

Annual Report 2021

# Proteins for life

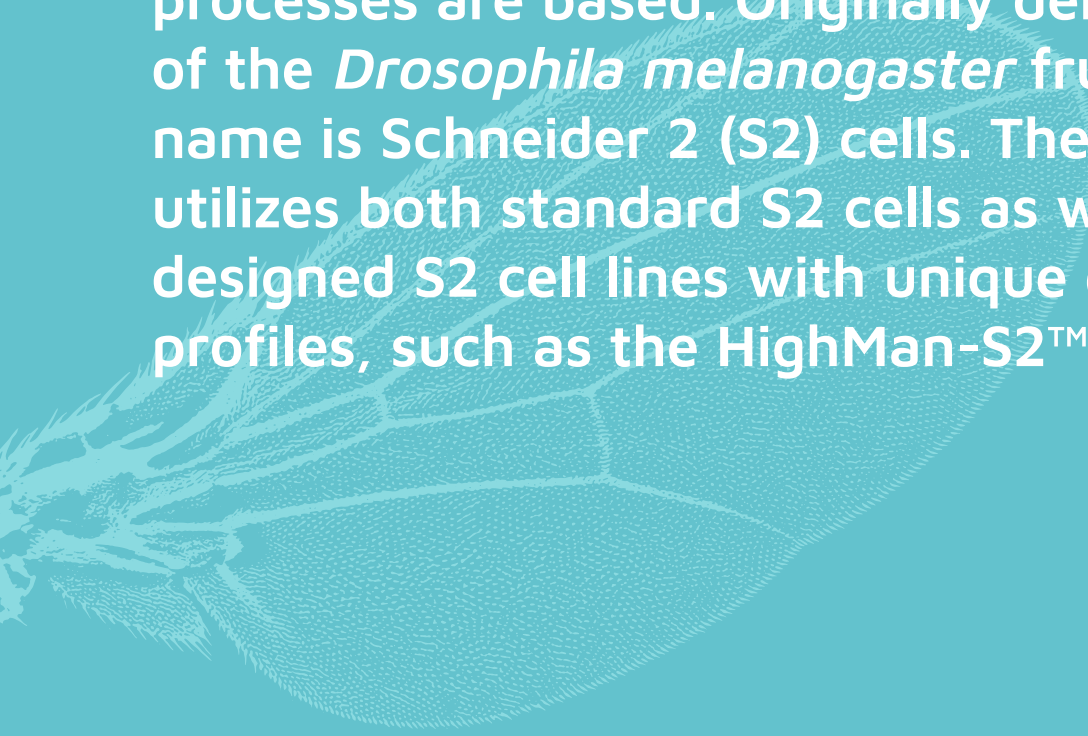


**EXPRES<sup>2</sup>ION**  
BIOTECHNOLOGIES

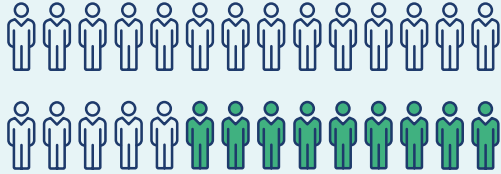
Expres<sup>2</sup>ion Biotech Holding AB  
Org. Nr. 559033-3729

# Our name

Our name, pronounced “Expression,” is a reference to the fruit fly cells upon which our research and processes are based. Originally derived from embryos of the *Drosophila melanogaster* fruit fly, their full name is Schneider 2 (S2) cells. The ExpreS2™ platform utilizes both standard S2 cells as well as ExpreS<sup>2</sup>ion designed S2 cell lines with unique glycosylation profiles, such as the HighMan-S2™.



# At a glance



## 28

**Employees**

Increase from 19 to 28 employees

## SEK 83.3 million

**Subscriptions**

SEK 83.3 million raised through two warrant subscriptions which were 97.6% and 97.4% subscribed



## 138.9

**Cash + other short-term investments\***

Increase from SEK 106.8 million to SEK 138.9 million

\*See Liquidity and the Danish tax authority's payment limit on page 51

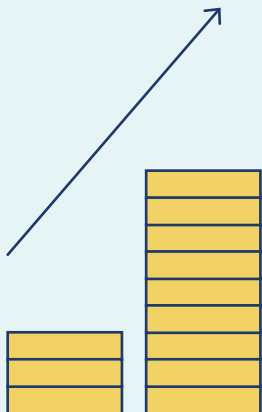
## 133%

**Increase in net sales**

## 24%

**Revenue**

annualized revenue growth since the IPO in 2016



## 281%

**Market capitalization**

281% increase in 2021



## 237%

**Share price**

237% increase in 2021

## “Did you know?”

The global vaccine market has grown from USD 33 billion in 2019 to USD 187 billion in 2021, over 460%, due to the COVID-19 pandemic. As of March, 2022, Evaluate Pharma forecasted COVID-19 vaccine sales for the top ten products of over USD 225 billion from 2023 to 2026.

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**CASE**

#### Recent progress and the way forward for the HER2 breast cancer vaccine program

In December 2021 and January 2022, strong positive preclinical proof-of-concept results were announced for ExpreS<sup>2</sup>ion's HER2-cVLP breast cancer vaccine.

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**CASE**

#### ExpreS<sup>2</sup>ion's continued role in the development of the Danish COVID vaccine

In 2021, Bavarian Nordic completed the ABNCoV2 COVID-19 vaccine's clinical Phase II trials with strong topline results presented in December.



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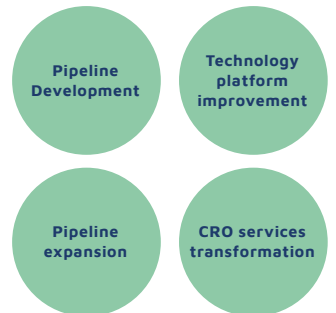
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#### ExpreS<sup>2</sup>ion's strategic objectives in 2022 and beyond

With tremendous progress achieved in 2020-2021 when it comes to validating and creating awareness of the ExpreS<sup>2</sup> platform through the COVID-19 vaccine program and securing the HER2 breast cancer vaccine as a leading high-value pipeline asset, the company is now in a great position to aim for a major platform upgrade in the coming five years.



# A word from our CEO

“

For ExpreS<sup>2</sup>ion, the COVID-19 vaccine program progress in 2021 has once again demonstrated that our ExpreS<sup>2</sup> platform is an excellent choice for rapid development of powerful protein-based vaccines, and also that the platform works well with VLP-based projects.”

In 2021, ExpreS<sup>2</sup>ion was able to deliver strong progress in key areas related to our ongoing transition into a stronger and much more pipeline-driven biotechnology company with high-value assets based on our novel ExpreS<sup>2</sup> technology platform for the development and production of protein-based vaccines.

Our most high-profile program, the ABNCoV2 COVID-19 vaccine licensed to Bavarian Nordic, progressed rapidly throughout the year. A clinical Phase I/II trial was initiated in the first quarter, with excellent topline results reported in August. This was followed by the exciting news later in August that the program will receive up to DKK 800 million in funding for a Phase III trial from the Danish Ministry of Health. The clinical program then progressed with a Phase II clinical trial to evaluate ABNCoV2 as a booster vaccine, with positive topline results presented near the end of the year. The data showed a 2-40-fold increase in SARS-CoV-2 neutralizing antibodies, with no serious adverse events reported, which confirms the vaccine's excellent profile as a non-adjuvanted universal COVID-19 booster vaccine.

For ExpreS<sup>2</sup>ion, the COVID-19 vaccine program progress in 2021 has once again demonstrated that our ExpreS<sup>2</sup> platform is an excellent choice for rapid development of powerful protein-based vaccines, and also that the platform works well with

VLP-based projects. This is important as the VLP technology is used also in our HER2 breast cancer vaccine program.

The progress in our HER2 breast cancer vaccine program was another key achievement for ExpreS<sup>2</sup>ion in 2021. We licensed the program from our joint venture AdaptVac in February, and got off to a strong start by initiating a research collaboration for animal studies in state-of-the-art breast cancer mice models with University of Bologna just weeks later. This collaboration led to the selection of our lead candidate ES2B-C001 in May, and subsequently the reporting of excellent animal proof of concept results in December 2021 and January 2022. These results demonstrated strong tumour-growth inhibiting effect in both *in vivo* mice models and *in vitro* studies with human breast cancer tumour cells, including tumour cells from patients resistant to the commonly used monoclonal antibody treatment trastuzumab. This is especially encouraging as this important patient group is currently lacking an efficient treatment option.

We were also able to report on encouraging progress in our Malaria projects together with the University of Oxford in 2021. Positive clinical Phase I/IIa data for the RH5 blood-stage malaria vaccine was presented by the University in April, and in July a Phase Ib clinical trial was initiated to evaluate

the blood-stage malaria vaccine candidate RH5.1/Matrix-M in adults and infants living in Tanzania.

The excellent overall progress presented above would not have been possible without successful recruitments to our team, with the expansion of our capabilities when it comes to preclinical and clinical development of our pipeline assets as a key focus. This included welcoming Dr. Mette Thorn as Vice President of Preclinical Development, promoting Dr. Max M. Søggaard to the position of Vice President, R&D and Technology, and appointing Dr. Mattis F. Ranthe as the company's new Chief Medical Officer (CMO). I am proud to see that ExpreS<sup>2</sup>ion continues to attract top-level talent to our team, which is necessary when having the ambition to grow substantially while advancing our pipeline in the coming years.

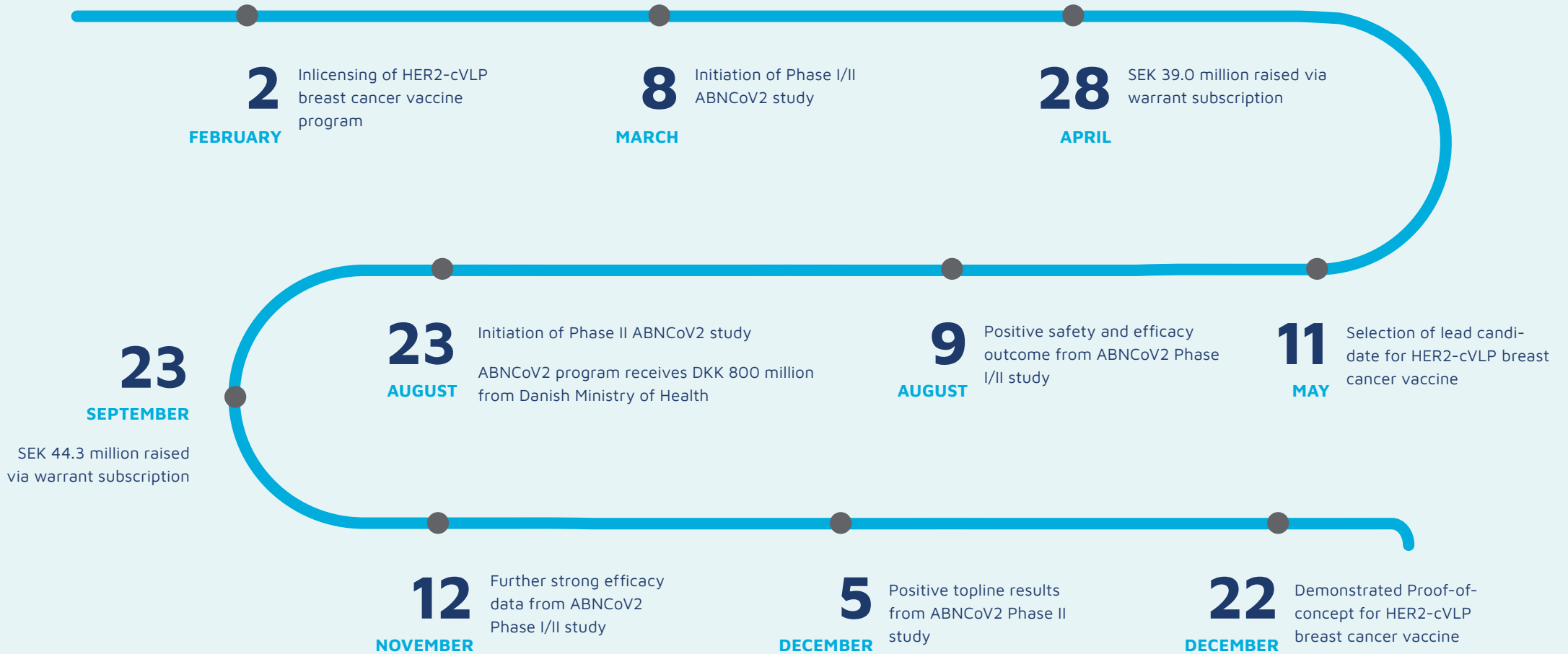
I finally want to thank all of our shareholders for their support during the year, including the participation in our TO4 and TO 5 warrant programs, which secured 83.3 MSEK in total additional funding to the company in 2021. ExpreS<sup>2</sup>ion's management team and board is fully committed to combining important progress in the fight against global health challenges with building strong shareholder value in the company over time, and we see excellent opportunities to continue to do so when looking ahead towards the rest of 2022 and beyond.



A handwritten signature in black ink, appearing to read 'Bent U. Frandsen'. The signature is fluid and cursive, written over a white background.

**Bent U. Frandsen**  
CEO, ExpreS<sup>2</sup>ion Biotech Holding AB

# 2021 timeline of key events





## CASE

# Recent progress and the way forward for the HER2 breast cancer vaccine program

In December 2021 and January 2022, strong positive preclinical proof-of-concept results were announced for ExpreS<sup>2</sup>ion's HER2-cVLP breast cancer vaccine. The company is now planning toxicology studies in 2022-23, followed by first in human clinical studies in 2024 with topline Phase I/IIa results expected in 2024-25.

A key milestone for ExpreS<sup>2</sup>ion's strategy to build its own development pipeline with high-value assets was achieved in February 2021, when the company was granted an exclusive global license for the HER2-cVLP breast cancer vaccine program from the Danish company AdaptVac, of which ExpreS<sup>2</sup>ion owns 34%.

The project was advanced just weeks later as ExpreS<sup>2</sup>ion announced a research collaboration with Prof. Pier Luigi Lollini and his team at the University of Bologna to test the vaccine in state-of-the-art breast cancer mice models mimicking some of the mechanisms in human breast cancer. In May, this collaboration led to





“ With the recent strong animal proof of concept data presented for our HER2-cVLP breast cancer vaccine, it is shown that the polyclonal antibody response approach of our vaccine may be uniquely suited to become an efficient treatment for trastuzumab

resistant breast cancer patients, while the vaccine may also have strong potential as a general therapeutic vaccine for HER2 breast cancer and other HER2-expressing tumours. It is exciting that we have been able to rapidly and successfully advance our leading pipeline project to this level in 2021 and early 2022, and we very much looking forward to the toxicology studies and the first in human studies planned for 2022-24.”

### Mette Thorn

Vice President of Preclinical Development

further progress, as ES2B-C001 was selected and presented as the project’s lead candidate.

### Excellent proof-of-concept data announced in December 2021–January 2022

In December 2021 and January 2022, positive preclinical data constituting preclinical proof

of concept for the project was announced. The studies used two *in vivo* mouse models: one transgenic mouse type with natural HER2 expression, just like humans, and one without natural HER2 expression. Furthermore, *in vitro* data was presented from studies where human HER2 breast cancer tumour cells were

cultivated and applied blood serum from transgenic mice who had received the breast cancer vaccine, or the monoclonal antibody treatment trastuzumab that is commonly used today. The human breast cancer tumours cells were from two patient types: patients who responded to trastuzumab, and patients who had developed trastuzumab resistance, which is a not uncommon and troublesome side effect during treatment with this monoclonal antibody.

For the normal mice, ExpreS<sup>2</sup>ion’s vaccine formulated in an adjuvant was able to totally block tumour growth. Tumour growth was also significantly inhibited in transgenic mice, which better mimic a human patient.

In the non-trastuzumab resistant human breast cancer tumour cells, blood serum from vaccinated transgenic mice was able to inhibit tumour growth to the same extent as blood serum with trastuzumab. Furthermore, the blood serum from vaccinated transgenic mice was also able to inhibit growth in the human breast cancer tumour cells which were trastuzumab resistant. Although this was expected it is still very promising, as it indicates that the polyclonal approach of ExpreS<sup>2</sup>ion’s vaccine (using a more diversified approach which makes it harder for the tumour cells to become resistant) will enable it to function as an efficient treatment for the important trastuzumab resistant patient group that is lacking satisfactory treatment options today.

### Upcoming toxicology studies and first in human clinical studies

Based on the encouraging preclinical proof of concept data, ExpreS<sup>2</sup>ion is now designing the upcoming toxicology studies for the breast cancer vaccine. The company has recently received feedback from relevant regulatory agencies on a preliminary study design, and is currently incorporating this feedback into the final design while also evaluating different animal models to find the most optimal and human-like setup possible. The toxicology studies for the breast cancer vaccine project are planned to be conducted in 2022-23.

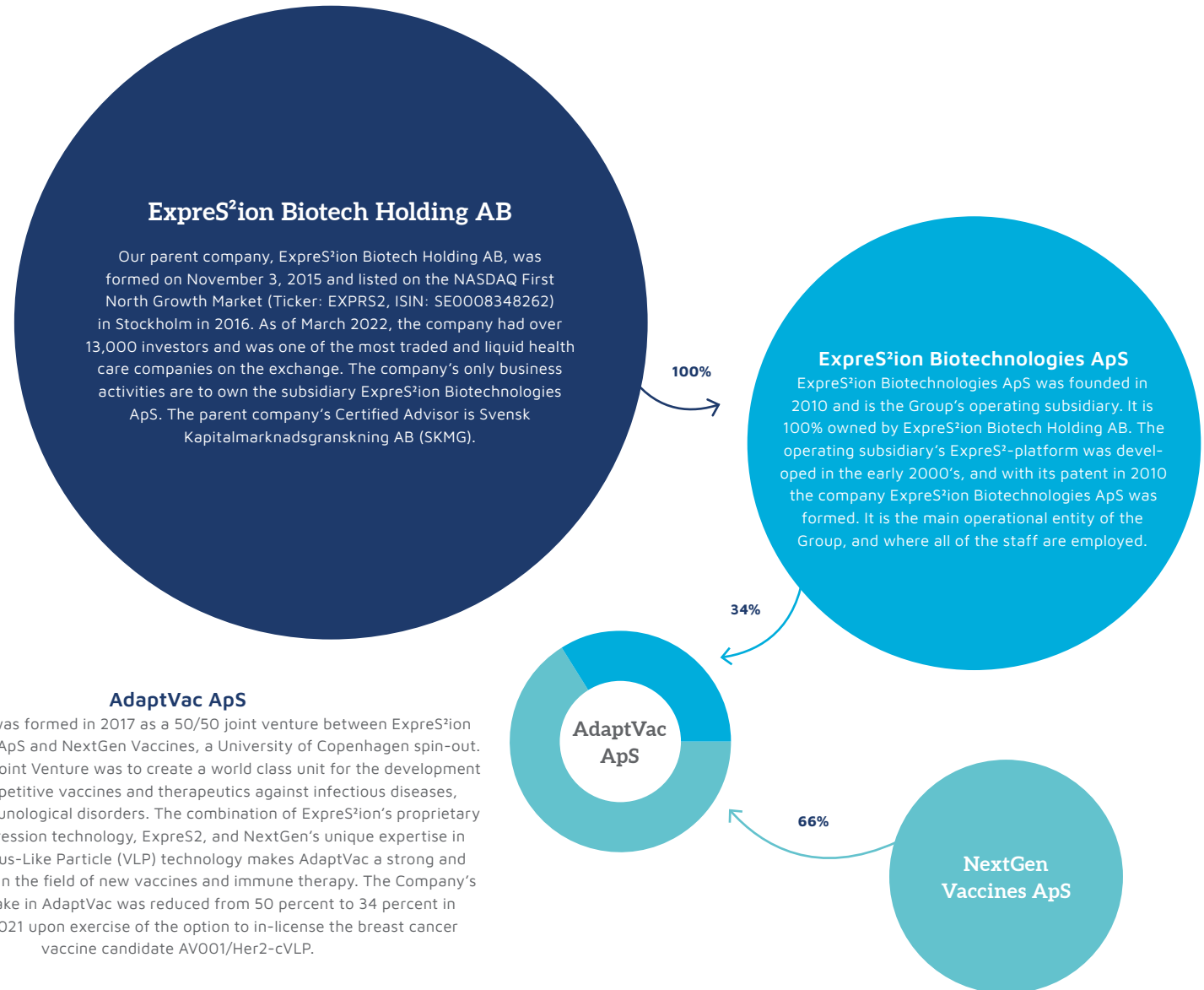
The next step after the toxicology studies will be first in human clinical studies to confirm the safety profile of the vaccine. These studies are planned to be initiated in 2024 with the topline results presented in 2024-25. If the encouraging preclinical results can be confirmed in clinical studies, ExpreS<sup>2</sup>ion expects to receive strong interest from potential partners for the later phases of the clinical program and the commercialization of the project.

