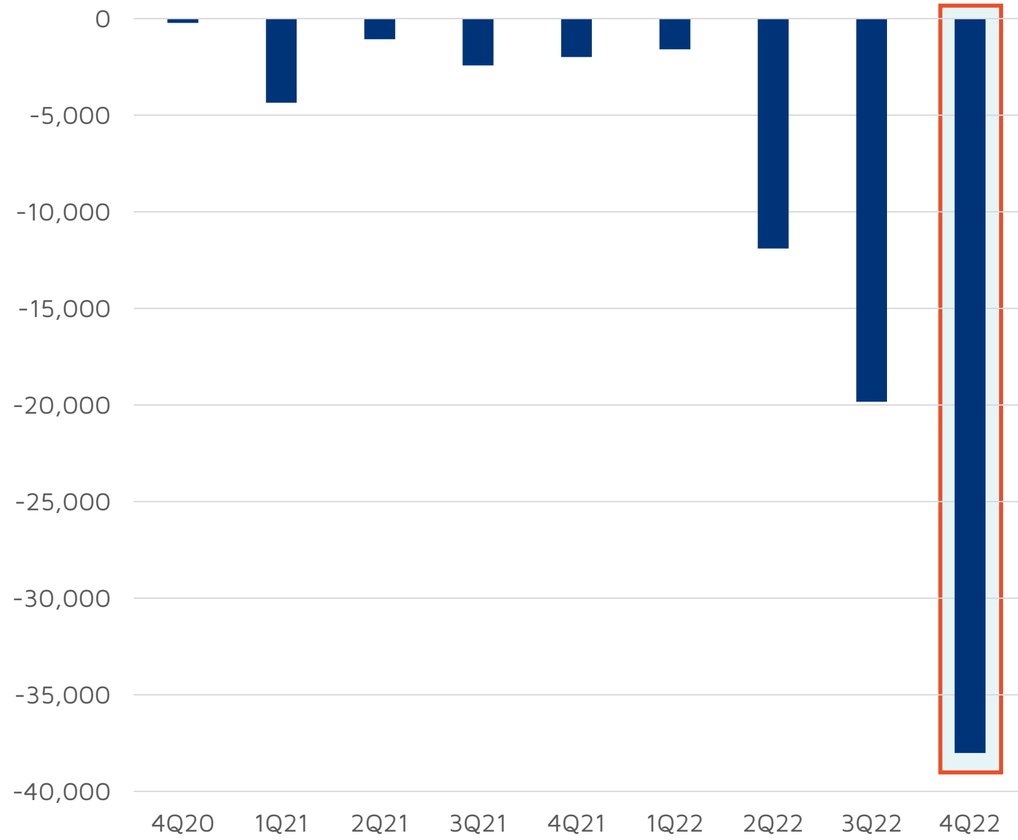
SEK `000s	2022	2021	Growth
4Q	1,583	4,430	-64%
Year-to-date	5,086	13,730	-55%

