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H C Andersen Capital Webinar

Proteins for Life

Q2 2022 Financial Report

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EXPRESSION
BIOTECHNOLOGIES

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Investment Highlights

Key player in advanced protein sciences, with deep pipeline of novel vaccines addressing high-value markets



High-potential pipeline of key focus within infections diseases and oncology, backed up by strong intellectual property rights



Vaccine development platform with track record and partner validation.
+500 proteins produced while posting +90% success rate




















Global vaccine market rapidly growing, from USD 33bn (2019) to USD 187bn (2021),
corresponding to 460% growth



ExpreS²ion is advancing towards key catalysts during 2022, further de-risking the company's pipeline.
COVID-19 clinical Phase III initiation in August 2022

Deep Pipeline for Value Creation

DISEASE	Project/Target	Development Progress					Partner/Funding
		Discovery	Pre-clinical Pharmacology	cGMP / Tox	Phase I	Phase II	
Coronavirus 	ABNCoV2/SARS-CoV-2 cVLP	Progressing into Ph. III					  
Breast Cancer 	ES2B-C001/HER2 cVLP	Progressed into cGMP/Tox					<p>100% ExpreS²ion</p>
Influenza 	Hemagglutinin						
Malaria: 							
1: Blood-Stage	RH5						 
2: Blood-Stage	RH5-VLP						 
3: Transmission	Pfs 48/45						 
4: Placenta-Borne	VAR2CSA						 
5: Blood-Stage	CYRPA complex						



ABNCoV2 COVID-19 Vaccine

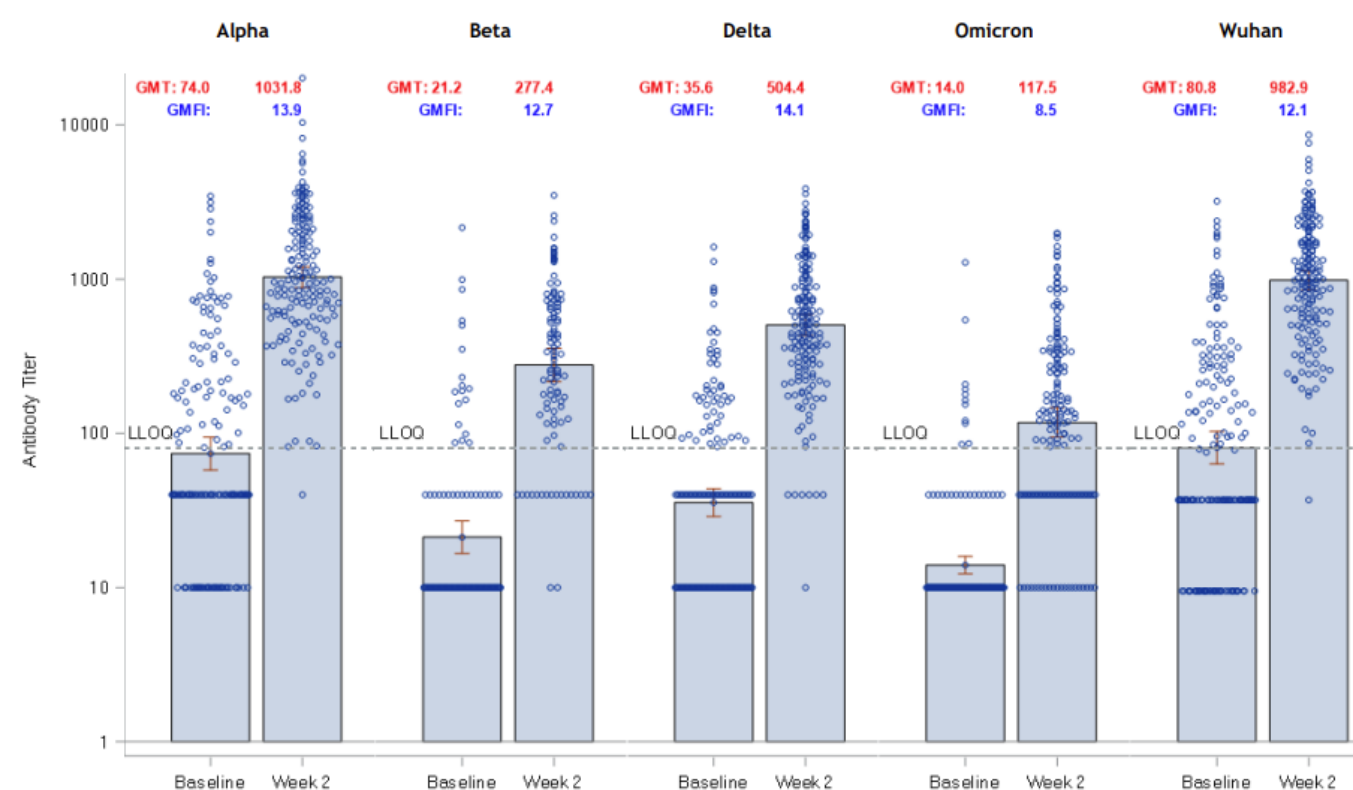
Bavarian Nordic completes the Phase II study, and on path for Phase III study initiation