# Our strategy and business

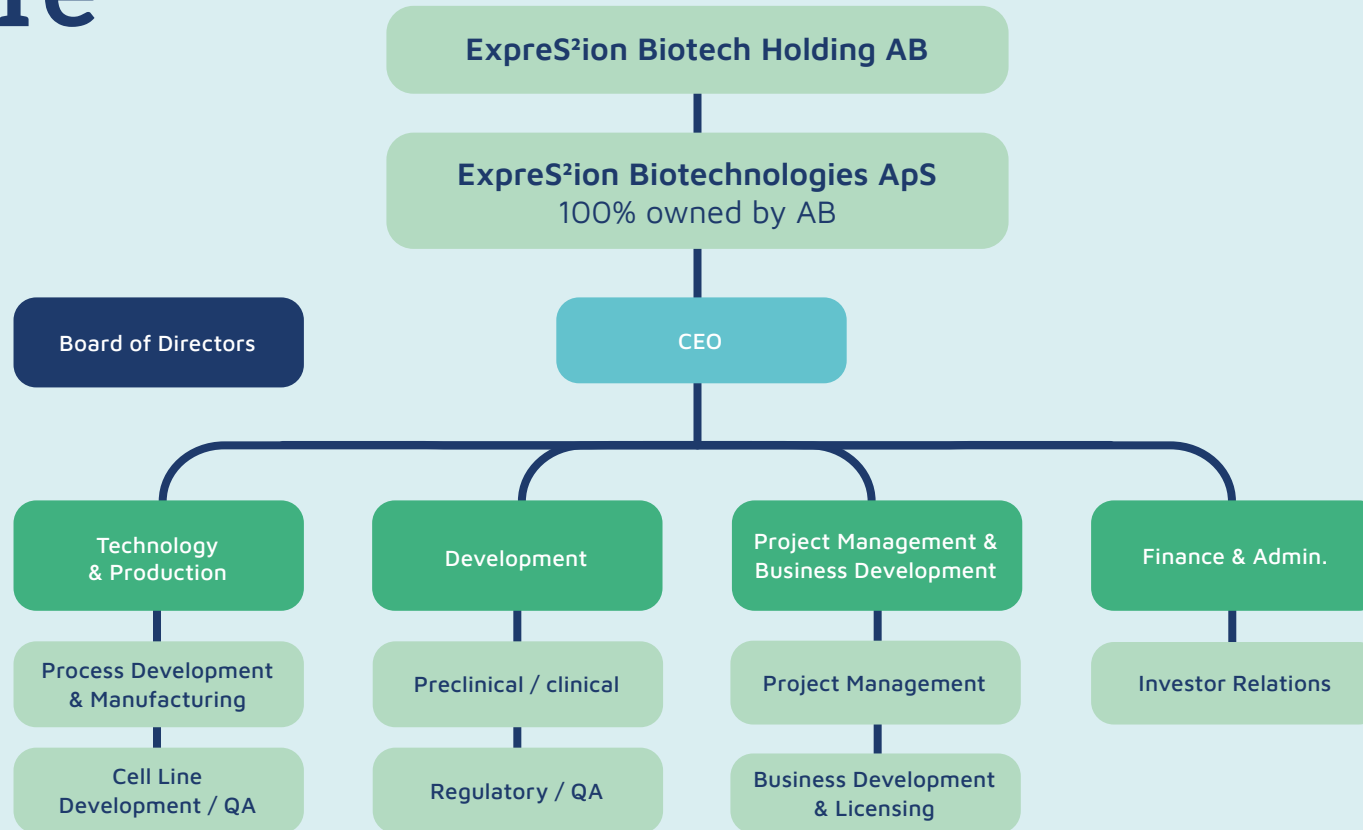
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# Company structure

Expres<sup>2</sup>ion has a streamlined company structure. Expres<sup>2</sup>ion Biotech Holding AB is the Swedish entity listed on Nasdaq First North Growth Market since 2016. Expres<sup>2</sup>ion Biotechnologies ApS is the operational entity, with offices and labs in the Scion DTU Science park 20 km north of Copenhagen, Denmark, and was established in 2010. AdaptVac ApS is a joint venture established in 2017 together with a group of scientists from the Institute of Immunology and Microbiology at the University of Copenhagen. The scientists own their part of AdaptVac through a joint holding company named NextGen Vaccines ApS.



# Organization structure



# Expres<sup>2</sup>ion's key assets

## The Expres<sup>2</sup> technology platform

The company's Expres<sup>2</sup> platform has been used successfully for the development and production of hard-to-express proteins for over a decade. It has a great track record, with over 350 proteins expressed and a success rate above 90 percent. Additional advantages include a rapid delivery process of 3-6 months, and a high batch-to-batch consistency.

The platform is used in Expres<sup>2</sup>ion's two most valuable development programs, the ABNCoV2 COVID-19 vaccine and the company's own ES2B-C001 HER2 breast cancer vaccine program, as well as in several Malaria vaccine partner projects and the Influenza vaccine project developed within the INDIGO consortium. The platform is also used in Expres<sup>2</sup>ion's CRO services, which will be increasingly used to drive value generation in the company's pipeline development projects going forward.

In addition to its current advantages, the Expres<sup>2</sup> platform is also in the process of being upgraded with unique and genetically engineered cell lines, such as the HighMan-S2™. With these cell lines, the proteins expressed are given improved

characteristics such as the facilitation of higher immunization levels compared to regular versions of the same proteins.

## The in-licensed cVLP platform

In some of Expres<sup>2</sup>ion's development projects, including the ABNCoV2 COVID-19 vaccine and the ES2B-C001 HER2 breast cancer vaccine, a capsid virus-like particle (cVLP) technology platform is used to create the full vaccine. This is done by attaching the proteins developed by Expres<sup>2</sup>ion to the surface of a capsid, which is a protein protective shell of a virus. By doing so, the vaccine is mimicking a virus to elicit an immune response in the patient.

VLP-based vaccines have a strong commercial track record in the cancer field from its successful use to prevent HPV cancer. This is promising for Expres<sup>2</sup>ion's HER2 breast cancer vaccine project, which has already achieved excellent preclinical *in vivo* and *in vitro* results.

The VLP platform in-licensed and used by Expres<sup>2</sup>ion was developed by the Danish company AdaptVac ApS, of which Expres<sup>2</sup>ion owns 34%. This VLP platform has a high immunogenic potential due to its ability to hold





full length proteins (compared to fragments in other systems), which are attached with a high density on the capsid surface. The platform can also use directional attachment compared to random orientation for other systems.

#### The ABNCov2 COVID-19 Vaccine

Expres<sup>2</sup>ion has been engaged in the development of a unique capsid virus-like particle (cVLP) COVID-19 vaccine using Expres<sup>2</sup>-produced SARS-CoV-2 antigens. The vaccine has been licensed exclusively to Bavarian

Nordics, which has completed Phase II studies with excellent results. In these studies, the vaccine was demonstrated to create a 2-40-fold increase in neutralizing antibodies compared to mRNA vaccines, for all variants tested so far, with no severe adverse effect. The vaccine also has the advantage of not requiring extremely cold storage and shipping temperatures (such as mRNA vaccines), which makes it suitable for global usage, including in developing regions.

The preclinical development of the vaccine was partly sponsored through a Horizon 2020 EU grant award to the PREVENT-nCoV consortium, with Expres<sup>2</sup>ion as one of its members. As announced by the exclusive licensee Bavarian Nordic on August 23, 2021, the clinical program will receive up to DKK 800 million in funding from the Danish Ministry of Health. The next step is to conduct Phase III studies, which are planned to start in the first half of 2022, fully sponsored by Bavarian Nordic.

While the main goal of the clinical program is to evaluate ABNCov2 as a booster vaccine, the excellent Phase II clinical results indicate that it will provide very strong protection on its own.

Expres<sup>2</sup>ion's main source of potential future license revenues from this vaccine is the company's 34% ownership in the Danish

company AdaptVac, which is providing the cVLP technology for the vaccine.

#### The ES2B-C001 HER2 Breast Cancer Vaccine

This high-value asset was licensed from the Danish company AdaptVac in February 2021, and it is the first development program fully controlled by Expres<sup>2</sup>ion. The vaccine is being developed for therapeutic treatment of HER2 breast cancer, with the patient group developing resistance to the commonly used monoclonal antibody treatment trastuzumab as a key focus. The vaccine is using a capsid virus-like particle (cVLP) approach combined with Expres<sup>2</sup>-produced antigens.

In December 2021 and January 2022, positive preclinical data constituting preclinical proof of concept for the project was announced. In both *in vivo* mice models and in *in vitro* studies with human breast cancer tumour cells, the vaccine was shown to inhibit tumour growth to at least the same extent as trastuzumab. These positive results were demonstrated also in trastuzumab resistant human cancer cells, which is very promising.

Expres<sup>2</sup>ion is now planning preclinical safety studies in 2022-23, followed by first in human clinical studies in 2024 with topline Phase I/IIa results expected in 2024-25.

# Platform strengths

ExpreS<sup>2</sup>ion Biotechnologies ApS was founded in 2010 on the realisation that to produce the complex proteins needed for biological drugs and vaccines of the future, in a safer and more efficient manner, a new protein expression system would be needed.

The Company developed the ExpreS2 recombinant protein expression platform supporting all phases of drug discovery and R&D as well as GMP manufacturing for clinical studies. With the ExpreS2 platform, the Company enables high-quality production of complex proteins using *Drosophila melanogaster* (fruit

fly) S2 cell lines. ExpreS<sup>2</sup>ion has emerged as a company capable of solving difficult protein challenges and intends to be at the forefront of vaccine development platforms. Since 2019, ExpreS<sup>2</sup>ion's offering to the biopharmaceutical industry also includes glyco-engineered S2 cell lines under the GlycoX-S2™ brand. This allows

for functional modification, e.g., by enhancing immunogenicity or improving pharmacokinetics. The Company sells licenses to use the ExpreS2 platform as a whole or in part to both pharmaceutical companies and research institutions. All ExpreS<sup>2</sup>ion's pipeline assets incorporate the ExpreS2 technology.



## 90%

To date more than 300 different proteins have been produced with the ExpreS2 platform, with a success rate exceeding 90%.

### The Company believes that the strengths of the platform include:

**1.**

Significantly less costly and time-consuming than alternative methods, which is an important competitive advantage, considering time-to-market and patent expiry. It also makes the platform particularly valuable for the development of diagnostics and vaccines in epidemic or pandemic situations where speed is of the essence.

**2.**

Generates higher yields, i.e. amount of protein per manufacturing batch, compared to competing systems.

**3.**

Provides homogeneous manufacturing batches, a requirement in pharmaceutical development. The platform includes the Company's patented expression vectors which were developed, among other things, to make it possible for the cells to generate higher yields.

**4.**

Since 2019 the Company's offering to the biopharma sector includes glyco-engineered S2 cell lines under the GlycoX-S2™ brand. This allows for functional modification, e.g. by enhancing immunogenicity or improving pharmacokinetics.

# Expres<sup>2</sup>ion's strategic objectives in 2022 and beyond



With tremendous progress achieved in 2020-2021 when it comes to validating and creating awareness of the Expres<sup>2</sup> platform through the COVID-19 vaccine program and securing the HER2 breast cancer vaccine as a leading high-value pipeline asset, the company is now in a great position to aim for a major platform upgrade in the coming five years.

The overall objective is to substantially speed up its pipeline development processes, secure a more robust supply chain, increase yields and finally establish Expres<sup>2</sup> as a global volume manufacturing standard for protein-based vaccines.

Based on an internal strategic review completed in the second half of 2021, Expres<sup>2</sup>ion has committed to four core strategic objectives to take the company and its platforms to the next level in the coming five years:

**Pipeline  
Development**

**Technology  
platform  
improvement**

**Pipeline  
expansion**





**CRO services  
transformation**

“With the Expres<sup>2</sup> proven to be a world-class platform for hard-to-express proteins in the discovery, preclinic and clinical phases, the company is now set on further improving its capabilities in several key areas so that it becomes the most attractive option to use also when our current and future programs reaches the volume production phase. These improvements will at the same time facilitate much more efficient development processes, and the creation of proteins with unique capabilities, which will be of great use as we continue to rapidly advance our existing and upcoming pipeline programs.”

**Bent U. Frandsen**  
CEO



# Pipeline schematic

DISEASE	Project / Target	Discovery	Pre-clinical Pharmacology	cGMP / Tox	Phase 1	Phase 2	Phase 3	Market potential
Corona virus 	ABNCoV2/SARS-CoV-2 cVLP	[Progress bar from Discovery to cGMP/Tox]			I/IIa	BN: II		> 100 billion EUR
Breast cancer 	ES2B-C001/Her2 cVLP	[Progress bar from Discovery to Pre-clinical Pharmacology]						> 15 billion EUR
Influenza 	Hemagglutinin	[Progress bar from Discovery to Pre-clinical Pharmacology]						> 4 billion EUR
Malaria 								> 0.6 billion EUR
I: Blood	RH5	[Progress bar from Discovery to cGMP/Tox]			Ib / IIa			
II: Blood	RH5-VLP	[Progress bar from Discovery to Pre-clinical Pharmacology]						
III: Transmission	Pfs 48/45	[Progress bar from Discovery to Pre-clinical Pharmacology]						
IV: Placenta	VAR2CSA	[Progress bar from Discovery to cGMP/Tox]			Ia / Ib			
V: Blood	CYRPA complex	[Progress bar from Discovery to Pre-clinical Pharmacology]						

Sources (market potential): COVID - Meticulous Market Research, 2021 • Breast Cancer - MI4A, 2019 • Influenza - Allied market research, 2021 • Malaria - Report and Data, Malaria diagnostics Market, 2021

# Pipeline description



## CORONAVIRUS/COVID-19

ExpreS<sup>2</sup>ion and its associated company AdaptVac have been engaged in the development of a unique capsid virus-like particle (cVLP) COVID-19 vaccine, partly sponsored through a Horizon 2020 EU grant award to the PREVENT-nCoV consortium to rapidly advance the vaccine candidate against COVID-19 into the clinical stage. The candidate vaccine is a cVLP applying ExpreS<sup>2</sup>-produced SARS-CoV-2 antigens, thereby creating a powerful immunogenic vaccine. In July 2020, AdaptVac and Bavarian Nordic, a fully integrated biotechnology company focused on the development, manufacture and commercialization

of life-saving vaccines, entered into a license agreement providing Bavarian Nordic the global commercialization rights to the proprietary capsid virus like particle based SARS-CoV-2 subunit vaccine, designated ABNCoV2. For application of our proprietary protein production system ExpreS<sup>2</sup>, ExpreS<sup>2</sup>ion and AdaptVac have also entered into a license agreement for this project.

In addition to ExpreS<sup>2</sup>ion and AdaptVac, the PREVENT-nCoV consortium members are Leiden University Medical Center (LUMC), Institute for Tropical Medicine (ITM) at University of Tübingen, The Department of Immunology and Microbiology (ISIM) at University of Copenhagen, the Laboratory of Virology at Wageningen University, and Radboud University Medical Center. We announced the first headline results of the clinical Phase I/IIa in August 2021 and demonstrated positive safety and efficacy outcomes. Bavarian Nordic is currently running a Phase II study to determine the vaccine's potential as a universal booster. Preliminary results in December 2021 demonstrated a strong boosting effect for all variants tested and confirmed the vaccine's excellent profile as a non-adjuvanted universal COVID-19 booster vaccine.

Additional positive Phase II results were presented in February 2022. The full study data confirms that existing levels of SARS-CoV-2 neutralizing antibodies increased by 2-40-fold, depending on the initial levels of antibodies, with no serious adverse events reported. Based on this excellent outcome, Bavarian Nordic plans to initiate a Phase III study in the first half of 2022.



## BREAST CANCER

Breast cancer is a widespread oncology indication affecting more than 1.3 million people worldwide annually, resulting in more than 450,000 deaths (Tao, 2015: [www.ncbi.nlm.nih.gov/pubmed/25543329](http://www.ncbi.nlm.nih.gov/pubmed/25543329)). The most common treatment today is based on monoclonal antibodies, where the dominating therapies Herceptin (trastuzumab) and Perjeta (pertuzumab) generate annual global sales of USD 7 billion. The target

product profile of our lead breast cancer project, ES2B-C001 (HER2-cVLP), is tailored to be highly competitive both in terms of cost and efficacy, thus aiming at a significant market share.

In February 2021, ExpreS<sup>2</sup>ion signed a final patent license agreement with AdaptVac whereby ExpreS<sup>2</sup>ion exclusively licensed in AV001 (renamed ES2B-C001). This gives ExpreS<sup>2</sup>ion full control over and responsibility for driving this valuable asset forward, hereby realising the very significant value of this project. At the end of 2021, ExpreS<sup>2</sup>ion's candidate demonstrated strong tumor-growth inhibiting effect in a mice models, thus reaching an important pre-clinical milestone ahead of schedule. Additionally, anti-HER2 antibodies from these studies were found to effectively inhibit tumor growth in human cancer cells. The candidate also demonstrated proof-of-concept in HER2-transgenic preventive as well as therapeutic tumor mice models, thus reaching a further important pre-clinical milestone.

Based on feedback from the Danish Medicines Agency (DKMA), ExpreS<sup>2</sup>ion intends to conduct additional preclinical safety studying, which will increase the robustness of the project's preclinical data. Consequently, the Company is now aiming to file the clinical trial application for the Phase I trial in the second half of 2023, with the aim of dosing first in human in the first half of 2024.



## INFLUENZA

The international next-generation influenza vaccine consortium INDIGO, led by the University of Amsterdam with ExpreS<sup>2</sup>ion as a participating member, is developing a next-generation influenza vaccine in a large collaboration between public and private R&D organisations from the EU, India, and the United States. The project has been awarded a 10 MEUR Horizon 2020 grant from the EU, of which ExpreS<sup>2</sup>ion's participation was directly awarded 0.6 MEUR.

The INDIGO consortium plans to carry out the preclinical and clinical development of the project, which contains two novel influenza vaccine concepts, including the application of a novel potent adjuvant by LiteVax BV, the Netherlands, as well as the use of the ExpreS<sup>2</sup>

platform for antigen production by ExpreS<sup>2</sup>ion. The aim is to create an influenza vaccine that meets the requirements of global vaccination, i.e. to achieve <10% instead of 60% non-responders, combined with a lower manufacturing cost and better accessibility.



## MALARIA PROJECTS

### Malaria I Blood stage (RH5-1)

Jenner Institute of the University of Oxford is developing the blood-stage Plasmodium falciparum malaria antigen RH5.1 with ExpreS<sup>2</sup>ion as a collaboration partner. The RH5.1 antigen is produced in ExpreS<sup>2</sup>ion's ExpreS<sup>2</sup> platform.

### Malaria II Blood stage (RH5-2)

With the aim to further improve efficacy, the Jenner Institute of the University of Oxford is developing a second-generation

RH5 vaccine, RH5.2, in the ExpreS<sup>2</sup> platform. RH5.2 has been engineered to retain regions important for red blood cell recognition, which are targeted by neutralising antibodies. Additionally, the RH5.2 protein will be displayed on the surface of a hepatitis B derived virus-like particle (VLP) in order to maximise the induction of high titre antibodies. The project is funded by the Wellcome Trust.

### Malaria III Transmission (Pfs48/45)

The goal for a transmission-blocking vaccine is to prevent the transfer to mosquitos feeding on persons infected with malaria, thus effectively hindering further spread of the disease. Thereby a transmission-blocking vaccine does not give direct protection from the disease, but it stops the disease from spreading and could therefore lead to eradication of malaria. During the last decade, the inability to produce the full-length Pfs48/45 antigen has been a major roadblock for researchers aiming to create a transmission-blocking malaria vaccine. However, this challenge was overcome by ExpreS<sup>2</sup>ion and Jenner Institute at the University of Oxford.

This vaccine is developed by the Horizon 2020-funded OptiMalVax grant consortium, led by Jenner Institute at the University of Oxford with ExpreS<sup>2</sup>ion as a member. The objective of the consortium is to create a combination malaria vaccine, and its clinical

program will include trials to assess the pre-erythrocytic, blood-stage and mosquito-stage components of the combination vaccine, including this transmission vaccine.


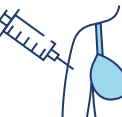


### Malaria IV Placenta borne (VAR2CSA)

ExpreS<sup>2</sup>ion is a part of the PlacMalVac project that started in 2013 as an international consortium project with the aim to develop a vaccine against placental malaria. The project is based on the antigen VAR2CSA, which enable parasite accumulation in the placenta and was discovered by Professor Ali Salanti and others at the University of Copenhagen.

### Malaria V Blood-stage (PfRipr complex)

An international research team, including scientists from ExpreS<sup>2</sup>ion and led by the Walter and Eliza Hall Institute of Medical Research (WEHI), is developing a next generation malaria vaccine that is targeting a recently discovered molecular 'key' that the deadly malaria parasite uses to enter human blood cells. The malaria 'key' was first described in a Nature article, published December 2018 from the group. It is a complex of three parasite proteins called Rh5, CyRPA and Ripr, where the three proteins work together to unlock and enter the cell. This central role in the infection of human blood cells makes the complex a new and promising target for vaccine development. The vaccine is based on a patent co-owned by WEHI and ExpreS<sup>2</sup>ion.