Operating Costs

Operating costs, SEK `000s

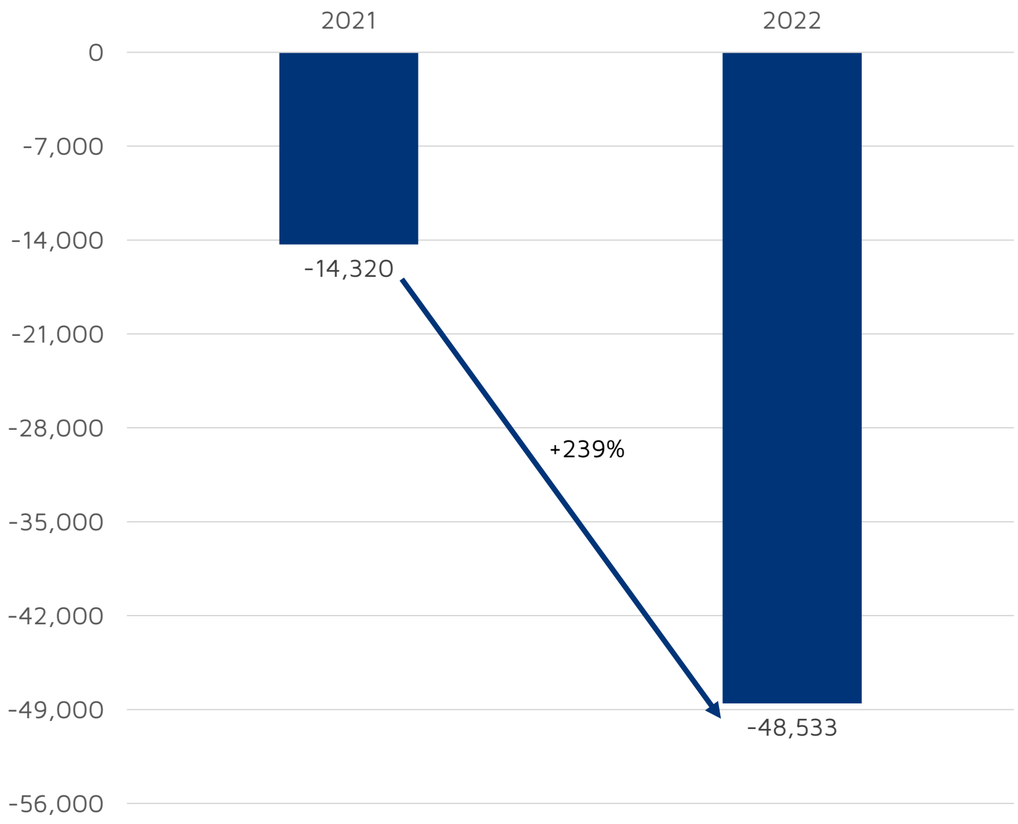


R&D costs (external), SEK `000s

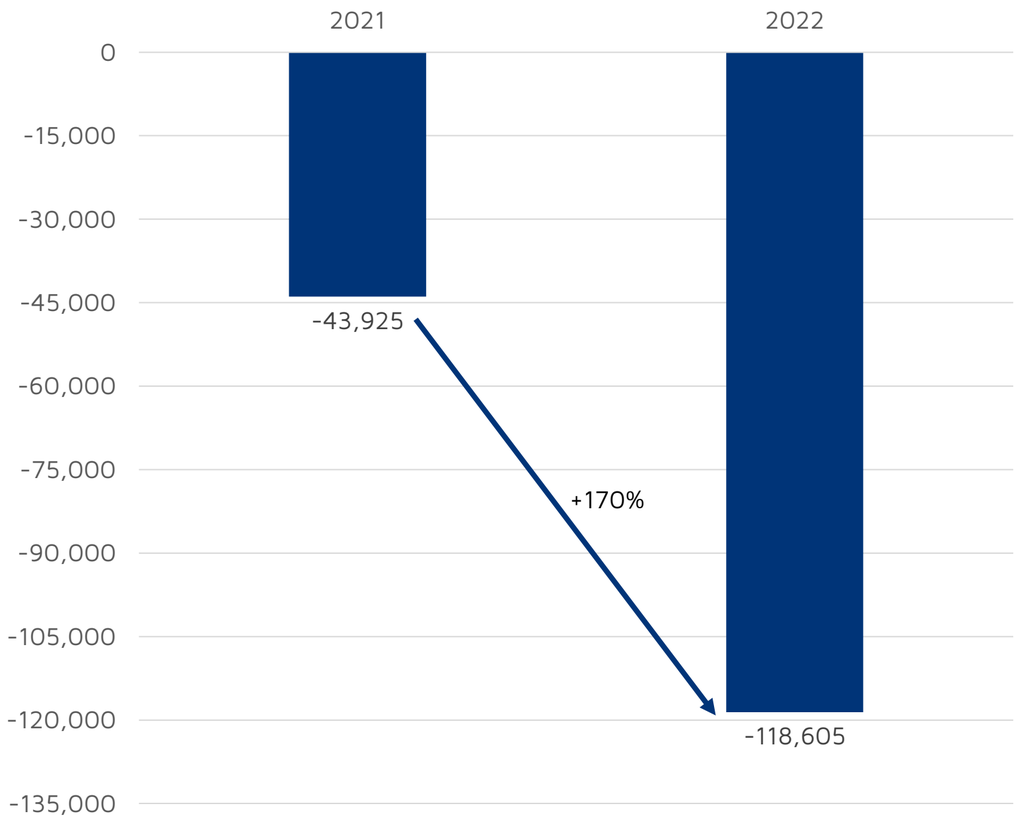


Profit / Loss for the Period

4Q profit / loss, SEK `000s

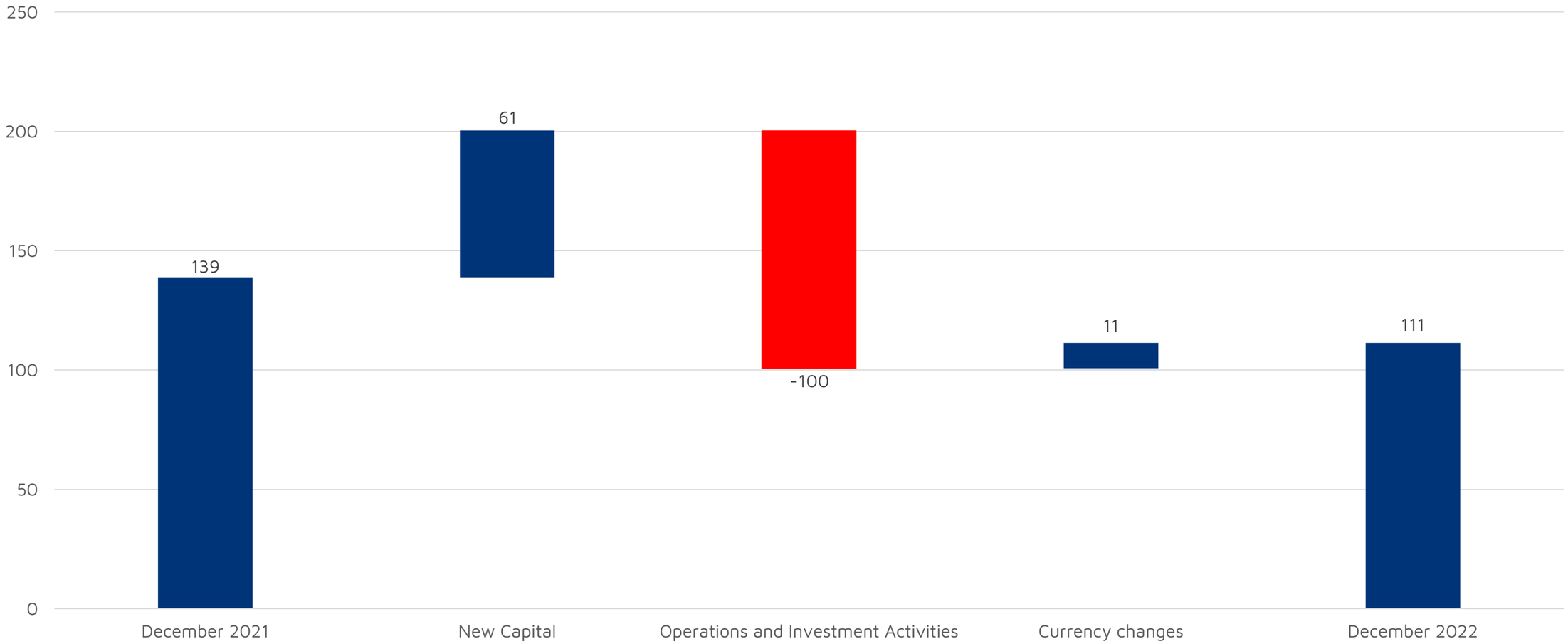


Year-to-date profit / loss, SEK `000s