Phase II results confirms ABNCoV2 as universal booster

- Evaluation of ABNCoV2 as a booster vaccine in individuals with existing immunity. The study also assessed neutralizing immune responses against circulating variants of SARS-CoV2
- **Strong boosting effect across all variants of concern**
- **Level of neutralizing antibodies at levels reported to be associated with high level of protection (>90%)¹**
- **Level of neutralizing antibodies lowest for beta and omicron**

Phase III study now planned to start in 3rd quarter of 2022

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



Trial planned for initiation in August 2022 and with anticipated completion before year-end

Bavarian Nordic expects approval and launch in 2023

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



Partnership with Bavarian Nordic

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

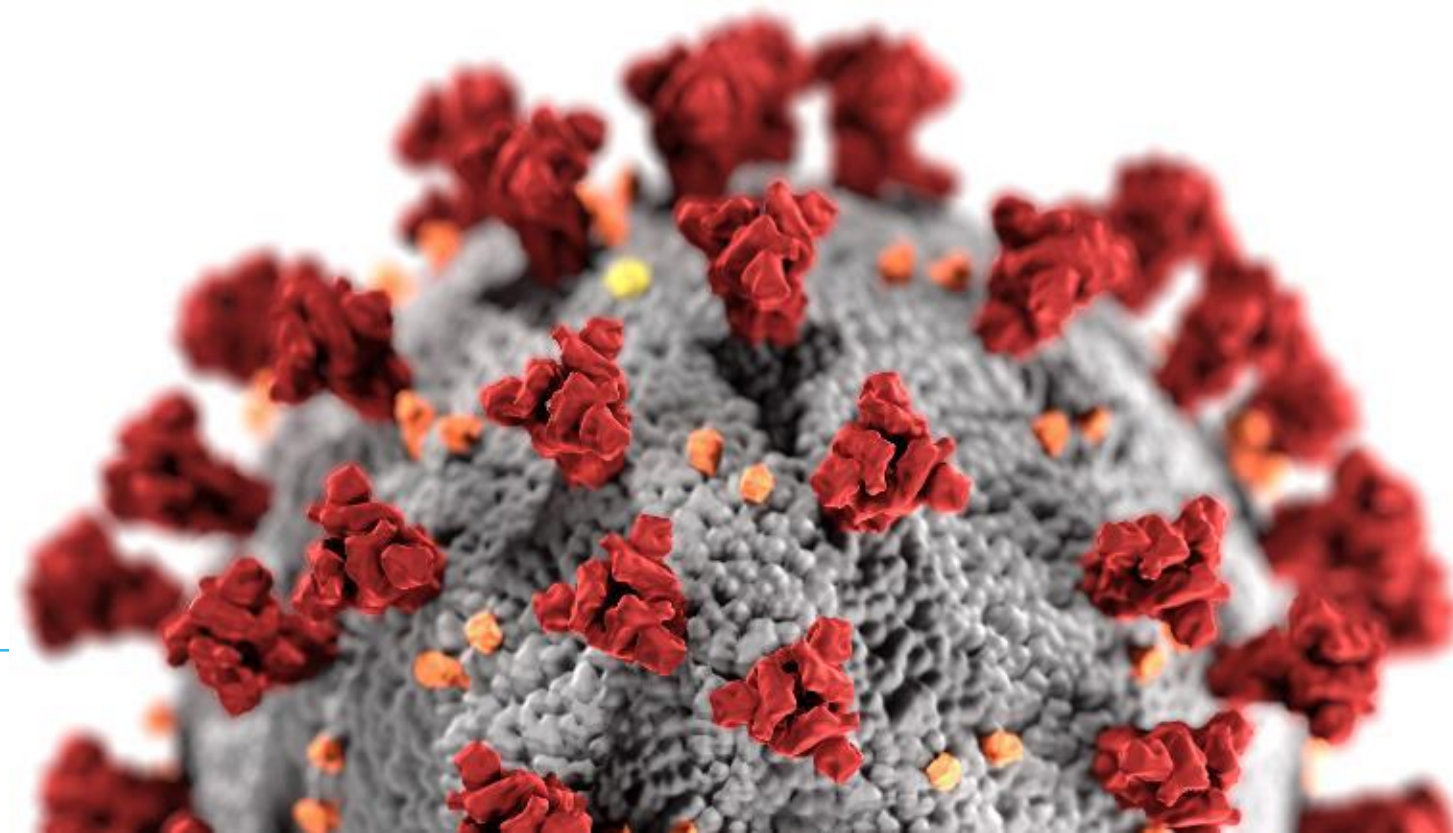
AdaptVac receive from Bavarian Nordic

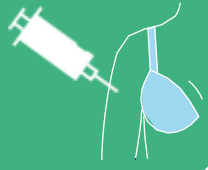