# Advancing towards key catalysts

	2022	2023	2024+
 <p><b>CORONAVIRUS/ COVID-19 ABNCOV2</b></p>	<p>✓ BN Phase II study initiation (Q3'21)</p>	<p>✓ <b>BN Phase II study readout H1 2022</b></p> <p><b>BN Phase III study initiation H1 2022</b></p> <p><b>BN Phase III initial readout H2 2022</b></p>	<p><b>BN ready for market launch</b> (subject to regulatory approval)</p>
 <p><b>BREAST CANCER</b></p>	<p>✓ Executed in-licensing (Feb 2021)</p> <p>✓ Preclinical animal studies initiated (Q2)</p>	<p><b>Preclinical animal proof-of-concept results H1 2022</b></p> <p>GMP manufacturing batch</p> <p>Preclinical safety studies readout</p>	<p>Filing of clinical study application H2 2023</p> <p><b>Initiation of first human clinical study 2024</b></p> <p><b>Outlicensing window opens pending human data</b></p>
 <p><b>INFLUENZA</b></p>	<p>✓ Advance/support further development of one or more candidates in 2022</p>	<p><b>cGMP/Preclinical safety studies initiation 2023</b></p>	
 <p><b>MALARIA</b></p>	<p>✓ Phase IIa results from the Rh5 vaccine published in 2021</p>	<p>✓ RH5 Additional phase I study in a malaria endemic region in Africa launched during 2021, with alternative adjuvant</p> <p><b>Pfs 48/45 phase I study initiation 2022</b></p>	<p><b>RH5-VLP phase I initiation 2023</b></p> <p><b>RH5 phase I study readout H2 2023</b></p>

# Partners

## Broad Customer and Collaborator Base

With over 100 currently active or former academic and industrial service and license contracts, the Company has built a large network in the international research community since its inception in 2010. Furthermore, the Company is currently a part of an international research consortia which together has been granted more than an estimated EUR 40 million of non-dilutive public funding. The Company also sells licenses to use the ExpreS2 platform as a whole or in part, thus allowing its clients to participate in or be entirely responsible for the development of the required proteins. The Company sells ExpreS2 test kits and reagents for application as research tools or diagnostics. The Company may also enter into agreements in which the client accepts a quotation and is charged for the development, production and delivery of research grade proteins, using the ExpreS2 platform.

The Company services both pharmaceutical companies and research institutions. The ExpreS2 platform is equally suited for academic research, analytics and commercial drug development, both in vaccines and other biopharma fields. The Company's clients are not limited to any geographic area and are located all over the world. Since its foundation in 2010, the Company has worked with more than 100 clients and partners. The agreements with these clients, which in many cases are worldleading universities, research institutions and pharmaceutical companies, have generated significant revenues for the Company over the years. It currently has more than ten major clients. For instance, the Company has out-licensed the ExpreS2 platform for research to Hoffman-La Roche, Imperial College London and Francis Crick Institute among others, and outlicensed the platform for clinical development to the University of Copenhagen and the Jenner Institute of the University of Oxford, among others.



# +100

**Since its foundation in 2010, the Company has worked with more than 100 clients and partners**



### Academics

- Boston Children's Hospital
- Cancer Research, UK
- Harvard Medical School
- Imperial College London
- The Jenner Institute
- Sir William Dunn School of Pathology
- Statens Serum Institute
- Technical University of Denmark (DTU)
- University of Copenhagen
- Department of Biochemistry, University of Oxford



### Big Pharma

- Eli Lilly
- Janssen, Pharmaceutical companies of Johnson & Johnson
- Novartis
- Roche
- Servier



### Small and medium-sized enterprises, contract manufacturing organizations, diagnostics and retailers

- AGC Biologics
- Genlbet Biopharmaceuticals
- Idorsia
- Integrated biotherapeutics
- Intravacc
- Virion\Serion; SERION Diagnostics

## CASE

# Expres<sup>2</sup>ion's continued role in the development of the Danish COVID vaccine

In 2021, Bavarian Nordic completed the ABNCoV2 COVID-19 vaccine's clinical Phase II trials with strong topline results presented in December. The upcoming Phase III study and subsequent development work will be funded with up to DKK 800 million by the Danish Ministry of Health, with Expres<sup>2</sup>ion continuing to be an important partner in this project.



The strong progress for the COVID-19 vaccine program in 2020 and 2021 has once again demonstrated the strength of the Expres<sup>2</sup> platform when it comes to preclinical and clinical protein development and production. When the program continues into Phase III in 2022, and the potential commercialization of the vaccine, new opportunities will arise for Expres<sup>2</sup>ion.

### Continued development of the vaccine

With several COVID-19 mutations discovered since the original outbreak, the fight against the

virus is a constantly evolving battle where the Expres<sup>2</sup> platform has the potential to continue to shine. The platform is perfectly suited for rapidly adjusting the vaccine so that it is optimized for all important COVID-19 mutations, and Expres<sup>2</sup>ion has been in continuous contact with Bavarian Nordic to offer its development services and advice as the program advances.

### Excellent financial potential through the co-ownership in AdaptVac

In addition to using the Expres<sup>2</sup> platform, the COVID-19 vaccine is based on the virus-like

particle (VLP) technology developed by ExpreS<sup>2</sup>ion's associated company AdaptVac. As ExpreS<sup>2</sup>ion owns 34% of AdaptVac, the potential commercialization and sales of the COVID-19 vaccine would be translated into a substantial value increase for this holding.

A potential commercialization of the COVID-19 vaccine would of course also further validate the technology platforms used, and thus increase the interest in the HER2 breast cancer vaccine, which is using the same platforms and is being developed inhouse by ExpreS<sup>2</sup>ion based on an exclusive global license acquired from AdaptVac in February 2021.

### Potential to become a technology partner for a vaccine's volume production

At present, the ExpreS<sup>2</sup> platform is mainly used in the preclinical and clinical development and production of the proteins used in vaccines, as this is what the platform has been optimized for over the years. However, the potential of the platform goes far beyond its current use cases.

To unlock its full potential, ExpreS<sup>2</sup>ion has initiated an ambitious program to further enhance the capabilities of the platform based on the experience gained from development and research projects, as well as skillsets added to the company through recruitments of highly skilled team members in recent years. One of the key objectives of these activities

is to develop the ExpreS<sup>2</sup> platform's yield and robustness so that it becomes an attractive choice also for volume production. This could become an option for current and future vaccines being developed or co-developed by ExpreS<sup>2</sup>ion, including the COVID-19 vaccine.

### Key benefits of the ABNCoV2 COVID-19 vaccine

- Very high immunization response (2-40-fold increase in neutralizing antibodies compared to mRNA vaccines demonstrated in Phase II topline results)
- Excellent safety profile with no serious adverse events reported in Phase I and Phase II studies
- Rapidly upgradable to address new COVID-19 mutations
- Flexible distribution and storage using regular cooling equipment, which is a great advantage in especially the developing regions of the world
- Developed as a global booster vaccine solution, thus suitable also for the endemic phase of the COVID-19 pandemic, which could last for several years or even decades

“As the COVID-19 vaccine program advances into clinical Phase III trials, potentially followed by the commercialization of the vaccine, ExpreS<sup>2</sup>ion continues to be an important service provider with several opportunities to contribute to its success through our current platform and ongoing platform developments, as well as our co-ownership in AdaptVac. In addition to this, the COVID-19 vaccine program will surely continue to highlight ExpreS<sup>2</sup>ion and our position as a world-class player in the development of powerful protein-based vaccines for some of the greatest medical challenges of our time.”



**Max M. Sogaard**

Vice President of Research & Development and Technology

# Corporate matters

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# Management team



**Mette Thorn**  
Vice President of Preclinical  
Development



**Max M. Søgaard**  
Vice President of Research &  
Development and Technology



**Bent U. Frandsen**  
Chief Executive Officer



**Dr. Mattis Flyvholm Ranthe**  
Chief Medical Officer



**Keith Alexander**  
Chief Financial Officer

# Management team



**Bent U. Frandsen**  
Chief Executive Officer  
since 2019

**Education:** Bent U. Frandsen holds a Master's degree in Finance and Strategic Planning from Copenhagen Business School, Denmark.

**Previous assignments/engagements:** Bent U. Frandsen has about 30 years of professional experience in management, finance, and business development positions in multinational companies, including more than 25 years life science experience at public listed companies such as Lundbeck, ALK-Abelló, Coloplast, and private companies such as NsGene, CMC Biologics, and Amphidex. Bent U. Frandsen was a board member in AdaptVac Aps.

**Other material ongoing positions:** CEO of ExpreS<sup>2</sup>ion Biotechnologies ApS.



**Keith Alexander**  
Chief Financial Officer  
since 2020

**Education:** Keith Alexander holds an MBA from The Wharton School of the University of Pennsylvania, and a B.Sc. in Industrial Management, with a minor in Biological Sciences, from Purdue University.

**Previous assignments/engagements:** Keith Alexander has over 20 years of professional experience in investment markets, investor communications, corporate strategy, and business development from American and Danish banks. Over his career, he has served in leadership, analytical and commercial functions at J.P. Morgan Securities and J.P. Morgan Asset Management in NY, the US, Danske Bank Asset Management (formerly Danske Capital) in Kongens Lyngby, Denmark and Accenture (formerly Andersen Consulting) in Chicago, IL, the US.



**Max M. Sogaard**  
Vice President of Research &  
Development and Technology  
since 2021

**Education:** Max M. Sogaard holds a PhD in Biochemistry from University College London, UK, and a MSc in Molecular Biology from Aarhus University, Denmark.

**Previous assignments/engagements:** Max M. Sogaard has 20 years of scientific research and process development experience, having served the last eight years at ExpreS<sup>2</sup>ion in roles ranging from Senior Scientist (Downstream) to Vice President, and prior to that 12 years of academic research focused on structural biology and molecular biophysics with an emphasis on infectious disease applications. Max heads internal R&D in order to extend ExpreS<sup>2</sup>ion's capabilities and know-how in applying ExpreS<sup>2</sup>™ technology for customers and the company's own vaccine development.

**Mette Thorn**

Vice President of Preclinical Development since 2021

**Education:** Mette Thorn holds a PhD in Immunology and a MSc in Chemical Engineering from the Technical University of Denmark.

**Previous assignments/engagements:** Mette Thorn has 20 years of preclinical development and management experience in vaccine development within cancer and infectious diseases, amongst other fields. Mette Thorn has extensive research science experience from Biotech and Pharma, including from roles with Astion Pharma, the SSI, Symphogen, Novo Nordisk, Bioneer, Biocare, and CBio. In all of her roles she has been instrumental in progressing preclinical pipeline assets from early stage research into clinical development phases. Mette Thorn was previously CSO for Biocare Copenhagen and Associate Manager of Novo Nordisk Pharmatech.

**Other material ongoing positions:** Owner of STABIL solutions.

**Dr. Mattis Flyvholm Ranthe**

Chief Medical Officer since 2022

**Education:** Dr. Mattis F. Ranthe holds a Doctor of Medicine and a PhD in cardiovascular epidemiology from the University of Copenhagen Denmark.

**Previous assignments/engagements:** Dr. Mattis F. Ranthe has extensive experience with drug development from headquarter positions in global pharma, backed up by broad clinical experience. He has in total of more than ten years' combined research experience from academia/pharma, from, among other things, his time as Medical Director at ALK and Senior clinical research & development lead at GSK Vaccines. Dr. Mattis F. Ranthe has experience in drug development from preclinical/FTiH transition, and all the way to approval/LCM.

# Board of directors



**Dr. Martin Roland Jensen**  
Chairman of the Board

**Education:** Dr. Martin Roland Jensen holds a Master of Science, and PhD. Molecular and Cellular biology from University of Copenhagen, Denmark.

**Previous assignments/engagements:** Dr. Martin Roland Jensen has extensive leadership experience from the biopharmaceutical industry and has as serial entrepreneur founded and co-founded several biotech companies. He also has extensive experience with scientific work, mainly in immunology, cell biology and development of cancer vaccines. Dr. Martin Roland Jensen is one of the co-founders of the Company.

**Other material ongoing positions:** Founder and CEO of Medic-Advice ApS and Martin Roland Holding ApS. Co-founder and CBO in Cell2Cure ApS and Unikum Therapeutics ApS.



**Dr. Karin Garre**  
Board Member

**Education:** Karin Garre holds a Doctor of Medicine from Copenhagen University, Denmark.

**Previous assignments/engagements:** Karin Garre has extensive leadership, change management and drug development experience from over 30 year in lifescience, both in the pharmaceutical and biotech industries such as Astra A/S, Novo Nordisk A/S, Nycomed, Genmab and NeuroSearch, where she served in either line or corporate functions. Karin Garre also was Executive Head of Center of Capital Region of Copenhagen.

**Other material ongoing positions:** Senior Vice President, Chief Operating Officer and General Manager of Symphogen A/S. Board member of Cervello A/S.



**Jakob Knudsen**  
Board Member

**Education:** Jakob Knudsen holds a Master of Law from the University of Copenhagen, DK, and an MBA from Imperial College, UK.

**Previous assignments/engagements:** Jakob Knudsen has built up extensive experience in commercial operations, including business development, marketing and finance. He has held various positions at ALK-Abelló A/S, a listed mid-sized biotechnology company in Denmark, where he a.o. headed Corporate Business Development. Furthermore, he has held positions as CCO and CFO at the Danish pharmaceutical company Egalet Ltd.

**Other material ongoing positions:** CEO of ViroGates A/S (Nasdaq First North Growth Market CPH "VIRO") an in-vitro diagnostic commercial company. Board member in P.V. Fonden and Ingeniørssystem A/S.



**Dr. Allan Rosetzky**  
Board Member

**Education:** Dr. Allan Rosetzky holds a Doctor of Medicine from the University of Copenhagen, Denmark.

**Previous assignments/engagements:** Dr. Allan Rosetzky has worked for several years in the Danish healthcare sector. Dr. Rosetzky has also held several international management positions within pharmaceutical development in the Rhône-Poulenc Group. In addition to this, he has founded, developed and run his own company KLIFO, which was involved in international contract research.

**Other material ongoing positions:** CEO of AR CONSULT ApS. Chairman of the Board in Hepoligo Solutions ApS. Board member in AdaptVac ApS and GlyPro Vac ApS.



**Sara Sande**  
Board Member

**Education:** Sara Sande holds a Master of Science in Economics from University of Copenhagen, Denmark.

**Prior positions/experience:** Sara Sande has extensive leadership and top management experience from high-tech B2B companies. Sara Sande was Vice President of Cooper Surgical and Head of Grain & Beverages Sales, Europe of Novozymes.

**Other material ongoing positions:** Member of Vækstfonden Venture Team. Board Member in Hydract. Member in Advisory Board of Flowtale.

# Insider holdings

Name	Title	Shares	Warrants
Martin Roland Jensen	Chairman of the Board	606,392	0
Allan Rosetzsky	Board member	1,312,581	0
Jakob Knudsen	Board member	11,166	0
Karin Garre	Board member	0	0
Sara Sande	Board member	0	0
Bent U. Frandsen	CEO	116,700	464,189
Keith Alexander	CFO	9,894	100,000
Max M. Søgaaard	VP, Research & Development and Technology	27,582	145,849
Mette Thorn	VP, Preclinical Development	0	100,000
Mattis F. Ranthe	CMO	0	100,000

Dr. Jensen and Dr. Rosetzsky own shares directly in their own names as well as through their holding companies, Medic-Advice Holding ApS and AR Consult ApS, respectively.



“As a co-founder of ExpreS<sup>2</sup>ion Biotechnologies, I am proud to be a part of ExpreS<sup>2</sup>ion’s journey into a 28-person company with a robust pipeline and thriving CRO business. My commitment to ExpreS<sup>2</sup>ion is as strong today as it was when we founded the Company over 12 years ago.”

**Dr. Martin Roland Jensen**  
Co-Founder & Chairman of the Board

# The ExpreS<sup>2</sup>ion team



Laura Fabricius  
Andersson



Helle Benthin



Palle Benthin



Mélanie Buffel



Klaas Buijs



Michele Cacciapuoti



Janni Christensen



Stine Clemmensen



Bahram Daneshvar



Tanja Domeyer



Jerzy Dorosz



Dagmara Grzadzela



Kasper Henrik  
Kjærsgård-Jensen



Cecilie Hallwass  
Kofod



Ida Busch Nielsen



Blanka Poulsen



Christina Rasmussen



Malene Rasmussen



Madalena  
Skrzypczak



Vladislav Soroka



Anette Strøbæk



Kiri Thorup-Smith



Sandra Urioste

# Employee focus

ExpreS<sup>2</sup>ion prides itself on having a highly educated and diverse workforce. Sixty percent of our management team and employees have earned advanced degrees in scientific disciplines, including PhDs. Our workforce is diverse across gender, age and nationality.

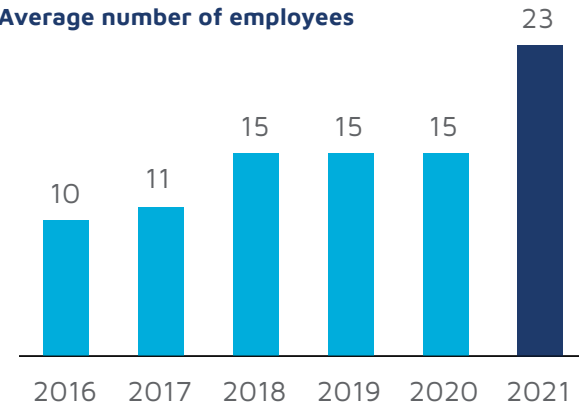
We also pride ourselves in have a “pancake-thin” organization. Experts with decades of experience and students work side by side, benefitting from their different perspectives and experience. Seven of our 28 employees have a PhD, and nine have an MSc.

We strive to maintain an entrepreneurial working culture, in which each individual wears several hats, while adding specialized competencies to support our key strategic objectives. Consequently, in 2021 we hired more specialists to support the execution of the strategy. We are proud to welcome eleven new highly qualified colleagues during the year.

As we grow, we aim to automate administrative tasks to permit our specialists to focus on their roles. Most recently, we have optimized

our HR systems to help us manage our rapid growth by taking our payroll and HR administration system in-house. Furthermore, we have increased our focus on employee well-being by offering a new company contribution to the employee pension plans, which we understand is rare in small biotechnology companies. As a result of our focus on the employee value proposition, employee turnover has remained low. As of April 2022, nine of our twenty employees have been with ExpreS<sup>2</sup>ion five years or longer.

Average number of employees



In 2022, the Company initiated an employer contribution to the pension program



Gender distribution

23 full-time / 5 are part-time

Male:  
36%



Female:  
64%



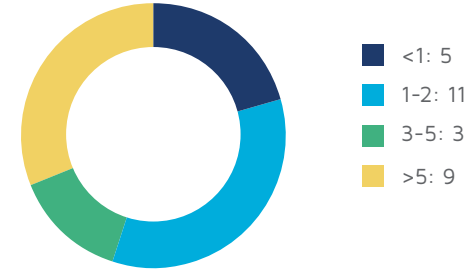


## Country of origin

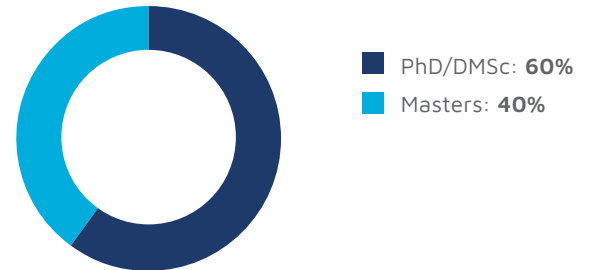


Note: One employee has dual citizenship.

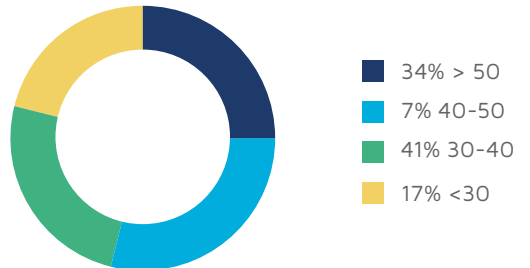
## Years with company



## Management, highest degree achieved



## Age distribution



# ExpreS<sup>2</sup>ion supports Ukrainian relief efforts

With ExpreS<sup>2</sup>ion being a part of the European life science community, as well as having a Ukrainian team member, the company has decided to support relief efforts to Ukrainians through the Danish non-profit Bevar Ukraine organization.

## Team member spotlight: Vladislav Soroka

Vladislav Soroka is a biochemist from Ukraine working on innovative purification methods for ExpreS<sup>2</sup>ion's vaccines. He has also been involved in support efforts for Ukrainians since 2014.

## Can you briefly describe your professional background?

"I earned my degree as a biochemist at a Ukrainian university, and then came to Copenhagen University in Denmark, originally to do a PhD in Structural Biology. After 12-13 years at the University, I worked at Novo Nordisk for three years before returning to the University, and then I joined the ExpreS<sup>2</sup>ion team in 2016."