Cash Development Year-to-Date

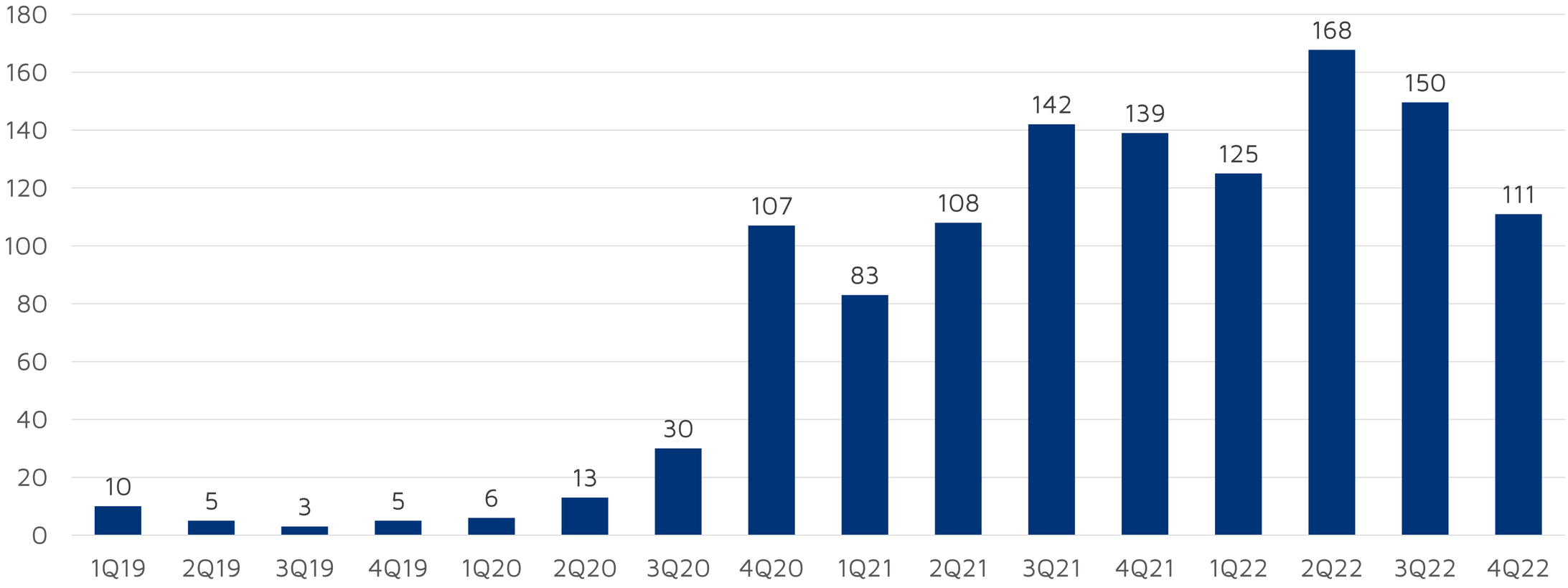
SEK millions



Note: December cash and cash flow from investing activities adjusted for impact if temporarily storing cash in the Company's SKAT account. See notes on the financial overview of the Q1 and Half-Year 2022 reports for further information.