## Bevar Ukraine key impact figures



# 108 & 2

108 trucks and 2 aircraft with medical and humanitarian cargo have been sent to different corners of Ukraine

# 629.693 kg

the total weight of the cargo sent assistance from Bevar Ukraine

### Can you tell us about the main focus for your role at ExpreS<sup>2</sup>ion?

"I purify proteins for our vaccines using virus-like particles (VLP), and I also analyse protein stability. More specifically, my job is to find new ways to do much more efficient purification while still being compatible with standard industrial settings used during production."

### Which development projects are you currently involved in?

"I am working on our HER2 breast cancer vaccine project, which is ExpreS<sup>2</sup>ion's main focus at this time. The material I am purifying and doing stability tests on goes into the batches used in our animal studies. Previously, I worked on the COVID-19 vaccine project as well."

### Can you describe your work related to relief efforts for Ukrainians?

"I have been involved in getting especially medical supplies to Ukraine since 2014 as a part of the Bevar Ukraine organization. Many Danish volunteers have helped to initiate contacts with hospitals and medical institutions which have donated old medical equipment. We also have a good connection with a warehouse where surplus from hospitals is collected: sanitizers, masks, equipment for surgery, beds, equipment that has been replaced etc."

"My main role over the years has been to load trucks together with my three strong sons



and my wife, along with transporting and also coordinating/communicating as I am fluent in Danish. Since the escalation of the conflict this year, the supportive efforts have also increased, with many people willing to get organized. Our organization also received a lot of donated necessities from my colleagues at ExpreS<sup>2</sup>ion. In addition to my earlier tasks, I have also been giving interviews to Danish media and going to meetings promoting peace in the region."

### ExpreS<sup>2</sup>ion's donation from team members and the company

In March 2022, ExpreS<sup>2</sup>ion decided to initiate a cash donation to the organization Bevar Ukraine. It was decided that the company would match the full amount donated by employees. With 25 team members contributing with a total of 25,000 DKK, the full donation to Bevar Ukraine from ExpreS<sup>2</sup>ion and its team members amounted to 50,000 DKK.



# 255

medical and educational institutions have received assistance from Preserve Ukraine

# 14.058.776

DKK the total value of the aid transferred to Ukraine exceeds 1 889 900 EURO

# Shareholder information

ExpreS<sup>2</sup>ion Biotech Holding AB (company reg. no. 559033-3729) is a Swedish limited liability company listed on the Nasdaq First North Growth Market since 2016.

ExpreS<sup>2</sup>ion Biotechnologies ApS (CVR No. 32 77 04 87) is a Danish operational entity, with offices and labs in the Scion DTU Science park just North of Copenhagen, and is 100% owned by ExpreS<sup>2</sup>ion Biotech Holding AB.

ExpreS<sup>2</sup>ion Biotech is listed on NASDAQ First North Growth Market with ticker symbol EXPRS2.

## Certified Advisor

Svensk Kapitalmarknadsgranskning AB  
 Email: [ca@skmg.se](mailto:ca@skmg.se)  
 Phone: +46 11 32 30 732  
 Web: [www.skmg.se](http://www.skmg.se)

## List of largest shareholders

Name	Number of shares held	Share of votes and capital
Summary shareholders over 5%	0	0.00%
Remaining shareholders (below 5%)	31,153,456	100.00%
<b>Total 31/12/2021</b>	<b>31,153,456</b>	<b>100.00%</b>

## Share price development in 2021



Source: Nasdaq

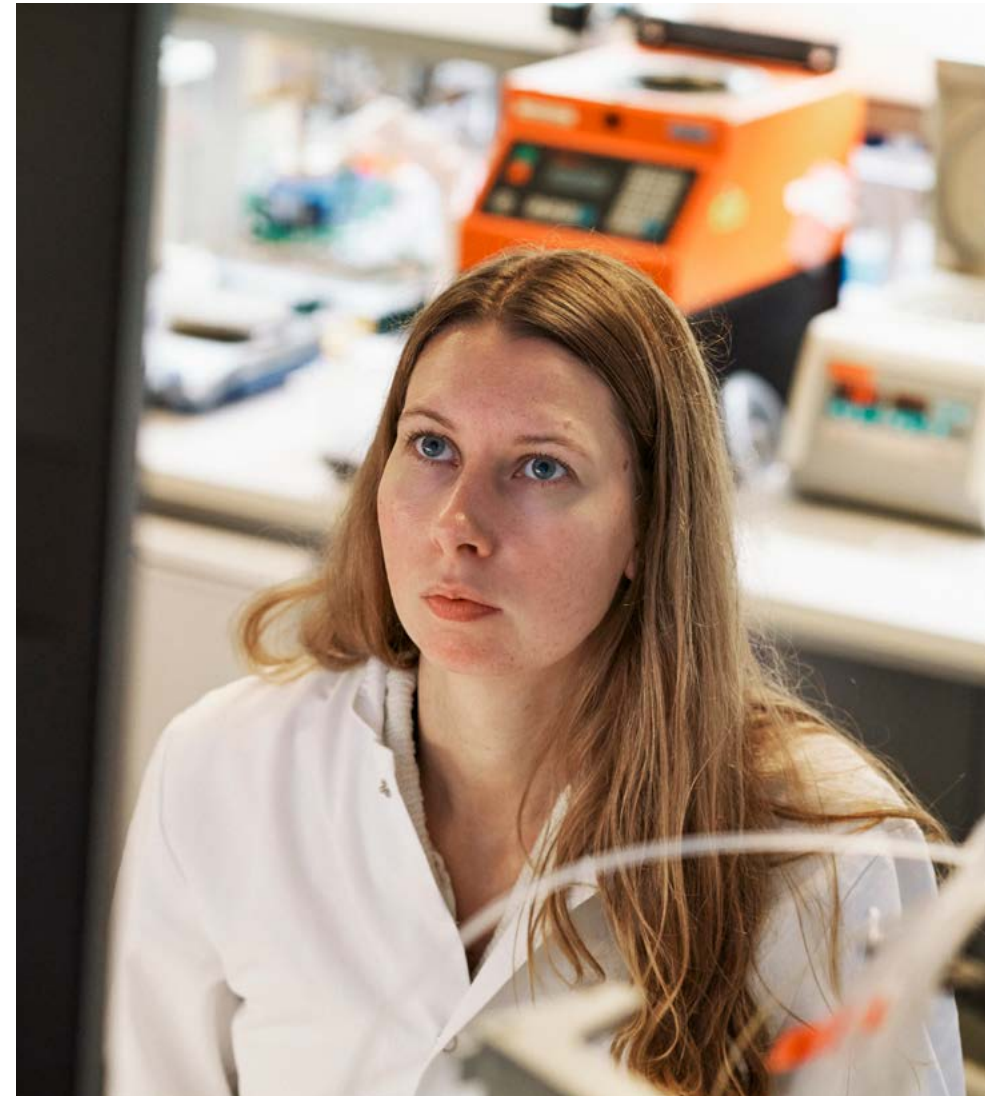
# 120

The Company's shares had the third highest turnover of of 120 health care companies listed on the Nasdaq First North Growth Market in 2021.

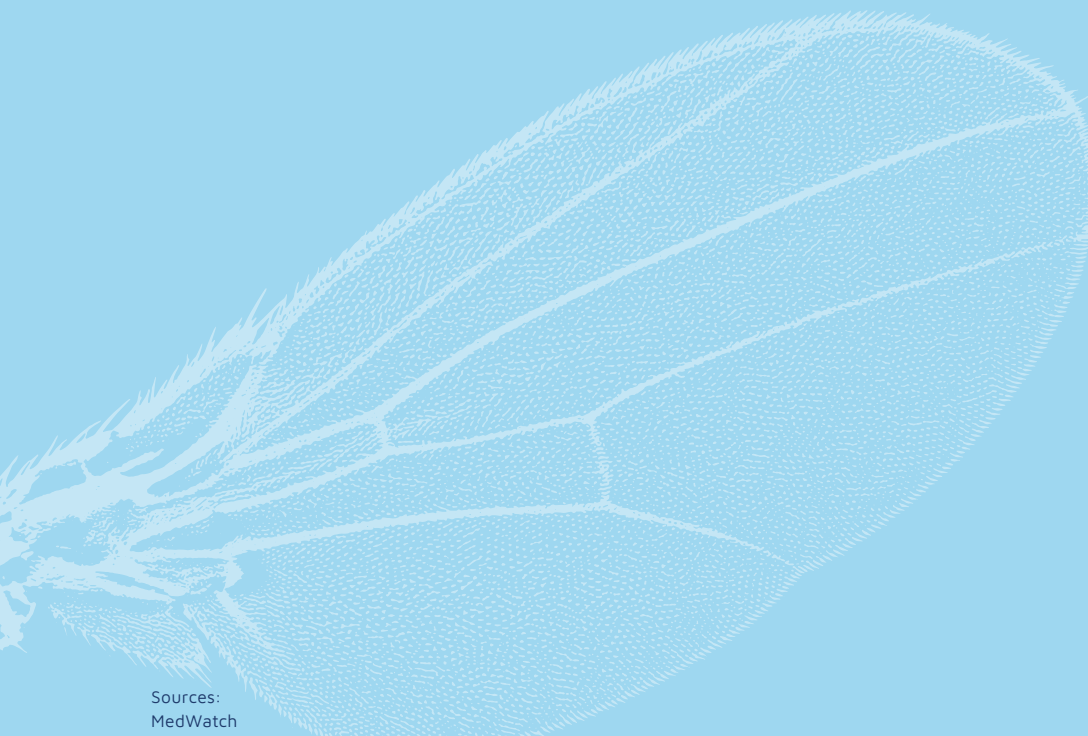
# Warrant programs

As of 31 December 2021, the Company had three series of warrants issued. These series are identified as TO2, TO6 and TO7.

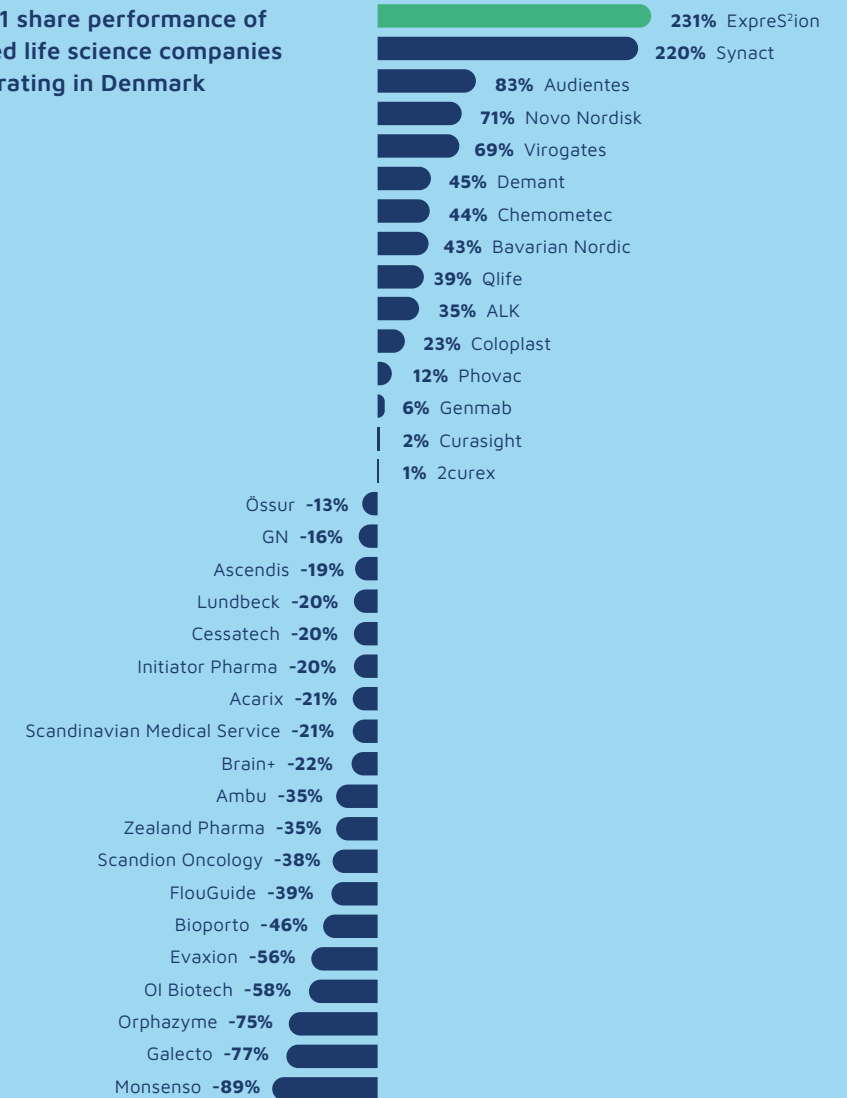
- **TO2** (2019/2022): On 23 May 2019, the Annual General Meeting resolved to implement an incentive program for all employees and issue a maximum of 680,100 warrants, of which 612,084 were subscribed for and allocated to the employees.
- **TO6** (2020/2024): On 23 September 2020, the Extraordinary General Meeting resolved to implement an incentive program for management and key persons and issue a maximum of 1,000,000 warrants. All warrants were subscribed for by the Company's subsidiary ExpreS<sup>2</sup>ion Biotechnologies ApS and 640,000 warrants have subsequently been transferred to selected employees and 360,000 warrants are still held by the subsidiary.
- **TO7** (2021/2024): On May 26, 2021, the Annual General Meeting resolved to implement an incentive program for senior executives, employees and other key persons not included in the TO6 program, and issue a maximum of 1,050,000 warrants, of which 750,000 were subscribed for an allocated to the employees as of the publication of this report. All warrants will be subscribed for by the Company's subsidiary ExpreS<sup>2</sup>ion Biotechnologies ApS.



# ExpreS<sup>2</sup>ion was the top performing listed life science company operating in Denmark in 2021, with a return of +231%



2021 share performance of listed life science companies operating in Denmark

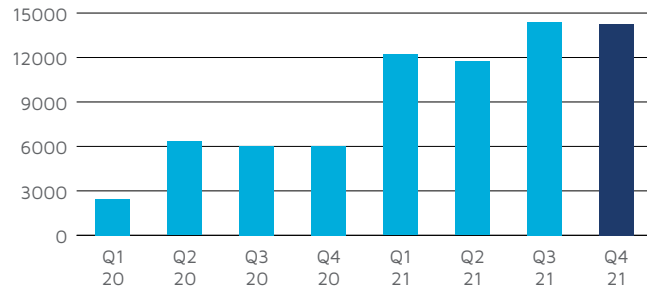


Sources:  
MedWatch

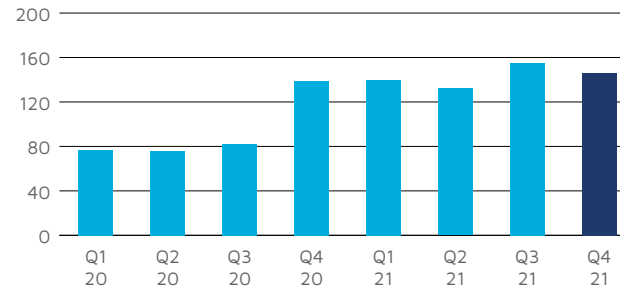
Citation: Hemmingsen, M. (2022) Pipelinenyt sendte to selskaber i udbrud på børsen i 2021 Available from: [https://medwatch.dk/Medicinal\\_\\_\\_Biotek/](https://medwatch.dk/Medicinal___Biotek/)

# Shareholder figures

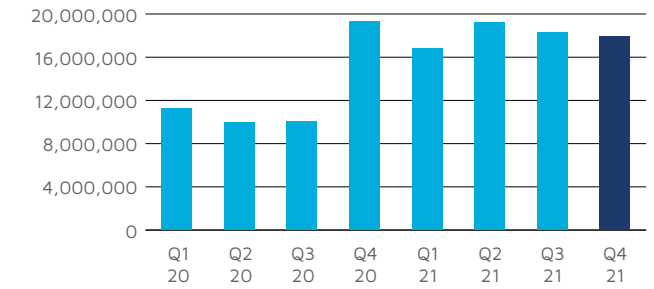
Number of shareholders, by quarter



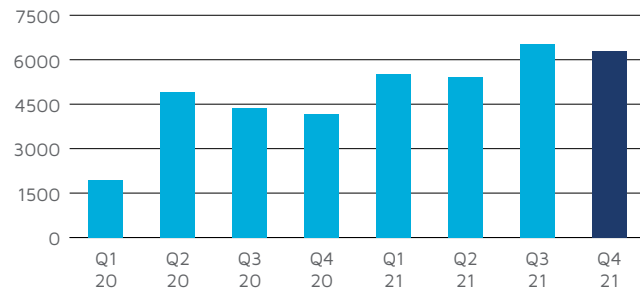
Number of large shareholders (>20,000 shares), by quarter



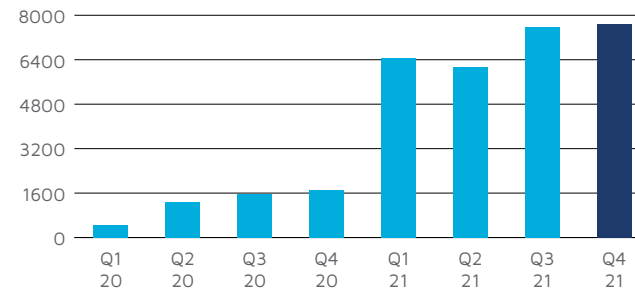
Shares owned by large shareholders (>20,000 shares), by quarter



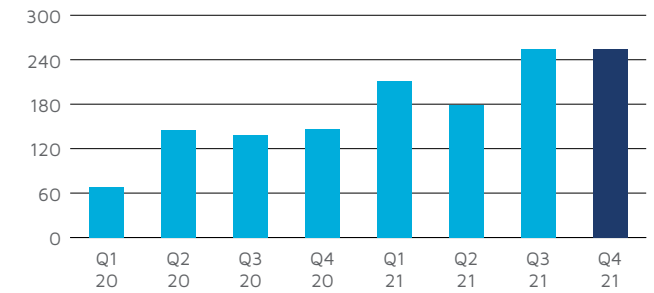
Number of Swedish shareholders, by quarter



Number of Danish shareholders, by quarter



Number of non-Swedish/Danish shareholders, by quarter



# Risk factors

An investment in securities is associated with various risks. This section describes the risk factors and significant circumstances considered to be material to ExpreS<sup>2</sup>ion's business and future development. The risk factors described in this section are limited to such risks which are deemed specific to the Company and/or to the Company's shares and which are deemed material in order for an investor to be able to make a well-informed investment decision.

ExpreS<sup>2</sup>ion has assessed the materiality of the risks based on the likelihood of the risks occurring and the expected extent of their negative effects. The risk factors are presented in a limited number of categories that include risks attributable to ExpreS<sup>2</sup>ion's operations and industry, financial risks, legal and regulatory risks, and risks related to ExpreS<sup>2</sup>ion's shares.

The risk factors presented below are based on the Company's assessment and information available as of the date of the Annual Report. Financial information presented in brackets represents comparative information for the relevant corresponding period of the previous financial year.

## 1

### RISKS RELATED TO THE COMPANY'S OPERATIONS AND INDUSTRY

#### ExpreS<sup>2</sup>ion may never develop a biopharmaceutical product

The Company has developed vaccines, however none of which are yet on market as they are currently under clinical evaluation or preclinical analysis. Furthermore, as of the date of the Annual Report, no drug or vaccine marketed by someone else employs the Company's ExpreS<sup>2</sup> technology or AdaptVac's cVLP technology. However, there are blockbuster VLP / insect cell vaccines on the market, including Gardasil and Cervarix for HPV, and a new vaccine from Novavax for COVID-19. Any new drug or vaccine candidate developed by the Company will need to undergo a number of pre-clinical and clinical trial stages, some of which take several years to complete and may cost tens of millions of SEK. As of the date of the Annual Report, the Company's COVID-19 vaccine (ABNCoV2) has completed clinical phase II and is expected to commence phase III before June 30, 2022, the breast cancer vaccine (ES2B-C001) in preclinical phase, the malaria vaccines RH5 in clinical phase I/IIa and RH5-VLP in preclinical phase, influenza vaccine in preclinical phase as well as three additional malaria vaccines

in preclinical phases. Each stage is unpredictable and there is a high risk of failure, even after initially promising results have been seen. Vaccines have in the past been notorious for their prolonged development times. Therapeutic cancer vaccines, such as the HER2 breast cancer vaccine which the Company has exclusively in-licensed from AdaptVac, have historically shown high failure rates. No active immunotherapy product against HER2 has ever demonstrated proof of concept in human phase II trials. The Company believes there is a medium risk that it may never develop and commercialize a biopharmaceutical product.