Cash Balance[1], 2019-2022 Quarterly

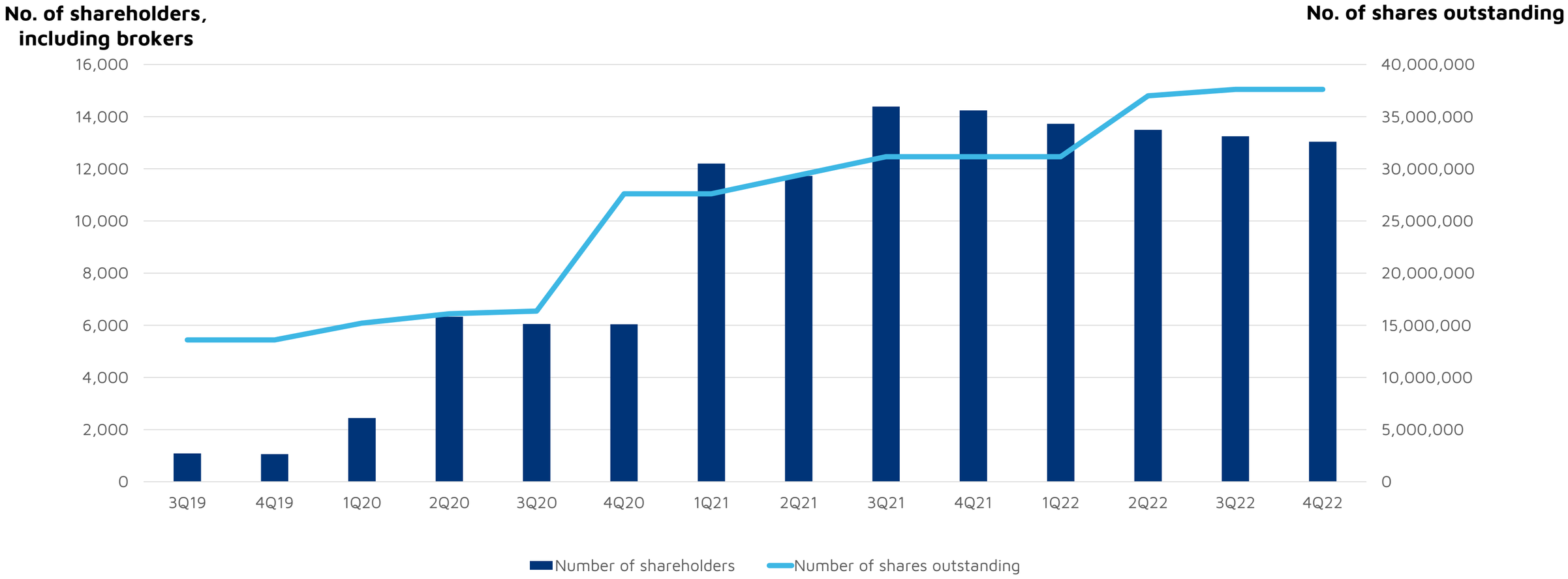
SEK millions



[1] For Q4 2021 and Q1 2022, the cash balance combines funds on the Company's SKAT account (interest-free tax asset with Denmark's tax authorities), and cash and bank. See page 16 of the 2Q 2022 report for more information.

Shareholder Composition

~13,000 shareholders holding ~37.6 million shares

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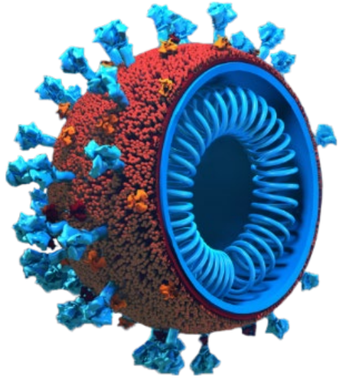
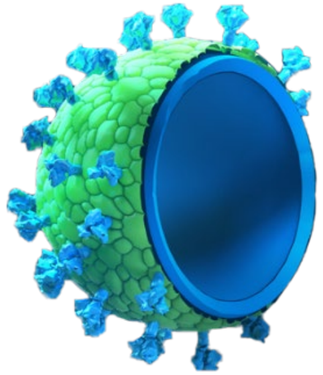
ABNCoV2 COVID-19 Vaccine

ABNCoV2 is rapidly advancing through clinical phases



Virus

Spike proteins on surface of the coronavirus are primary target for vaccine development



ABNCoV2-Capsid VLP

Spike proteins displayed on surface but contains no genetic material

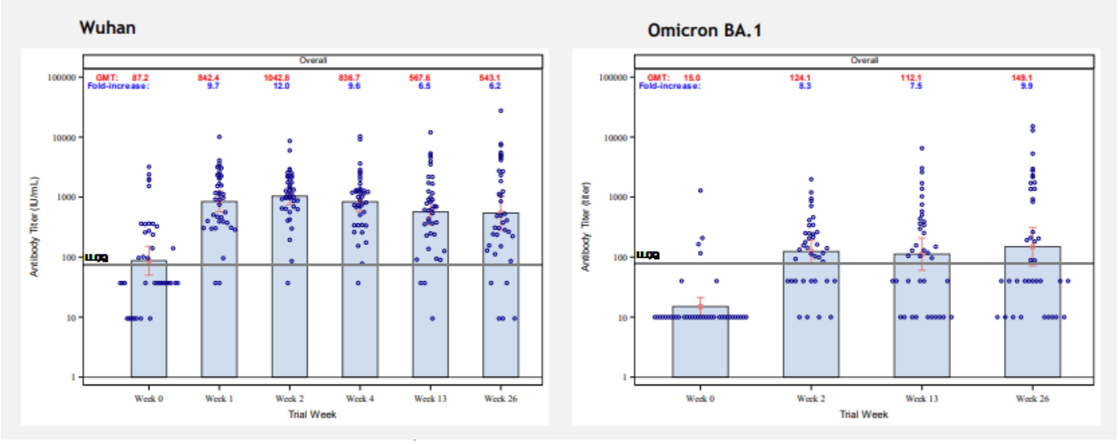
Positive phase II data announced in February 2022, phase III-initiated 2nd September 2022

Phase II results confirms ABNCoV2 as universal booster

- Evaluation as a booster vaccine in ~100 individuals with existing immunity. Study also assessed neutralizing immune responses against circulating variants and durability.
  - Strong boosting effect across all variants of concern
  - Level of neutralizing antibodies (NAbs) at levels reported to be associated with high level of protection (>90%)[1]
  - Geometric mean titers fold increase in levels of NAbs similar between Wuhan and omicron

Announced 17 October 2022

- **Phase II six-month follow up data in 41 out of 103 subjects demonstrated durable antibody levels across variants of concern**



1) P. B. Gilbert et al., Science 10.1126/science.abm3425 (2021)

COVID-19

Partnership with Bavarian Nordic

ABNCoV2 is out-licensed with near-term revenue streams supporting ExpreS^{2}ion

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

ExpreS^{2}ion receives from AdaptVac

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