#### The Company is highly dependent on its current and future partners

Out-licensing to larger pharma or vaccine companies is an integral part of the Company's strategy. The Company focus on research and early clinical development where it believes it has the technology, competencies and experiences to be competitive, whereas larger scale international multicentre trials, registration, marketing and sales of final drugs and vaccines is clearly outside the Company's scope. As such, the Company will inevitably be dependent on third parties and this dependency is further accentuated by the Company's limited organisation and internal resources. This is for example the case for the COVID-19 vaccine which has been out-licensed to Bavarian Nordic. Once an out-licensing agreement has been made, the Company



generally loses direct control of the further development and eventual marketing of the product. In these instances, the Company will instead rely on the terms of the out-licensing agreement regarding development which, in various degrees, also may give the Company insights on how development progresses and how to define further development processes. Notwithstanding the foregoing, the Company is in these cases generally dependent on the partner's competence and continued interest in subject matter of the out-licensing agreement. Ambitious development programs are extremely costly, and could amount to several hundred million Swedish krona, which may adversely impact the Company's partners' willingness to seek funding for, and their interests in, certain development programs. Further, if the Company's partners fail to get regulatory approval for the vaccines, or if they are unable to effectively commercialise the vaccines, it will have a direct impact on the Company's future milestone- and royalty streams, which could adversely affect the Company's prospects.

### **The Company aims to develop products for which the competition is intense**

The industry in which the Company operates is competitive, subject to rapid change and highly sensitive to the introduction of new products or other market activities of industry participants. The Company's competitors are companies with substantially greater financial,

technical and marketing resources, and they may succeed in discovering, developing, receiving approval for and/or commercializing products that could render Expres<sup>2</sup>ion's products non-competitive and/or limit their potential. Even if competitors' products, in a clinical sense, may not be superior to those of the Company, the competitors may have greater resources and better established contacts with relevant parties on the market (Key Opinion Leaders, etc.), which could lead to that the competitors' products are shown greater interest from relevant market participants and decision makers. In relation to COVID-19 vaccines, there are to the Company's knowledge for example over a hundred COVID-19 vaccines in development, many of which already commercialized. Several of these vaccines are being developed by significantly larger companies and/or enjoy government support far exceeding that which has been bestowed to the PREVENT-consortium in which the Company and AdaptVac are members. However, the risk that the approval of competing or complementary vaccines would impact Bavarian Nordic's plan to develop the COVID-19 vaccine is by the Company considered low. If the Company is able to successfully develop a HER2 breast cancer vaccine, the Company and its potential future partner would enter a market currently dominated by global pharmaceutical companies Roche and Genentech. The breast cancer vaccine must demonstrate that it is safe and

at least as clinically effective as the therapies currently available. This includes not just other immunotherapies but also conventional breast cancer drugs such as well-known hormone and chemotherapy drugs. The Company believes that the risk that the HER2 breast cancer vaccine will turn out not to be able to demonstrate superior clinical efficacy in clinical trials is medium-to-high. If so, the entire investment in the program of several tens of million SEK could be lost, which would adversely affect the Company's financial value and prospects.

### **Obstacles in obtaining registration and licensing at agencies and/or governmental authorities**

Authorization must be obtained in order to market and sell pharmaceuticals and diagnostics and registration takes place at the appropriate agency or governmental authority in the respective market, such as the Food and Drug Administration (FDA) in the United States and the European Medicines Agency (EMA) in Europe. Should the Company, directly or through collaboration partners, fail in obtaining the required authorisations and registration from such agencies or governmental authorities, the Company's ability to generate revenues may be significantly impeded. The cost and workload for the Company associated with obtaining clearance/approval from agencies and governmental authorities will depend of the type

of clearance/approval sought, including the laws of the country in which such clearance is sought. Should the aforementioned events materialize, it could have a material adverse effect on the Company's financial position and prospects.

### **Clinical trials may prove to be unsuccessful**

While the Company, through Bavarian Nordic's exclusive license to and sponsorship of development of ABNCoV2, is on the brink of initiating a regulatory validated Phase III trial and thus increasing further the likelihood of approval for the COVID-19 vaccine, the clinical development process is inherently uncertain. The Company cannot assure that clinical trials produce the data required to support approval or that the candidate drugs developed with Expres<sup>2</sup>ion's platform technology results in a commercially viable product. For the financial year 2021, the Company's total R&D expenses amounted to SEK 9.8 million. Should clinical trials prove to be unsuccessful, it may lead to possible regulatory approvals awarding labelling that includes distribution restrictions and/or be subject to post-marketing testing requirements. Unsuccessful clinical trials may also affect market acceptance and the possibility of successful commercialization and thus the Company's earnings and sales volumes. There is a risk, the likelihood of which is considered uncertain, that time and capital invested in research projects may not yield

corresponding benefits to the Company, which could effect on the Company's prospects. If any of the above risks were to materialize, it would have a material adverse effect on the Company's financial position and results.

### The Company is exposed to risks related to its premises

The Company depends on being able to carry out tests and research in its premises and needs continuous access to the laboratories housed therein. As of the date of the Annual Report, the Company runs its operation activities in 300 sqm. office premises and 715 sqm. laboratories and depots, which are all located in the DTU Science Park in Hørsholm, Denmark, 20 km North of the capital Copenhagen, respectively. Further, the Company has partnerships where the Company's partners carries out the research activities in its premises, e.g. University of Bologna with the functional preclinical studies, and Charles River Laboratories with the safety preclinical studies. The Company is therefore exposed to the risk that its, or its partners', premises may be damaged to the extent that certain studies and/or laboratories cannot be carried out/used. Depending on the type of damage, access to such premises could for a long period of time be limited, and could occur due to, for example, fires, explosions, natural disasters or sabotages. In addition, pandemics, such as the COVID-19 pandemic, may result in these premises/laboratories being shut

down due to staff illness or other restrictions imposed by authorities. As of the date of the Annual Report, no such shutdowns have been forced due to the COVID-19 pandemic, but it cannot be excluded that this will not happen in the future. Any disruption or other unanticipated events affecting ExpreS<sup>2</sup>ion's or its partners' premises/laboratories, and therefore the Company's operations, would adversely affect the Company's operations, results and the timing of ongoing studies.

### Dependence on key employees

As of the date of this Annual Report, ExpreS<sup>2</sup>ion employs 30 people, the majority of which works in R&D and of which nine hold PhD degrees. Most biotech companies rely on attracting and retaining key employees, but a Company as small as ExpreS<sup>2</sup>ion becomes even more dependent on its employees. The work in which the Company is predominantly involved (protein expression) requires a unique combination of scientific insight and hands-on experience in a lab environment, which can be difficult and time-consuming to replace should the Company lose one or more of its key scientists or lab technicians. The Company must be successful in attracting and retaining qualified scientific and clinical personnel. Also, the COVID-19 pandemic may affect the availability of competent personnel. In the first quarter of 2022, the Company experienced some sickness among its personnel, which however did not materially affect the ability to progress



the work flow. Nevertheless, this is out of the Company's control if this would happen again, due to the COVID-19 pandemic or other outbreaks of illness within the Company. The loss of management members or other key personnel could have an adverse effect on the Company's ability to conduct and improve its business and operations.

### Profitability of the Company and its ability to manage growth

The Company has generated losses since its formation 2015. For the financial year 2021, the Company's recorded a net loss of SEK 43.9 million. These losses mainly arose as a result of expenses for research and development activities related to the Company's

studies and related personnel costs, a material portion of which was non-cash incentive-based compensation. The Company recorded expenses in research and development activities in the amount of SEK 9.8 million for the financial year 2021. There is a risk that such research and development do not yield the expected results and there is a risk that the Company will never be profitable, which will likely adversely affect the valuation of the Company and thus also the share price.

Given the Company's current strong focus on research and development activities, the Company may overlook important aspects related to e.g., internal control, human resources, and other internal processes, or preparation of commercialization strategies of its products if and when this becomes relevant. If such processes/strategies are not adequately designed and implemented, are not in place in advance of commercialization activities or expansion, it could adversely affect the Company's operations and its possibilities to successful commercialization. Further, in order to design and implement the aforementioned processes, the Company may need to hire additional employees, which could increase the Company's costs for employees in general.

## 2

### FINANCIAL RISKS

#### Expres<sup>2</sup>ion may not be able to fund its new strategy

Expres<sup>2</sup>ion's business model requires it to increasingly finance own research and early clinical development activities which is very costly. During the financial years 2020 and 2021, the Company generated revenue from its service business and government grants of SEK 15.3 million and SEK 13.7 million, respectively, but these revenue sources were not, and will in all likelihood in the future not be, sufficient to cover the Company's expanding activities, particularly not those related to clinical development as envisioned for the HER2 breast cancer vaccine.

The Company's annual burn rate – the yearly amount of cash needed to operate the Company's business model – is expected to increase over the coming years, both as a result of the anticipated progress in the Company's pipeline and as a result of an increased number of employees. The Company may have to rely on repeated capital increases until such time where it is able to out-license one or more of its programs to a third party and through such arrangement(s) be able to finance the operations with cash generated by the business.

This will particularly be the case if the COVID-19 vaccine which has been out-licensed to Bavarian Nordic, and for which the Company may in the future receive milestone and royalty payments, fails to show efficacy and receive regulatory approval. If new equity funding is not available when needed, Expres<sup>2</sup>ion could be forced to delay or terminate its product development efforts and in the worst instance the Company could be forced to terminate its entire operations, which could adversely affect the Company's financial position and prospects.

#### The Company may not be able to obtain government grants

Grant funding is a part of Expres<sup>2</sup>ion's business model, where the Company receives various types of research grants and funding for pharmaceutical developments. The Company has in the past been successful in applying for and receiving non-dilutive grant funding, both from the Danish government, the EU and other sources and has been able to finance a significant part of its early exploratory research through such grants. As of the date of the Annual Report, the Company is recipient of combined grants in a variety of international vaccine and immunotherapy research programs. These grants have allowed the Company to participate in research activities it would not otherwise have had the financial means to partake in. The Company's lead program, the COVID-19

vaccine was initially developed on a public grant, and the Company's influenza and malaria activities have likewise been almost entirely funded by such grants. During the financial year 2021, the Company's revenue from government grants amounted to SEK 1.5 million in total, corresponding to 10.9 percent of the total revenue during that period. In addition to funding, public grants have also given the Company access to large international networks of universities and other public or semi-public research institutions. The application process for research grants is labour intensive and time-consuming, and the competition for them is intense. There is no assurance the Company will continue to be successful when applying for grant funding and if it is not, this funding would have to be provided from the Company's equity, which in turn could mean that the Company would have to raise additional cash from its shareholders. Alternatively, the Company would have to scale back on its exploratory and early research, which in turn would adversely impact the Company's ability to add new exploratory vaccine candidates into its pipeline. Failure to obtain government grants will therefore have a material adverse effect on the Company's operations and financial position.

# 3

## LEGAL AND REGULATORY RISKS

### The Company may not control the intellectual property needed to commercialise its products

The Company is the sole owner of the ExpreS<sup>2</sup> and the GlycoX-S2<sup>TM</sup> technology platforms. However, the cVLP platform is owned by AdaptVac, an entity in which the Company owns 34 percent of the shares and votes. The Company can therefore exert limited control as AdaptVac is a joint venture with NextGen Vaccines, a company spun out from the University of Copenhagen's Institute of Immunology and Molecular Biology. Furthermore, the Company participates in research consortia where other parties also contribute intellectual property, for instance in the form of vaccine adjuvants which become an integral part of the product. In general, ExpreS<sup>2</sup>ion will always seek to enter written agreements with such collaborators about the ownership of intellectual property arising from the collaborations. For example, in February 2021 the Company entered into a patent license agreement with AdapVac providing the Company with the option to exercise the right to exclusively in-license ES2B-C001, a preclinical-stage breast cancer vaccine candidate. However, such agreements may provide that the parties at a later

stage negotiate the commercial rights to joint inventions or inventions made by individual collaborators arising from the collaboration. Such negotiations may not be successful. In other instances, the consortium agreements (which are often based on templates provided by the grant authority) may be inadequate to clearly resolve the intellectual property arising from the collaboration. These uncertainties can make the commercial potential of the Company's early research and development activities difficult to evaluate and may lead to some of them having limited commercial potential for the Company. Should the intellectual property rights around a particular vaccine or immunotherapy candidate be unclear, the Company's ability to find a development partner for such a product could be seriously adversely affected, which could have a material adverse effect on the Company's operations and prospects. Moreover, if the Company would become involved in a dispute over the rights to certain intellectual property, this could adversely affect various stakeholders' (partners, governments, banks etc.) view of the Company and its prospects, including the perceived value of the Company among capital markets participants.

### ExpreS<sup>2</sup>ion collects, stores and processes sensitive personal data

As part of the ExpreS<sup>2</sup>ion's business, the Company collects, stores and processes personal data relating to employees and

customers and patients (e.g. before conducting a study and during the study). Health-related information is typically of a very sensitive nature as it could pertain to sensitive health information on the persons participating in the Company's studies. There is a risk that the Company's precautions to protect patient data in accordance with the privacy requirements under applicable laws may prove to be ineffective or insufficient. There is a risk that such data may be transferred, moved, inappropriately shared, or leaked as a result of human error or technological failure or otherwise be used inappropriately. Violation of data protection laws, either from the Company, its partners, employees or suppliers, may result in high penalty fines for the Company.

According to Regulation (EU) 2016/679 ("GDPR"), incidents may result in the imposition of fines amounting up to EUR 20 million or up to 4 percent of ExpreS<sup>2</sup>ion's total worldwide annual turnover for the preceding financial year (in relation to an incident), whichever is higher, for each case of non-compliance with the GDPR. Additional penalties may also apply, such as the deprivation of profits. In addition, non-compliance with GDPR or other applicable data protection laws regulations in other jurisdictions may in addition lead to reputational harm and customer losses and which could have a material adverse effect on the Company's operations, liquidity, financial position and results.

### The Company may not have Freedom to Operate and may have to obtain licenses from third parties

Even if ExpreS<sup>2</sup>ion obtains patents covering its product candidates or compositions, it may still be barred from commercialising its product candidates or technologies because of the patent rights of others. Extensive Freedom to Operate searches are expensive and provide no guarantees and as of the date of the Annual Report, the Company has never carried one out. Others may already have filed patent applications covering compositions or products that are similar or identical to ExpreS<sup>2</sup>ion's or dominate the Company's patents. Furthermore, the Company may find that others have patented the molecular targets or pathways the Company means to address with its technologies. If so, the Company may be barred from commercial exploitation or may have to pay a royalty to do so. There is a risk that the Company may not have Freedom to Operate in all its programs and that it may have to obtain licenses from third parties, which could have a material adverse effect on the Company's operations.

### Inadequate protection of intellectual property rights

ExpreS<sup>2</sup>ion has several patent applications that are pending for which the outcome is uncertain. Also AdaptVac, whose cVLP technology is instrumental in the ABNCov2 and ES2B-C001 vaccine candidates, has several



patent applications pending. The Company's patents covering new technologies on the glycosylation of protein antigens (essentially the HighMan<sup>TM</sup> and GlycoX-S2<sup>TM</sup> technologies) were submitted on 10 January 2020. The European patent for the cVLP technology resides in AdaptVac and is significant for the Company's two key programs, the COVID-19 vaccine and the HER2 breast cancer vaccine. The Company and AdaptVac may in the future have to limit the claims in patents or may not be able to achieve patenting at all. If so, the Company may have to rely on other protections, such as the patents covering vaccine antigens expressed with the ExpreS<sup>2</sup> platform, trade secrets and others. Obtaining strong patent protection is important, particularly for a small Company like ExpreS<sup>2</sup>ion which has limited resources in case of a patent dispute. If the Company fails to obtain patents or if the Company is granted patents with significantly reduced claims, it may be possible for other companies to develop and commercialise similar products in competition with ExpreS<sup>2</sup>ion and its partners, which could adversely affect the Company's operations, financial position and prospects.

#### Risks relating to potential product liability claims

Considering that ExpreS<sup>2</sup>ion operates in the pharmaceutical industry, the Company is exposed to product liability risks which may arise e.g., during clinical trials. For instance,

patients participating in clinical studies may suffer unwanted side effects or be harmed in other ways. Furthermore, there is a risk that the Company may not be able to accurately predict the possible side effects. The Company faces the risk of substantial liability for damages if its products or products candidates were to cause damages to patients who participate in clinical studies. This risk is also apparent for any approved and launched products. As of the date of the Annual Report, the Company has insurances that it considers to be customary in the industry. However, if the Company is held liable for any incidents, there is a risk that the Company's insurance coverage may not be sufficiently adequate to fully cover legal claims. There is also a risk that the Company fails to obtain or maintain adequate insurance coverage over time and on acceptable terms.

Defending against product liability can be costly and time-consuming, diverting management's focus from its day-to-day tasks. Litigations and claims related to such events could therefore have an adverse effect on ExpreS<sup>2</sup>ion's business, financial position and results. In addition, market acceptance of the Company's products may be adversely affected by product liability disputes and the Company's reputation may be harmed.

## 4

**RISKS RELATED TO THE COMPANY'S SHARES**

**Trading in the Company's shares has been, and may in the future be, inactive and illiquid and the price of the share may be volatile**

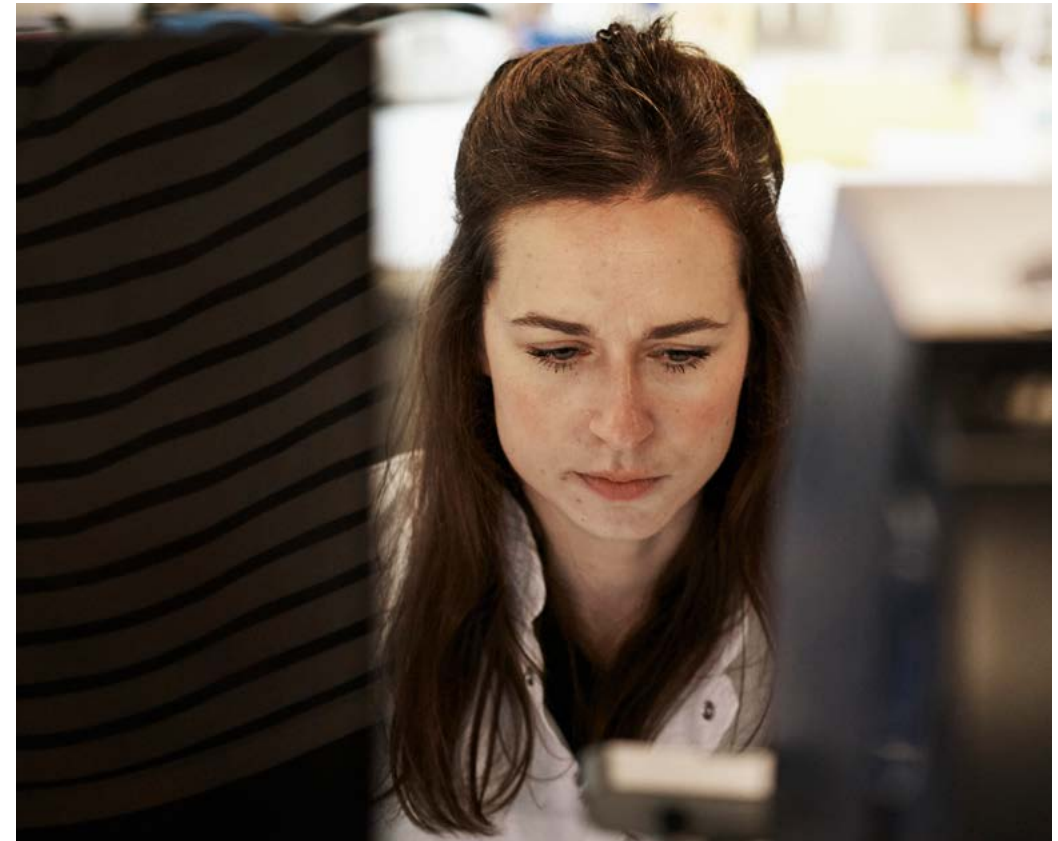
Expres<sup>2</sup>ion's shares are subject to trading on Nasdaq First North Growth Market in Stockholm, which is a multilateral trading facility and growth market for small and medium-sized enterprises. The price at which the shares in Expres<sup>2</sup>ion have been traded has historically been characterized by high volatility. In addition, the turnover in the Company's shares has at times been low. The highest and the lowest price at which the share in Expres<sup>2</sup>ion traded during 2021 were SEK 69.00 and SEK 10.75, respectively. The price for Expres<sup>2</sup>ion's share has thus historically varied. The share has also from time to time been subject to limited trading with low daily turnover and the difference between asking and selling prices can from time to time be big. The liquidity in the Company's share is affected by a number of internal and external factors. The internal factors include quarterly variations. The external factors include general economic conditions, industry factors, and additional external factors such as the outbreak of COVID-19 and Russia's invasion of

Ukraine, which has led to higher volatility in global stock markets and which are not related to the Company's business. There is a risk that investors will lose all or part of their investment. There is also a risk that shareholders will not have the opportunity to sell their holdings at any given time as trading may in the future be subject to inactivity or be illiquid. Furthermore, big differences between bid and ask prices generally mean a higher transaction cost for investors and increase the risk of volatile trading in the Company's share.

**Historically, the Company has not resolved to pay any dividends and there is no intention to pay dividends in the foreseeable future**

The Company has not adopted any dividend policy and has historically not paid any dividends, and does not intend to pay any dividends in the foreseeable future. The Group's profit after tax for the financial year 2021 amounted to SEK -43.9 million. Moreover, it is not certain that the Company's board of directors, even if the Company is stably profitable, will make any proposals for dividends to the shareholders and it is not certain that the shareholders will resolve to pay dividends. Expres<sup>2</sup>ion's ability to pay dividends in the future depends on a number of different factors, such as future income, financial position, cash flows, working capital needs, costs for investments and other factors. Expres<sup>2</sup>ion may lack sufficient distributable funds and the

Company's shareholders may decide not to pay dividends. An investor in the Company's shares must thus be aware that dividends may not be paid at all.



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# Director's Report

## Business model

### Vision and mission of the Company

Expres<sup>2</sup>ion is a biotechnology company that turns complex proteins into tomorrow's vaccines and aims to become a leading player within infectious diseases and cancer. The Company strives to deliver new preventive and therapeutic products that meet some of the gravest global medical needs. The Company aims to achieve this through scientific excellence, a continued focus on academic and industrial collaborations and a profound loyalty to the Company's core skills in protein expression and vaccine development.

### Business model

The Company's business model is first and foremost to develop a unique pipeline of preventive and therapeutic vaccine products. In parallel herewith, the Company generates revenue by providing fee-for-service contract research and products within recombinant protein expression, as well as outlicensing the Expres<sup>2</sup> platform to research institutes and pharmaceutical companies which develop biopharmaceutical drugs and vaccines on their own, or in cooperation with the Company.

The Company also sells Expres<sup>2</sup> test kits and reagents for application as research tools or diagnostics. This model generates short term revenue from the contract research organization (CRO) business, while the pharmaceutical products developed using the Company's technology carry potential future royalties, license fees, and milestone payments.

The Company is building its own pipeline of preclinical and later-stage clinical biopharmaceutical drug and vaccine candidates. Expres<sup>2</sup>ion will carry out its own initial research, preclinical and early clinical development work (proof-of-concept) prior to out-licensing. The agreement with Bavarian Nordic in 2020, under which Bavarian Nordic assumes all future development costs for the COVID-19 vaccine program and pay certain milestones and royalties, subject to external funding, is according to the Company the first example of validated ability to develop new preventive and therapeutic products that meet some of the gravest medical needs.

The Company believes that the combination of an inhouse pipeline of biopharmaceutical drug and vaccine candidates, while maintaining a revenue generating CRO business, puts the

Company in a good position to balance risk and return and create value for its shareholders.

### Strategy and growth

Expres<sup>2</sup>ion aims to develop the pipeline further by adding additional projects while continuing preclinical and early clinical development work on existing projects. The Company targets human Proof-of-Concept in order to maximize high-value partnerships for further development, but acknowledge that earlier partnering is also an option for progressing pipeline projects. The Company also aims to improve the technology platform further to ensure competitiveness. This is done by improving the Expres<sup>2</sup> system, potentially adding relevant compatible technologies, and continuing to sell licenses for the use of the Expres<sup>2</sup> platform.

See Business model on next page →



## 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



## Contract Research Organization (CRO)

### Independent

Fully-owned development of novel protein therapeutics and vaccines

After human PoC, targeting partner externally for further development

### Collaboration

Partner with leading research organizations to source and develop novel programs

Potential to fully acquire programs for independent development

### Services

Early-stage R&D for leading academic, research, and biotech organizations

Protein feasibility, delivery, and transfer to GMP production

### Licensing & Kit Sales

Fully out-license rights to ExpreS2 technology

Sell test kits and reagents for research or diagnostic applications

**Significant upside potential:  
intermediate/long-term**

**Revenue-generating business:  
current and long-term payments**

## The business in brief

### Major changes to the business operations during the year

#### Transition of pipeline focus from ABNCoV2 to ES2B-C001

Following the extremely accelerated development in 2020 of the SARS-CoV-2 protein antigen, which is the active ingredient in the ABNCoV2 COVID-19 vaccine, and the coupling to the VLP developed within our associate company AdaptVac ApS, 2021 started with filing of the clinical trial application (CTA) with the medicinal agency of the Netherlands. The CTA was approved in March, and the clinical Phase I/II safety trial in 45 healthy volunteers began. In August 2021 the first clinical readout was announced, and it was very encouraging, and shortly after, Bavarian Nordic commenced a clinical Phase II trial of the vaccine under their licensing agreement with our associate company AdaptVac ApS. While we continued to support Bavarian Nordic with the scale-up of the vaccine for the Phase II and III trials in 2021 and now in 2022, the overall demand on internal resources for the COVID-19 project is much lower than it was in 2020. Consequently, we have been able to focus much more on the preclinical development of the ES2B-C001 breast vaccine candidate, which we in-licensed from AdaptVac ApS in February 2021. In 2021, we further progressed on the development process, selected a lead candidate for the vaccine and demonstrated preclinical proof-of-concept. In early 2022, we

announced further strong preclinical proof-of-concept data. After receiving constructive feedback from the Danish Medicines Agency (DKMA), we added additional preclinical safety studies to our project plan, and currently aim to initiate the first human clinical trial in 2024.

#### Continued transition to pipeline business

In 2021, the Company continued its transition towards becoming a more pipeline-driven company, diverting the majority of its activities to focus on the development of ES2B-C001 and supporting the clinical trials of ABNCoV2. Looking forward, we will continue to focus our efforts on pipeline development, including looking at ways to expand the pipeline, while transforming our CRO business to focus on higher value projects.

#### Warrant subscriptions

In October of 2020, ExpreS<sup>2</sup>ion completed a Rights Issue of shares and warrants which raised SEK 131 million before deduction of costs related to the offering. As part of the Rights Issue, participating investors were issued warrants in the TO4 and TO5 warrant series, both of which had subscription periods in 2021. In the first warrant subscription period for the TO4 warrant series, which was from April 12-26, 2021, the company raised SEK 39.0 million before transaction costs in a subscription which was 97.6% subscribed. In the second warrant subscription period for the TO5 warrant series, which was from September

6-20, 2021, the company raised SEK 44.3 million before transaction costs in a subscription which was 97.4% subscribed.

#### Major external factors that impacted the financial position and results of the year COVID-19

Throughout the COVID-19 pandemic, ExpreS<sup>2</sup>ion has followed the guidelines put in place by the Danish Health Authority. In 2021, COVID-19 related lockdowns in the society continued. At times, ExpreS<sup>2</sup>ion employees worked from home due to exposure to persons who contracted COVID-19. Furthermore, the Company took additional steps to reduce the risk of infection and the related impacts it would have on business activities. These steps included transitioning to virtual-only meetings and isolating specific employees' work activities to reduce the risk of project delays or cancellations. As a result of these measures, it was not until the end of December 2021 that the first employee contracted COVID-19.

In the first two months of 2022, because of the relaxing COVID-19 related restrictions by the Danish Health Authority combined with the rapidly spreading Omicron variant, employees and the Company finally felt the impact of COVID-19 acutely. From December 1, 2021 to March 10, 2022, employees had a total of 51 COVID-19 related sick days. Despite the significant impact of their absence, the Company was able to

keep the pipeline and client projects on track due to the considerable efforts of all employees. We believe this is a testament to the resilience of our employees and organization setup.

#### The SEK/DKK exchange rate

The Company is listed in Sweden and reports in SEK. Operations are based in Denmark and many suppliers are in the Eurozone, thus most costs are incurred in EUR or DKK, which is closely pegged to the EUR. The Company aims to have a majority of its cash and equivalents DKK-denominated to reduce currency risk. If our cash and equivalents are not DKK-denominated, exchange rate fluctuations between SEK and DKK would have a much greater impact on the Company's cash runway. The disadvantage of converting the majority of cash to DKK is that since the company reports in SEK our financials will exhibit a greater level of currency-related volatility. Another major risk related to currency is that a weaker SEK related to DKK / EUR reduces the amount of capital we can raise in the currency we used to drive our operations.

In 2021, the Company made two significant currency conversions related to the warrant subscriptions. We made the first conversion on July 7, 2021, when the SEK/DKK exchange rate was 0.7329. We made the second conversion on November 3, 2021, when the SEK/DKK exchange rate was 0.7503. The latter conversion occurred at nearly the most



**Keith Alexander,**  
Chief Financial Officer

**Bent U. Frandsen,**  
Chief Executive Officer

advantageous exchange level since February 2018.

In early 2022, the SEK fell versus the DKK because of differences in expectations for monetary policy in Sweden versus the rest of Europe and the Russian invasion of Ukraine which resulted in investors moving from SEK into “safer” currencies including the USD, EUR, and JPY.

#### **Inflation**

In 2021, prices and wages started to rise in Denmark, Europe and more broadly, resulting in higher price levels for materials used in our R&D processes as well as higher labour prices. Management and the Board monitor price and wage levels to forecast more accurately to reduce the risk of actual costs exceeding our budget and ensure that employees are competitively compensated.

#### **Cash and the Danish tax authority's payout limit**

On May 7, 2020, the Danish tax authority (SKAT) increased the payout limit for SKAT accounts to DKK 100 billion due to the extraordinary COVID-19 situation. On February 1, 2022, this limit changed to DKK 350 million. SKAT allows companies to store up to that limit in their SKAT account where the balance does not incur negative interest. After consultation with SKAT, the Company's bank and the Company's advisors, ExpreS<sup>2</sup>ion decided

to store a portion of its cash in its SKAT account, thereby significantly reducing interest expense. At the end of 2021, the Company had SEK 101.8 million in its SKAT account. Each month the company considers its cash need in the coming months and adjusts the payout limit. Any amount in the account beyond the limit is transferred to the Company's bank account in less than two weeks. The balance with SKAT is recorded within the Company's other short-term investments.

At the end of 2021, the Company had SEK 101.8 million in its SKAT account, shown in other short-term investments. When combined with cash and bank, the company had SEK 138.9 million available to fund operations.

#### **Share-based compensation**

In 2021, the Company incurred significantly greater personnel costs than in previous years, driven primarily by higher share-based compensation costs. Share-based compensation charges reflect the fair value of vesting warrants, which we calculate on a graded basis. The primary driver of the increase in 2021 is a higher share price which has resulted in higher fair values for our two most recent employee warrant programs, the TO6 and TO7 series, than our earlier programs.

These charges have an impact on the Company's profit or loss for the year, but no impact on cash. This is because there is an offsetting entry on

the cash flow statement in the line "adjustments for items not included in the cash flow."

### Grant adjustment

In Q3 2021, the Company reversed SEK 7.1 million in grant income realized in 2020 related to the EU Horizon 2020 grant for the COVID-19 Coronavirus (SARS-CoV2) vaccine development programme. The portion of the grant covered a cost passed through by ExpreS<sup>2</sup>ion's associated company AdaptVac for the manufacturing of the vaccine for clinical trials, which the grant sponsor has insisted instead be borne by AdaptVac. As a result, ExpreS<sup>2</sup>ion returned the grant income to the grant managers and received an equal reimbursement from AdaptVac.

### Supply chain

Over the last two years, the COVID-19 pandemic has impacted supply chains globally, including the supply of plastics. ExpreS<sup>2</sup>ion consumes a large supply of plastic materials, including flasks, pipettes, and other items, in both our Contract Research and Pipeline businesses. The Company was proactive in pre-ordering materials in 2020 and 2021 to avoid potential disruptions and believe our inventory management approach will prevent disruptions in the future.

### Special circumstances

#### Mix of revenues from grants to CRO

In 2020, COVID-19 resulted in lower Contract Research business activity levels, impacting one of our income streams. We were able to

more than offset the impact through increased grant activities, and as a result were able to grow operating income by 10.4% in 2020. In 2021, this trend reversed as net sales from the CRO business recovered, growing by 133% versus 2020, while other operating income, which primarily reflects grant income, declined by 85% due to the full realization of large COVID-19 grants in 2020. Consequently, operating income fell by 10% in 2021.

### Significant changes to the ownership structure during the year

Throughout 2021, ExpreS<sup>2</sup>ion Biotech Holdings AB remained a publicly traded company listed on the Nasdaq First North exchange. Through the year we saw a significant increase in ownership from investors outside of Sweden, in particular from Denmark. In the first quarter of 2021 there was a significant increase in ownership by Danish investors, coinciding with the heightened profile of the company, particularly in Denmark, arising from the COVID-19 vaccine's development progress.

### Going concern

It is the Management's assessment that the Company has sufficient funds to support its normal operations for 2022 based on the current level of activity.



“ Following a productive 2021, in which the Company's pipeline candidates reached significant milestones, the Company has a strong cash position for the next steps in its key strategic objectives, with a focus on its wholly-owned therapeutic breast cancer vaccine candidate ES2B-C001.”

**Keith Alexander**  
Chief Financial Officer

## Significant events

### Significant events during the first quarter of 2021

- On January 8, ExpreS<sup>2</sup>ion announced that the clinical trial application (CTA) for a clinical Phase I/II study for the ABNCoV2 capsid virus-like particle based COVID-19 vaccine had been submitted to the Central Committee on Research Involving Human Subjects in the Netherlands. The CTA is expected to be approved under a COVID-19 fasttrack review procedure. The CTA submission is in line with the plans to present initial clinical Phase I/IIa results in Q1 2021.
- On January 11, ExpreS<sup>2</sup>ion announced that it is reorganizing the Company's top management to reflect its increased strategic focus on pipeline development. Several appointments within research and development will ensure the advancement of ExpreS<sup>2</sup>ion's development projects towards clinical investigations, with the first fully controlled project being the unique Her2-cVLP breast cancer project. This project will be in-licensed from ExpreS<sup>2</sup>ion's joint venture AdaptVac ApS and developed under its new designated project code name ES2B-C001.
- On January 12, ExpreS<sup>2</sup>ion announced the publication of strong virus neutralization properties in animal proof-of-concept data for

ABNCoV2, a unique capsid virus like particle based COVID-19 vaccine coated with ExpreS<sup>2</sup>-made SARS-CoV-2 antigens, in the esteemed scientific journal Nature Communications. The ABNCoV2 COVID-19 vaccine is the result of a strong collaboration effort by ExpreS<sup>2</sup>ion and its joint venture partner AdaptVac ApS together with the PREVENT-nCoV consortium, with an exclusive global license granted to Bavarian Nordic A/S.

- On February 2, ExpreS<sup>2</sup>ion announced that the Company exercised its option to license a unique breast cancer vaccine by signing a final Patent License Agreement with AdaptVac ApS. ExpreS<sup>2</sup>ion was granted an exclusive global license to a preclinical-stage novel HER2-cVLP breast cancer vaccine programme. Supported by the proceeds from the recent right issue, ExpreS<sup>2</sup>ion plans to develop the first vaccine candidate, that will be designated ES2B-C001, to human clinical studies. According to the Agreement, ExpreS<sup>2</sup>ion pays an upfront fee of DKK 2.5 million (approx. EUR 0.34 million) upon signing, followed by aggregated milestone-based payments of DKK 215 million (approx. EUR 29 million) during development until market approval, and a lower single-digit percentage royalty based on net sales. Furthermore, as a consequence of exercising the option and signing the Agreement, the Shareholder Agreement between ExpreS<sup>2</sup>ion and NextGen Vaccines ApS ("NextGen") is adjusted, with ExpreS<sup>2</sup>ion now owning 34%

of AdaptVac, and NextGen owning 66% of AdaptVac.

- On February 23, ExpreS<sup>2</sup>ion and the University of Bologna announced a research collaboration agreement which covers testing of the novel HER2-cVLP breast cancer vaccine program, including the selected lead candidate ES2BC001, in proprietary state-of-the-art breast cancer mice models. The collaboration follows the recently presented in-licensing of the HER2-cVLP technology from AdaptVac. The outcome of the collaboration is expected to support ExpreS<sup>2</sup>ion's breast cancer vaccine project and will constitute a proof of preclinical concept. The research collaboration is budgeted and planned for within the proceeds from the recent rights issue.
- On February 25, ExpreS<sup>2</sup>ion announced its full-year financial results for 2020 and the fourth quarter of 2020. The report is available on ExpreS<sup>2</sup>ion's website ([www.expres2ionbio.com](http://www.expres2ionbio.com)).
- On March 8, ExpreS<sup>2</sup>ion announced that the clinical trial application (CTA) for a clinical phase I/II study for the ABNCoV2 capsid virus-like particle (cVLP) based COVID-19 vaccine was approved by the Central Committee on Research Involving Human Subjects (CCMO) in the Netherlands. The clinical study then started with the

enrolment of up to 42 study participants to investigate safety and secondary efficacy parameters. First human dosing occurred on March 15, 2021. The CTA approval was in line with the plans to present initial clinical Phase I/IIa results in Q1 2021.

- On March 16, ExpreS<sup>2</sup>ion presented an updated outlook for its pipeline development projects, including the ABNCoV2 COVID-19 vaccine and its ES2B-C001 HER2-cVLP breast cancer vaccine.

### Second quarter of 2021

- On April 12, ExpreS<sup>2</sup>ion announced that the first group of volunteers in the clinical Phase I/II study, COUGH-1, had been satisfactorily administered with the ABNCoV2 capsid virus-like particle (cVLP) based COVID-19 vaccine. The clinical study ran as planned with no untoward safety signal in 18 healthy volunteers.
- On April 21, ExpreS<sup>2</sup>ion announced that its protein production platform ExpreS<sup>2</sup>™ has contributed to a scientific article published in the journal Med. The article highlights the outcome of the VAC063-study, a Phase I/IIa clinical trial to assess the safety, immunogenicity and efficacy of the blood-stage Plasmodium falciparum malaria vaccine candidate RH5.1/AS01B. In conclusion the RH5.1/AS01B vaccine is safe, well tolerated, and immunogenic in healthy adults. A significantly reduced blood-stage parasite growth

rate was observed in vaccinees following controlled human malaria infection, a defining milestone for the blood-stage malaria vaccine field.

- On April 26, ExpreS<sup>2</sup>ion announced that Gitte L. Pedersen would not seek re-election to the Board of Directors at the Annual General Meeting on May 26, 2021, and that two new members, Karin Garre and Sara Sande, were proposed for election. Thus, it was proposed to re-elect Jakob Knudsen, Martin Roland Jensen and Allan Rosetzsky and to elect Karin Garre and Sara Sande as new directors and to re-elect Martin Roland Jensen as chairman of the board.
- On April 28, ExpreS<sup>2</sup>ion announced the outcome of the exercise of warrants of series TO4, which were issued in connection with the Company's rights issue of units in 2020. In total, 5,324,670 warrants of series TO4 were exercised, corresponding to approximately 97.6 percent of the total number of outstanding warrants of series TO4, for subscription of 1,774,890 shares at an exercise price of SEK 22.00 per share. ExpreS<sup>2</sup>ion received approximately SEK 39.0 million before issuing costs through the exercise of the warrants of TO4.
- On May 11, ExpreS<sup>2</sup>ion announced the selection of its lead candidate HER2-cVLP breast cancer vaccine, and that the project runs according to plan.
- On May 26, ExpreS<sup>2</sup>ion held the 2021 Annual General Meeting (AGM), during which resolutions were passed related to the adoption of the income statement and balance sheet, allocation of profit, discharge from liability, election of the Board of Directors, Auditor and remuneration, changes to the articles of association, security issuance authorization, and incentive programs. Due to the corona pandemic, the AGM was carried out through postal voting only, without physical presence.

### Third quarter of 2021

- On July 21, ExpreS<sup>2</sup>ion announced that University of Oxford had initiated the VAC080-study, a Phase Ib clinical trial to assess the safety and immunogenicity of the blood-stage Plasmodium falciparum malaria vaccine candidate RH5.1/Matrix-M in adults and infants living in Tanzania. The RH5.1 blood-stage malaria protein vaccine has previously been administered to 67 healthy UK adults, with various doses, and was found to be safe and well tolerated. The study is estimated to be completed in H2 2023. The primary aim of the new Phase Ib trial is to assess the safety and immunogenicity of the RH5.1/Matrix-M formulation in a malaria-endemic population for the first time.

- On August 9, ExpreS<sup>2</sup>ion announced that COUGH-1, the COVID-19 Phase I/II clinical trial to evaluate the ABNCoV2 vaccine, as headline results met its safety and efficacy endpoints with excellent virus neutralization levels of up to 12 times higher compared to the levels achieved after COVID-19 infection. This was significantly higher than the virus neutralization levels reported for leading mRNA COVID-19 vaccines reaching only up to 4.1 times higher than the levels achieved after COVID-19 infection. High efficacy was reported in all groups receiving ABNCoV2, including the lowest dose ranges and non-adjuvanted formulations. Importantly, high virus neutralization levels were shown also for relevant COVID-19 variants such as the dominant Delta and the escape Beta variant.
- On August 19, ExpreS<sup>2</sup>ion announced its second quarter financial results for 2021.
- On August 23, ExpreS<sup>2</sup>ion announced that a Phase II clinical trial to evaluate the ABNCoV2 capsid virus-like particle (cVLP) based COVID-19 vaccine has been initiated by Bavarian Nordic. The trial will investigate the potential of ABNCoV2 as a booster vaccine for individuals with previous COVID-19 disease or vaccination. Initial trial results are expected in the second half of 2021.
- On September 23, ExpreS<sup>2</sup>ion announced the outcome of the exercise of warrants of series TO5, which were issued in connection with the Company's rights issue of units in 2020. In total, 5,310,795 warrants of series TO5 were exercised, corresponding to approximately 97.4 percent of the total number of outstanding warrants of series TO5, for subscription of 1,770,265 shares at an exercise price of SEK 25.00 per share. ExpreS<sup>2</sup>ion received approximately SEK 44.3 million before issuing costs through the exercise of the warrants of TO5.

### Fourth quarter of 2021

- On November 12, ExpreS<sup>2</sup>ion announced that the remaining virus neutralization data, for the two highest dose ranges of 50 µg and 70 µg, have now been published from the COUGH-1 COVID-19 Phase I/II clinical trial to evaluate the ABNCoV2 vaccine. The headline results met its safety and efficacy endpoints also for these dose ranges, and thus for the study in its entirety.
- On November 15, ExpreS<sup>2</sup>ion announced its third quarter financial results for 2021.
- On December 5, ExpreS<sup>2</sup>ion announced that the ABNCoV2 vaccine demonstrated a strong boosting effect in the clinical Phase II trial conducted by Bavarian Nordic. The existing levels of SARS-CoV-2 neutralizing antibodies increased by 2-40-fold,

depending on the initial levels of antibodies, with no serious adverse events reported. Furthermore, this strong increase was observed to be similar for all variants tested (Wuhan, Alpha, Beta and Delta). The topline results confirm the vaccine's excellent profile as a non-adjuvanted universal COVID-19 booster vaccine.

- On December 21, ExpreS<sup>2</sup>ion announced the appointment of Dr. Mattis F. Ranthe as the Company's new Chief Medical Officer (CMO). Dr. Ranthe brings a decade of broad clinical experience, and he will be responsible for ensuring the progression of ExpreS<sup>2</sup>ion's development pipeline activities, including clinical safety and efficacy trials. Dr. Ranthe will begin his employment on February 1, 2022 at ExpreS<sup>2</sup>ion's headquarters in Hørsholm, Denmark.
- On December 22, ExpreS<sup>2</sup>ion announced that its capsid virus-like particle (cVLP) breast cancer vaccine candidate ES2B-CO01 demonstrated strong tumor-growth inhibiting effect in a mice model, thus reaching an important pre-clinical milestone ahead of schedule. Additionally, anti-HER2 antibodies from these studies were found to effectively inhibit tumor growth in human cancer cells. The therapeutic vaccine is being developed towards first in human clinical trials in 2023.

### Subsequent events

- On January 4, ExpreS<sup>2</sup>ion announced that the capsid virus-like particle (cVLP) HER2-breast cancer vaccine candidate ES2B-CO01 has demonstrated proof-of-concept also in HER2-transgenic preventive as well as therapeutic tumor mice models. The vaccine has thus reached a further important pre-clinical milestone.
- On February 8, ExpreS<sup>2</sup>ion announced constructive feedback from its scientific advice meeting pertaining to the therapeutic breast cancer vaccine candidate, ES2B-CO01, with the Danish Medicines Agency ("DKMA"). Based on this feedback, ExpreS<sup>2</sup>ion plans to conduct an additional preclinical safety study in the first half of 2023, which will increase the robustness of the project's preclinical data. Consequently, the Company is now aiming to file the clinical trial application for the Phase I trial in the second half of 2023, with the aim of dosing first in human in the first half of 2024.
- On February 24, ExpreS<sup>2</sup>ion announced its financial results for the fourth quarter and full-year 2021.
- On February 28, ExpreS<sup>2</sup>ion announced that additional positive results for the ABNCoV2 vaccine, that is being developed as a universal booster vaccine, has been

presented from the Phase II clinical trial conducted by Bavarian Nordic. The full study data confirmed that existing levels of SARS-CoV-2 neutralizing antibodies increased by 2-40-fold, depending on the initial levels of antibodies, with no serious adverse events reported. Based on this excellent outcome, Bavarian Nordic plans to initiate a Phase III study in the first half of 2022.

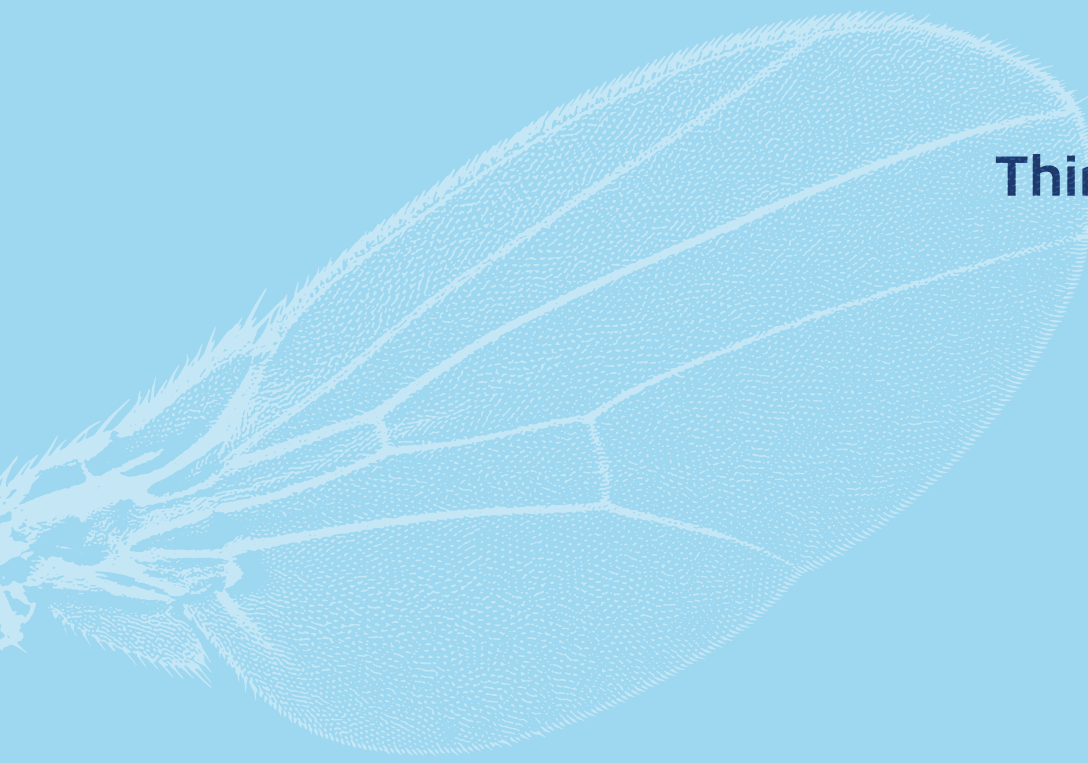
- On April 6, ExpreS<sup>2</sup>ion announced that the Board of Directors of ExpreS<sup>2</sup>ion Biotech Holding AB (publ) ("ExpreS<sup>2</sup>ion" or the "Company"), on the basis of the authorization from the Annual General Meeting on 26 May 2021, resolved to carry out a new share issue with preferential rights for the Company's existing shareholders (the "Rights Issue"). The Rights Issue encompasses 5,841,273 shares at a subscription price of SEK 12.50. The Rights Issue is fully covered by subscription undertakings made by certain existing shareholders and guarantee commitments from existing shareholders and new investors. The Company will upon full subscription of the Rights Issue receive gross proceeds of approximately SEK 73 million. The expected net proceeds from the Rights Issue will be used as to advance the breast cancer vaccine candidate ES2B-CO01 to completion of the preclinical safety studies, advance other pipeline development projects, including

within Influenza and Malaria, and support the strategic CRO business and invest in core technologies and IP to strengthen competitive edge.

- On April 13, ExpreS<sup>2</sup>ion announced that the prospectus related to the Rights Issue announced on April 6 had been published on the Company's website and was available in Swedish and English.

# “Did you know?”

**Third of 120 in 2021 turnover amongst Nasdaq  
First North listed health care companies**





# Key figures

## GROUP

Overview (KSEK)	2021	2020	2019	2018	2017
Operating income	13 730	15 263	13 829	8 868	9 795
Profit/loss after financial items	-47 516	-34 923	-19 641	-18 853	-11 750
Total assets	151 956	118 858	18 707	20 954	17 235
Equity/assets ratio (%)	92,4%	79,5%	-5,8%	39,6%	39,1%
Average number of employees	23	15	15	15	11

## PARENT COMPANY

Overview (KSEK)	2021	2020	2019	2018	2017
Operating Income	368	335	335	335	305
Profit/Loss after financial items	-5 969	-4 897	-2 181	-1 605	-1 710
Total assets	253 066	171 445	49 989	39 193	22 147
Equity/assets ratio	99,4%	98,8%	89,5%	98,6%	99,3%
Average number of employees	0	0	0	0	0

## DISTRIBUTION OF DIVIDENDS

### (Amounts in SEK)

Proposed appropriation of retained earnings	
Retained earnings at the disposal of the Annual General Meeting:	
Share premium fund and retained earnings	254 179 833
Loss for the year	-5 968 505
	<b>248 211 328</b>

The Board proposes that:

The loss for the year is settled against the share premium fund and that the share premium fund is carried forward	248 211 328
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# Income statement – group

KSEK	Note	2021-01-01 - 2021-12-31	2020-01-01 - 2020-12-31
<b>Operating income</b>			
Net sales	3	12 234	5 259
Other operating income	4	1 496	10 004
<b>Total operating income</b>		<b>13 730</b>	<b>15 263</b>
<b>Operating costs</b>			
Raw materials & consumables		-7 513	-6 102
Research & development costs		-9 815	-216
Other external costs	5	-3 516	-21 234
Personnel costs	6	-32 374	-15 990
Depreciation of tangible & intangible fixed assets		-1 809	-2 917
Other operating expenses		-7 099	0
<b>Total operating costs</b>		<b>-62 126</b>	<b>-46 459</b>
<b>Operating profit/loss</b>		<b>-48 396</b>	<b>-31 196</b>
<b>Result from financial investments</b>			
Result in jointly governed companies		0	-194
Result in associated companies		671	0
Other interest income & similar items	7	0	0
Interest expense & similar items	8	209	-3 533
<b>Total result from financial investments</b>		<b>880</b>	<b>-3 727</b>
<b>Profit/loss after financial items</b>		<b>-47 516</b>	<b>-34 923</b>
Income tax on the result for the period	9	3 591	3 210
<b>Profit/loss for the period</b>		<b>-43 925</b>	<b>-31 713</b>

# Balance sheet – group

KSEK	Note	2021-12-31	2020-12-31
<b>Assets</b>			
Concessions, patents, licenses, trademarks and similar intellectual rights	10	3 141	3 907
Goodwill	11	0	194
<b>Total non-current intangible assets</b>		<b>3 141</b>	<b>4 101</b>
Plants and machinery	12	1 209	1 294
<b>Total non-current tangible assets</b>		<b>1 209</b>	<b>1 294</b>
Interest in jointly governed companies	13	0	34
Interest in associated companies	13	23	0
Other long-term receivables	14	1 119	966
<b>Total non-current financial assets</b>		<b>1 142</b>	<b>1 000</b>
<b>Total non-current assets</b>		<b>5 492</b>	<b>6 395</b>
Accounts receivable		1 623	525
Tax receivables		3 470	2 788
Other receivables		2 012	1 791
Prepaid expenses and accrued income	15	479	527
<b>Total receivables</b>		<b>7 584</b>	<b>5 631</b>
Other short-term investments		101 769	0
<b>Total short-term investments</b>		<b>101 769</b>	<b>0</b>
Cash and bank		37 111	106 832
<b>Total current assets</b>		<b>146 464</b>	<b>112 463</b>
<b>TOTAL ASSETS</b>		<b>151 956</b>	<b>118 858</b>

KSEK	Note	2021-12-31	2020-12-31
<b>Equity and liabilities</b>			
Share capital		3 461	3 067
Other capital contributions		266 243	178 042
Other equity including net loss for the period		-129 358	-86 561
<b>Total equity</b>	16	<b>140 347</b>	<b>94 548</b>
Provision for taxes	17	671	827
<b>Total provisions</b>		<b>671</b>	<b>827</b>
Other long-term liabilities	18	3 477	5 272
<b>Total long-term liabilities</b>		<b>3 477</b>	<b>5 272</b>
Liabilities to credit institutions		1 918	1 889
Accounts payable		1 685	2 078
Other liabilities		3 858	14 244
<b>Total short-term liabilities</b>		<b>7 461</b>	<b>18 211</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>151 956</b>	<b>118 858</b>

## Changes in equity – group

KSEK	Share capital	Other capital contributions	Other equity including net profit for the period	Total equity
<b>Opening balance as of 2021-01-01</b>	<b>3 067</b>	<b>178 042</b>	<b>-86 561</b>	<b>94 548</b>
Issuance of new shares	394	82 910		83 304
Payments for warrants				0
Issuing expenses		-6 778		-6 778
Vesting of share-based compensation		11 756		11 756
Exchange difference for the period			1 442	1 442
Profit-loss for the period			-43 925	-43 925
<b>Total equity as of 2021-12-31</b>	<b>3 461</b>	<b>265 931</b>	<b>-129 045</b>	<b>140 347</b>

As of December 31, 2021, the number of shares outstanding was 31 153 456 (27 608 301), with a quota value of SEK 0.1111 per share.

KSEK	Share capital	Other capital contributions	Other equity including net profit for the period	Total equity
<b>Opening balance as of 2020-01-01</b>	<b>1 512</b>	<b>50 100</b>	<b>-52 691</b>	<b>-1 079</b>
Issuance of new shares	1 212	129 715		130 927
Payments for warrants	226	12 030		12 256
Issuing expenses		-22 558		-22 558
Conversion of debt	117	8 471		8 588
Vesting of share-based compensation		284		284
Exchange difference for the period			-2 157	-2 157
Profit-loss for the period			-31 713	-31 713
<b>Total equity as of 2020-12-31</b>	<b>3 067</b>	<b>178 042</b>	<b>-86 561</b>	<b>94 548</b>

## Cash flow statement – group

KSEK	Note	2021-01-01 - 2021-12-31	2020-01-01 - 2020-12-31
Operating profit/loss		-48 396	-31 196
Adjustments for items not included in the cash flow	19	13 486	3 201
Received interest		0	0
Interest paid		-1 194	-3 137
Income tax received		2 795	2 046
<b>Cash flow from operating activities before changes in working capital</b>		<b>-33 309</b>	<b>-29 086</b>
Decrease(+)/increase(-) of current receivables		-1 350	-336
Decrease(+)/increase(-) of current liabilities		-10 988	11 247
<b>Cash flow from operating activities</b>		<b>-45 646</b>	<b>-18 175</b>
Investments in jointly governed companies		0	-194
Investments in associated companies		682	0
Investments in intangible non-current assets		45	0
Investments in tangible non-current assets		-715	-885
Other investing activities		-100 933	0
<b>Cash flow from investing activities</b>		<b>-100 921</b>	<b>-1 079</b>
Leasing agreement		-621	-415
Repayment of loan		-1 361	3 172
Payment for warrants		0	2 656
Issuance of new shares		83 304	140 527
Costs of issuing shares		-6 778	-22 558
<b>Cash flow from financing activities</b>		<b>74 545</b>	<b>123 382</b>
<b>Cash flow for the period</b>		<b>-72 023</b>	<b>104 128</b>
Cash and cash equivalents at the beginning of the period		106 832	5 418
Exchange difference cash and cash equivalents		2 302	-2 714
<b>Cash and cash equivalents at the end of the period</b>		<b>37 111</b>	<b>106 832</b>

## Income statement – parent company

KSEK	Note	2021-01-01 - 2021-12-31	2020-01-01 - 2020-12-31
<b>Operating income</b>			
Net sales	3	368	335
<b>Total operating income</b>		<b>368</b>	<b>335</b>
<b>Operating costs</b>			
Other external costs	5	-4 501	-2 675
Personnel costs	6	-2 670	-363
<b>Total operating costs</b>		<b>-7 171</b>	<b>-3 038</b>
<b>Operating profit/loss</b>		<b>-6 803</b>	<b>-2 703</b>
<b>Result from financial investments</b>			
Other interest income & similar items	7	1 015	390
Interest expense & similar items	8	-181	-2 584
<b>Total result from financial investments</b>		<b>834</b>	<b>-2 194</b>
<b>Profit/loss after financial items</b>		<b>-5 969</b>	<b>-4 897</b>
Income tax on the result for the period	9	0	0
<b>Profit/loss for the period</b>		<b>-5 969</b>	<b>-4 897</b>

## Balance sheet – parent company

KSEK	Note	2021-12-31	2020-12-31
<b>Assets</b>			
Shares in group companies	13	247 563	165 887
<b>Total financial non-current assets</b>		<b>247 563</b>	<b>165 887</b>
<b>Total non-current assets</b>		<b>247 563</b>	<b>165 887</b>
Tax receivables		18	32
Other receivables		179	397
Prepaid expenses and accrued income	15	86	60
<b>Total receivables</b>		<b>283</b>	<b>489</b>
Cash and bank		5 220	5 069
<b>Total current assets</b>		<b>5 503</b>	<b>5 558</b>
<b>TOTAL ASSETS</b>		<b>253 066</b>	<b>171 445</b>

KSEK	Note	2021-12-31	2020-12-31
<b>Equity and liabilities</b>			
Share capital		3 461	3 067
<b>Restricted equity</b>		<b>3 461</b>	<b>3 067</b>
Share premium fund and retained earnings		254 180	171 189
Profit/loss for the period		-5 969	-4 897
<b>Unrestricted equity</b>		<b>248 211</b>	<b>166 292</b>
<b>Total equity</b>		<b>251 672</b>	<b>169 359</b>
Payables to group companies		790	1 801
Other liabilities		604	285
<b>Total short-term liabilities</b>		<b>1 394</b>	<b>2 086</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>253 066</b>	<b>171 445</b>

## Changes in equity – parent company

KSEK	Share capital	Other capital contributions	Other equity including net profit for the period	Total equity
<b>Opening balance as of 2021-01-01</b>	<b>3 067</b>	<b>171 502</b>	<b>-5 210</b>	<b>169 359</b>
Issuance of new shares	394	82 910		83 304
Issuing expenses		-6 778		-6 778
Vesting of share-based compensation		11 756		11 756
Profit-loss for the period			-5 969	-5 969
<b>Total equity as of 2021-12-31</b>	<b>3 461</b>	<b>259 390</b>	<b>-11 179</b>	<b>251 672</b>

As of December 31, 2021, the number of shares outstanding was 31 153 456 (27 608 301), with a quota value of SEK 0.1111 per share.

KSEK	Share capital	Other capital contributions	Other equity including net profit for the period	Total equity
<b>Opening balance as of 2020-01-01</b>	<b>1 512</b>	<b>45 615</b>	<b>-2 368</b>	<b>44 759</b>
Appropriation of retained earnings according to the AGM		-2 055	2 055	0
Issuance of new shares	1 212	129 715		130 927
Payments for warrants	226	12 030		12 256
Issuing expenses		-22 558		-22 558
Conversion of debt	117	8 471		8 588
Vesting of share-based compensation		284		284
Profit-loss for the period			-4 897	-4 897
<b>Total equity as of 2020-12-31</b>	<b>3 067</b>	<b>171 502</b>	<b>-5 210</b>	<b>169 359</b>



# Additional information

## Note 1

### Accounting principles and valuation principles

The Swedish Annual Accounts Act and Swedish Accounting Standards Board's general standard BF- NAR 2012:1 (K3) are applied when preparing the financial statements.

### Reporting currency

The annual accounts are prepared in Swedish krona and the amounts are given in KSEK unless stated otherwise.

### Comparatives

For all written notes following this statement the numbers quoted always relate to the current year with the prior year comparatives provided in brackets, except in cases where it is stated otherwise.

### Consolidated accounts

The consolidated accounts comprise the parent company and the subsidiaries in which the parent company directly or indirectly holds more than 50% of the votes or otherwise has a controlling influence. The consolidated accounts have been prepared in accordance with the acquisition method, which means that equity in the subsidiaries at the acquisition date is eliminated in its entirety. Thus, in the group's equity, only the part of the subsidiaries' equity that has been added after the acquisition is included.

Appropriations and untaxed reserves are divided into equity and deferred tax liabilities. Deferred tax attributable to this year's appropriations is included in the profit for the year. The deferred tax liability has been recognised as a provision, while the remaining part is added to the group's equity. Deferred tax in untaxed reserves has been calculated at 21,4% (21,4%).

If the group's acquisition cost for the shares exceeds the value of the Company's net assets in the acquisition analysis, the difference is reported as consolidated goodwill. This value is amortised over a period of 5 years in the consolidated accounts. The amortisation rate is based on the long-term strategic importance of the acquisition for the group.

### Internal profits within the Group are eliminated in their entirety

When translating foreign subsidiaries, the current method is used. This means that the balance sheets are translated at the closing date's exchange rates and that the income statements are translated at the average exchange rates for the period. The translation differences that arise are reported directly against the group's equity.

### Shares in associated companies and jointly controlled companies

Associated companies are those companies in which the Group has significant but not controlling influence, which usually applies to shareholdings comprising at least 20% of the votes. In jointly controlled companies, the business is jointly conducted by two or more parties. Holdings in associated companies and holdings in jointly controlled companies are reported according to the equity method and are initially valued at cost. The Group's reported value of holdings in associated companies and jointly controlled companies includes goodwill identified at acquisition, net after depreciation and any impairment losses. The Group's share of earnings that arose in the associated company or the jointly controlled company after the acquisition is reported in the income statement. Accumulated changes after the acquisition are reported as changes in the carrying amount of the holding. Unrealized gains on transactions between the Group and its associated companies and between the Group and its jointly controlled companies are eliminated in relation to the Group's holdings in the associated company or the jointly controlled company. When the Group no longer has a significant influence, each remaining holding is revalued to fair value and the change in carrying amount is recognized in the consolidated income statement. The fair value is used as the first reported value and forms the basis for the continued accounting.

### Shares in group companies

Shares in group companies are reported at acquisition cost in the parent company and includes any transaction costs directly attributable to the acquisition of the shares. Issue payments and shareholders' contributions are added to the acquisition cost. Should the recoverable value be lower than the carrying amount, the shares are written down to the recoverable value if the decline in recoverable value can be assumed to be permanent.

### Cash flow statement

The cash flow statement has been prepared in accordance with the indirect method whereby adjustments are made for transactions that do not entail payments in or out. Assets that are classified as cash and cash equivalents are, apart from cash and bank balances, balances on group bank accounts and short-term liquid investments that can be converted to a known amount and that is exposed to an insignificant risk of value fluctuation.

### Valuation principles, etc.

Assets, provisions, and liabilities are recognized at cost unless otherwise stated below.

### Revenue recognition

Revenue from the sale of goods is recognised when the significant risks and rewards of ownership of the goods are transferred to the buyer and when the revenue can be measured reliably. Fixed-price service assignments are recognised as the work is completed. For assignments where the outcome cannot be cal-

# Additional information

culated satisfactorily, revenues corresponding to costs incurred is reported. Expected losses are recognised as soon as they are known. Assignments on a current account are recognised as revenues as the work is performed.

## Tangible and intangible fixed assets

Tangible and intangible fixed assets are reported at acquisition cost less amortisation/depreciation based on an assessment of asset's useful life.

The following depreciation periods apply to both parent and group companies

Concessions, patents, licenses, trademarks and similar intellectual rights	5-13 years
Goodwill	5 years
Equipment	5 years

Goodwill is amortised over 5 years based on the assessment that the acquisition attributable to the asset will generate benefits for at least this time.

## Leasing

Leasing agreements are classified either as finance or operating leases. Finance leases are recognised as such when substantially all financial risks and rewards related to the leased asset have been transferred to the leaseholder. All other leases are operating leases. The group has both finance and operating lease agreements. The fee for operating lease agreements is distributed linearly over the term of the lease. For finance lease agreements, the leased asset is recognized in the balance sheet as a corresponding liability for future leasing fees. Assets held under finance leases are subsequently depreciated as the company's other non-current assets. In the parent company, all leasing agreements are recognized as operating leases, which means that the leasing fee is distributed linearly over the term of the lease.

## Translation of items in foreign currency

At each balance sheet date, monetary items denominated in foreign currencies are translated at the closing date. Non-monetary items, which are valued at historical cost in a foreign currency, are not recalculated. Exchange rate differences are reported in operating income or as financial items based on the underlying business event, in the period they arise, except for hedging transactions that meet the terms of hedge accounting for cash flows or net investments.

## Impairment

Should there be an indication of a decline in the value of an asset, its recovery value is determined. If the asset's book value exceeds the recovery value, the asset is written down to this value. The recoverable value is

defined as the highest of either the fair value less costs to sell or the value in use. The value in use is defined as the risk-adjusted present value of the estimated future net earnings that the asset generates. Impairments are recognised in the income statement.

## Income taxes

Income tax accounting includes current tax and deferred tax. The tax is reported in the income statement, except in cases where it relates to items recognised directly in equity. In such cases, tax is also reported in equity. Deferred tax is reported in accordance with the balance sheet method on all significant temporary differences. A temporary difference exists when the book value of an asset or liability differs from the tax value.

The benefit is comprised primarily of refundable tax credits for costs incurred in connection with research and development activities under the Danish Tax Credit Regime.

Deferred tax is calculated using the tax rate that has been decided or announced at the closing date, which is currently 22% in Denmark and 20,6% in Sweden for the year ended 31 December 2021.

Deferred tax assets are reported to the extent that future tax surpluses are deemed to be available against which the temporary differences can be utilised. The Company does not presently recognise any deferred tax assets

## Provisions

Provisions are recognised when the group has or may be considered to have an obligation as a result of an event occurring and it is likely that payments will be required to fulfil the obligation. A prerequisite is that a reliable estimate of the amount to be paid can be made.

## Share-based payments to employees which are regulated by equity instruments

Share-based incentive plans in which Management and employees can only buy shares in the parent company (equity-based plans) are measured at the equity instruments' fair value at the grant date and recognized in the income statement over the vesting period on a graded basis. The balancing item is recognized directly in equity. The fair value of the equity instruments is determined using the Black & Scholes model.

## Governmental grants

Government grants comprise research funding from various government institutions, including the European Union. The grants received by ExpreS<sup>2</sup>ion provide reimbursement for certain project-specific research and development expenses, including wages and salaries.

## Additional information

Income under these grants is recognized in the Income Statement as Other Operating Income concurrently with the resources spent on the project. The earned income from the grant is recognized under Other Receivables in the Balance sheet, in the case the Company has received lower payment at the balance sheet date compared to the resources spent. In case the Company has received a higher payment at the balance sheet date compared to the resources spent, the amount is recognized in the balance sheet under Other Payables.

All the grants received are subject to repayment clauses upon breach of conditions to maintain the terms under which the grant was awarded. ExpreS<sup>2</sup>ion has complied with, and anticipates continuing to fully comply with, all such terms.

### Note 2

#### Estimates and assessments

Management makes estimates and assumptions about the future. These estimates rarely match the actual outcome. The estimates and assumptions that could lead to the risk of significant adjustments in the reported values of assets and liabilities are mainly valuation of intangible assets and fair value of warrants.

### Note 3. Net sales per geographic market

KSEK	Group		Parent company	
	2021	2020	2021	2020
The Nordics	4 013	799	368	335
Other countries	8 220	4 460	0	0
<b>Total</b>	<b>12 234</b>	<b>5 259</b>	<b>368</b>	<b>335</b>

### Note 4. Other operating income

KSEK	Group		Parent company	
	2021	2020	2021	2020
Grant Income	1 496	10 004	0	0
<b>Total</b>	<b>1 496</b>	<b>10 004</b>	<b>0</b>	<b>0</b>

# Additional information

## Note 5. Remuneration of auditors

KSEK	Group		Parent company	
	2021	2020	2021	2020
<b>Remuneration and reimbursements</b>				
Audit assignment	400	329	195	146
Other audit related fees	0	0	0	0
Other services	0	76	0	76
<b>Total</b>	<b>400</b>	<b>405</b>	<b>195</b>	<b>222</b>

## Note 6. Average number of employees - Parent and subsidiary

	2021		2020	
	Number of employees	Of which men	Number of employees	Of which men
<b>Parent</b>				
Sweden	0	0	0	0
<b>Subsidiary</b>				
Denmark	23	8	15	6
Total subsidiaries	23	8	15	6
<b>Group Total</b>	<b>23</b>	<b>8</b>	<b>15</b>	<b>6</b>

## Average number of employees - Board and management

	2021		2020	
	Women	Men	Women	Men
<b>Board and management</b>				
Board	2	3	1	3
CEO and rest of management	0	1	0	1

# Additional information

## Note 6. Average number of employees - Parent and subsidiary (continued)

### Personnel costs

KSEK	2021			2020		
	Salaries & remunerations	Social expenses	Share based compensation	Salaries & remunerations	Social expenses	Share based compensation
<b>Parent</b>						
Board of Directors and CEO	413	0	520	300	0	26
Other employees	0	0	1 738	0	0	37
<b>Parent</b>	<b>413</b>	<b>0</b>	<b>2 257</b>	<b>300</b>	<b>0</b>	<b>63</b>
<b>Subsidiary</b>						
Board of Directors and CEO	2 119	5	525	1 566	3	44
Other employees	17 932	227	8 896	13 637	200	177
<b>Subsidiary</b>	<b>20 051</b>	<b>232</b>	<b>9 421</b>	<b>15 203</b>	<b>203</b>	<b>221</b>
<b>Group Total</b>	<b>20 464</b>	<b>232</b>	<b>11 678</b>	<b>15 503</b>	<b>203</b>	<b>284</b>

The CEO has a notice period of 3 months in case of his own dismissal. In the event of termination by the Company, a notice period of 10 months applies.

Share based compensation of other employees in the parent company relates to warrant costs for subsidiary employees allocated to the parent company.

## Note 7. Other interest income and similar profit/loss items

KSEK	Group		Parent company	
	2021	2020	2021	2020
Interest income, group companies	0	0	1 015	390
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1 015</b>	<b>390</b>

## Note 8. Interest expense and similar profit/loss items

KSEK	Group		Parent company	
	2021	2020	2021	2020
Interest expense, group companies	0	0	74	5
Interest expense, others	209	3 533	106	2 579
<b>Total</b>	<b>209</b>	<b>3 533</b>	<b>181</b>	<b>2 584</b>

# Additional information

## Note 9. Tax

KSEK	Group		Parent company	
	2021	2020	2021	2020
Current tax	3 422	2 872	0	0
Deferred tax	169	338	0	0
<b>Total</b>	<b>3 591</b>	<b>3 210</b>	<b>0</b>	<b>0</b>
<b>Theoretical Tax</b>				
Pre-tax profit	-47 516	-34 923	-5 969	-5 423
Tax at current rate, 20.6%/22% (21.4%/22%)	9 788	7 474	1 230	1 193
<b>Reconciliation of reported tax</b>				
Effect of foreign tax rate	581	171	0	0
Effect of non-deductible income/costs	-2 137	-208	-1	0
Effect of deductible costs	1 263	0	0	0
Effect of amortisation of group goodwill	-138	-130	0	0
Effect of deductible issue costs directly against equity	1 397	4 827	1 396	4 827
Effect of unrecognised losses carried forward	-7 163	-8 924	-2 625	-6 020
<b>Total</b>	<b>3 591</b>	<b>3 210</b>	<b>0</b>	<b>0</b>

## Note 10. Concessions, patents, licenses, trademarks and similar intellectual rights

KSEK	Group		Parent company	
	2021	2020	2021	2020
Opening cost	10 973	11 359	0	0
Exchange differences for the year	166	-386	0	0
<b>Closing accumulated cost</b>	<b>11 139</b>	<b>10 973</b>	<b>0</b>	<b>0</b>
Opening amortization	-7 066	-5 745	0	0
Amortization for the year	-791	-1 580	0	0
Exchange rate differences for the year	-140	259	0	0
<b>Closing accumulated amortization</b>	<b>-7 997</b>	<b>-7 066</b>	<b>0</b>	<b>0</b>
<b>Closing carrying amount</b>	<b>3 141</b>	<b>3 907</b>	<b>0</b>	<b>0</b>

## Note 11. Goodwill

KSEK	Group		Parent company	
	2021	2020	2021	2020
Opening cost	2 906	3 008	0	0
Exchange differences for the year	56	-102	0	0
<b>Closing accumulated cost</b>	<b>2 962</b>	<b>2 906</b>	<b>0</b>	<b>0</b>
Opening amortization	-2 712	-2 206	0	0
Amortization for the year	-197	-606	0	0
Exchange rate differences for the year	-53	100	0	0
<b>Closing accumulated amortization</b>	<b>-2 962</b>	<b>-2 712</b>	<b>0</b>	<b>0</b>
<b>Closing carrying amount</b>	<b>0</b>	<b>194</b>	<b>0</b>	<b>0</b>

# Additional information

## Note 12. Plant and machinery

KSEK	Group		Parent company	
	2021	2020	2021	2020
Opening cost	4 868	4 161	0	0
Additions	720	885	0	0
Disposals	-320	0	0	0
Exchange differences for the year	94	-178	0	0
<b>Closing accumulated cost</b>	<b>5 362</b>	<b>4 868</b>	<b>0</b>	<b>0</b>
Opening depreciation	-3 574	-2 975	0	0
Depreciation for the year	-510	-730	0	0
Exchange rate differences for the year	-69	131	0	0
<b>Closing accumulated amortization</b>	<b>-4 153</b>	<b>-3 574</b>	<b>0</b>	<b>0</b>
<b>Closing carrying amount</b>	<b>1 209</b>	<b>1 294</b>	<b>0</b>	<b>0</b>

Plant and machinery include capitalised leased assets amounting to KSEK 246 (630).

## Note 13. Investments

Parent					
Company	Corporate ID	Registered Office	Capital share	Closing carrying amount	
				2021	2020
ExpreS <sup>2</sup> ion Biotechnologies ApS	32 77 04 87	Hørsholm, Denmark	100%	247 563	165 887
				<b>247 563</b>	<b>165 887</b>
				Parent company	
				2021	2020
Opening cost				165 887	45 868
Shareholder contribution				81 677	120 019
<b>Closing carrying amount</b>				<b>247 563</b>	<b>165 887</b>
Group					
Company	Corporate ID	Registered Office	Capital share	Closing carrying amount	
				2021	2020
AdaptVac ApS	38 73 27 30	Hørsholm, Denmark	34%	23	34
				<b>23</b>	<b>34</b>
				Group company	
				2021	2020
Opening cost				34	35
Disposal				-11	0
Revaluations				0	-1
<b>Closing carrying amount</b>				<b>23</b>	<b>34</b>

# Additional information

## Note 14. Long-term receivables

KSEK	Group		Parent company	
	2021	2020	2021	2020
Non-current other receivables	1 119	966	0	0
<b>Total</b>	<b>1 119</b>	<b>966</b>	<b>0</b>	<b>0</b>

## Note 15. Prepaid expenses and accrued income

KSEK	Group		Parent company	
	2021	2020	2021	2020
Prepaid insurance	17	96	0	0
Prepaid consultants	268	60	60	60
Prepaid rent	0	304	0	0
Other prepaid costs	194	67	26	0
<b>Total</b>	<b>479</b>	<b>527</b>	<b>86</b>	<b>60</b>

## Note 16. Equity

As of December 31, 2021, the number of shares outstanding was 31 153 456 (27 608 301), with a quota value of SEK 0.1111 per share.

## Note 17. Provision for taxes

Provision for taxes refer to tax on step-up values in connection with the acquisition of (issue for non-cash consideration) subsidiary, amounting to 673 (827) KSEK. The reductions during the year are due to depreciation of the surplus values.

The accumulated tax losses carried forward in the parent company amounts to 28 (16) MSEK and in the danish subsidiary to 47 (31) MDKK. None of these losses carried forward have been recorded at any value in the balance sheet. They run without a time limit.



# Additional information

## Note 18. Long-term liabilities

KSEK	Group		Parent company	
	2021	2020	2021	2020
<b>Maturity date, 1 to 5 years from the balance sheet date</b>				
Long-term leasing commitments	191	491	0	0
Other long-term liabilities	3 285	4 681	0	0
<b>Total</b>	<b>3477</b>	<b>5 172</b>	<b>0</b>	<b>0</b>

No liabilities have a maturity date later than 5 years after the balance sheet date.

## Note 19. Items not affecting cash flow

KSEK	Group	
	2021	2020
Depreciation and amortization	1 809	2 917
Other adjustments not affecting cashflow	11 677	284
<b>Total</b>	<b>13 486</b>	<b>3 201</b>

## Note 20. Contingent liabilities

KSEK	Group		Parent company	
	2021	2020	2021	2020
Rent commitment, Hørsholm, Denmark	1 696	1 384	0	0
<b>Total</b>	<b>1 696</b>	<b>1 384</b>	<b>0</b>	<b>0</b>

## Note 21. Distribution of dividends

### (Amounts in SEK)

Proposed appropriation of earnings

Retained earnings at the disposal of the Annual General Meeting:

Share premium fund and retained earnings	254 179 833
Loss for the year	-5 968 505
	<b>248 211 328</b>

The Board proposes that:

The loss for the year is settled against the share premium fund and that the share premium fund is carried forward	248 211 328
--	-------------

# Statement by the Board of Directors and Managing Director on the 2021 Annual Report

Today, the Board of Directors and Managing Director approved the Annual Report of ExpreS<sup>2</sup>ion Biotech Holding AB for the year 2021. The Board of Directors and the Managing Director are jointly responsible for ensuring the integrity and quality of the report. The Consolidated Financial Statements have been prepared in accordance with the Swedish Annual Accounts Act and Swedish Accounting Standards Board's general standard BFNAR 2012:1 (K3).

In our opinion, the Consolidated Financial Statements and the Financial statements of the Parent Company give a true and fair view of the financial position at 31 December 2021, the results of the Group's and Parent

Company's operations, and consolidated cash flows for the financial year 2021. Furthermore, in our opinion, Management's Review includes a true and fair account of the development in the operations and financial circumstances, of the results for the year and of the financial position of the Group and the Parent Company as well as a description of the most significant risks and elements of uncertainty facing the Group and the Parent Company.

We recommend that the Annual Report be adopted at the Annual General Meeting.

Helsingborg 4 May 2022

**Dr Martin Roland Jensen**  
Chairman of the Board

**Jakob Knudsen**  
Member of the Board

**Sara Sande**  
Member of the Board

**Karin Garre**  
Member of the Board

**Dr Allan Rosetzsky**  
Member of the Board

**Bent U. Frandsen**  
Chief Executive Officer

Our auditor's report has been issued on 4 May 2022

Ernst & Young AB

**Ola Larsmon**  
Authorised Public Accountant

# Auditor's report

To the general meeting of the shareholders of ExpreS<sup>2</sup>ion Biotech Holding AB, corporate identity number 559033-3729

## Report on the annual accounts and consolidated accounts

### Opinions

We have audited the annual accounts and consolidated accounts of ExpreS<sup>2</sup>ion Biotech Holding AB for the year 2021. The annual accounts and consolidated accounts of the company are included on pages 48-74 in this document.

In our opinion, the annual accounts and consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of parent company and the group as of 31 December 2021 and their financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the group.

### Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

## Other information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1-47. The Board of Directors and the Managing Director are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit

and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

## Responsibilities of the Board of Directors and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intend to liquidate the company, to cease operations, or has no realistic alternative but to do so.

### Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

As part of an audit in accordance with ISAs, we exercise professional judgment and

maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Managing Director.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of

accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible

for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

### Report on other legal and regulatory requirements

#### Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of ExpreS<sup>2</sup>ion Biotech Holding AB for the year 2021 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the financial year.

#### Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in

Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

### Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting,

management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

### Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

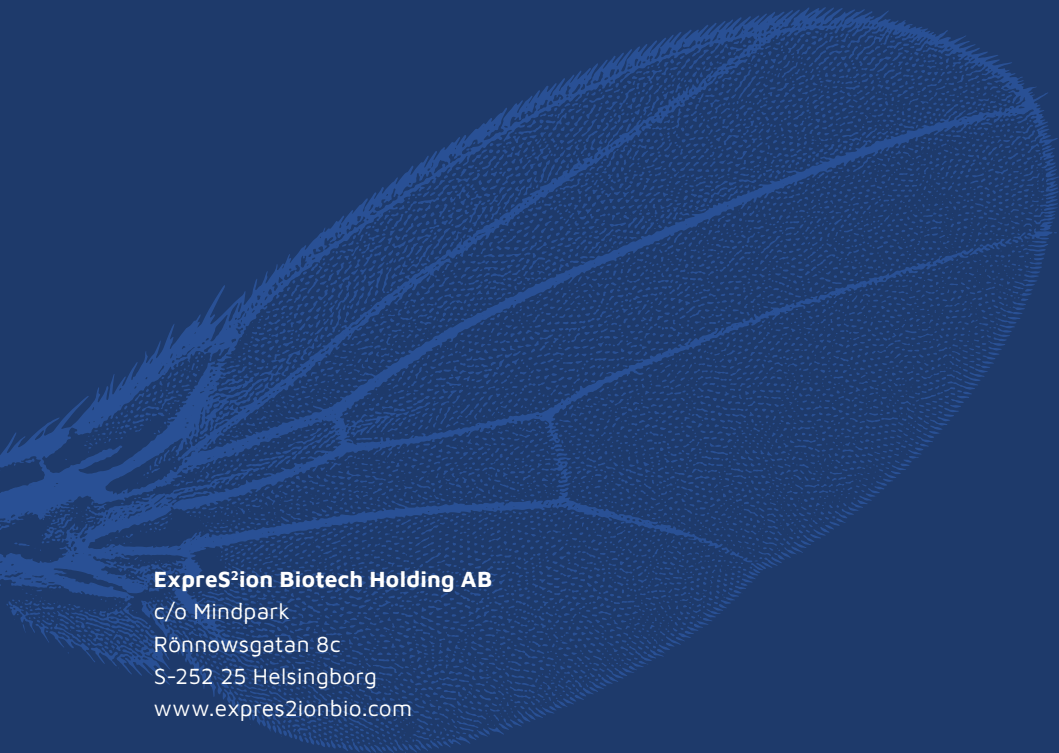
Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined whether the proposal is in accordance with the Companies Act.

Malmö,  
on the day of our electronic signature, 2022

Ernst & Young AB

Ola Larsson  
Authorized Public Accountant



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