- EUR 4 million upfront (paid in July 2020)
- Up to EUR 136 million in development and sales milestones
- Single- to double-digit-% royalties of Bavarian revenues



ExpreS²ion receive from AdaptVac

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





Breast Cancer Overview

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

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

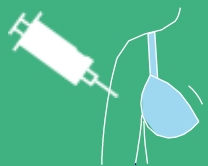
- Target the HER2 receptor on tumor cells to reduce proliferation and induce tumor cell destruction



Serious drawbacks exist with these therapies²

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

ExpreS²ion's vaccine-like approach offers potential to overcome drawbacks through *internal antibody production*



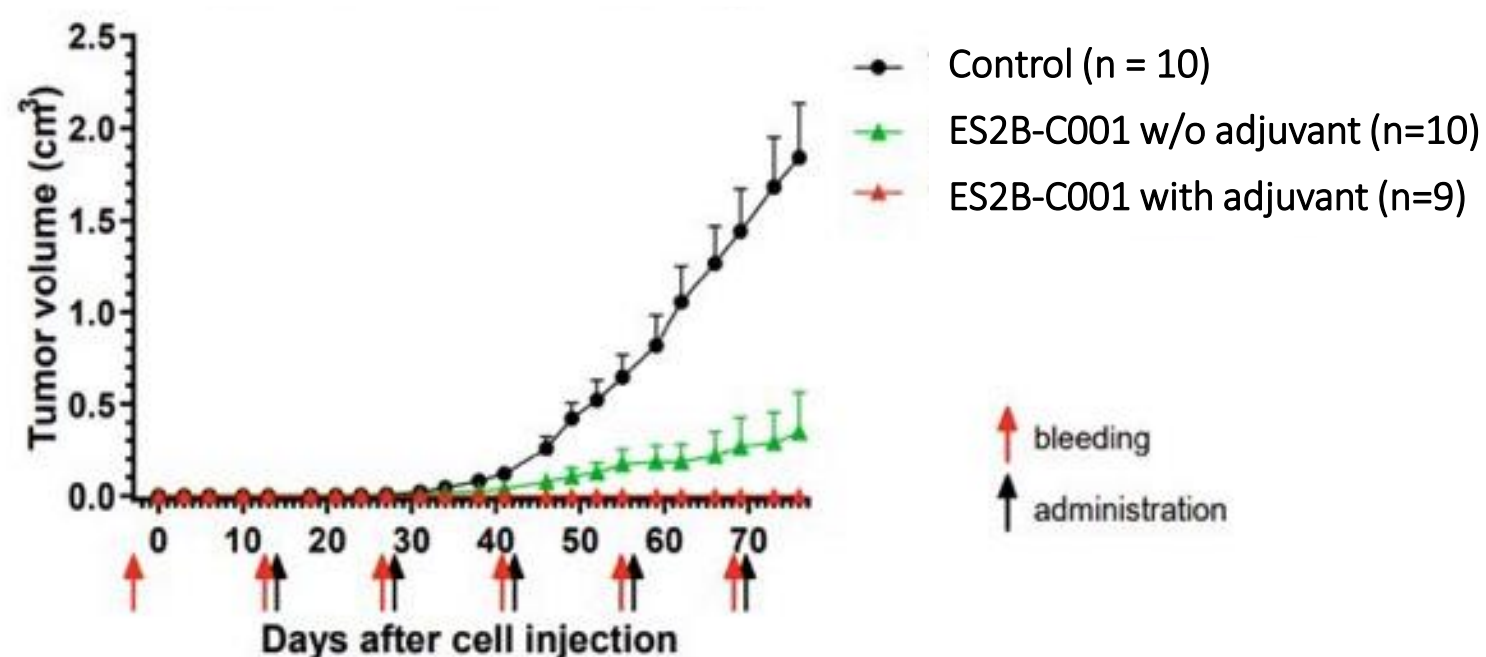
ES2B-C001 Preclinical Proof-of-Concept (I)

ES2B-C001 has demonstrated *in vivo* proof-of-concept

Effectively inhibited tumor development

Prevented tumor development with 95% efficiency

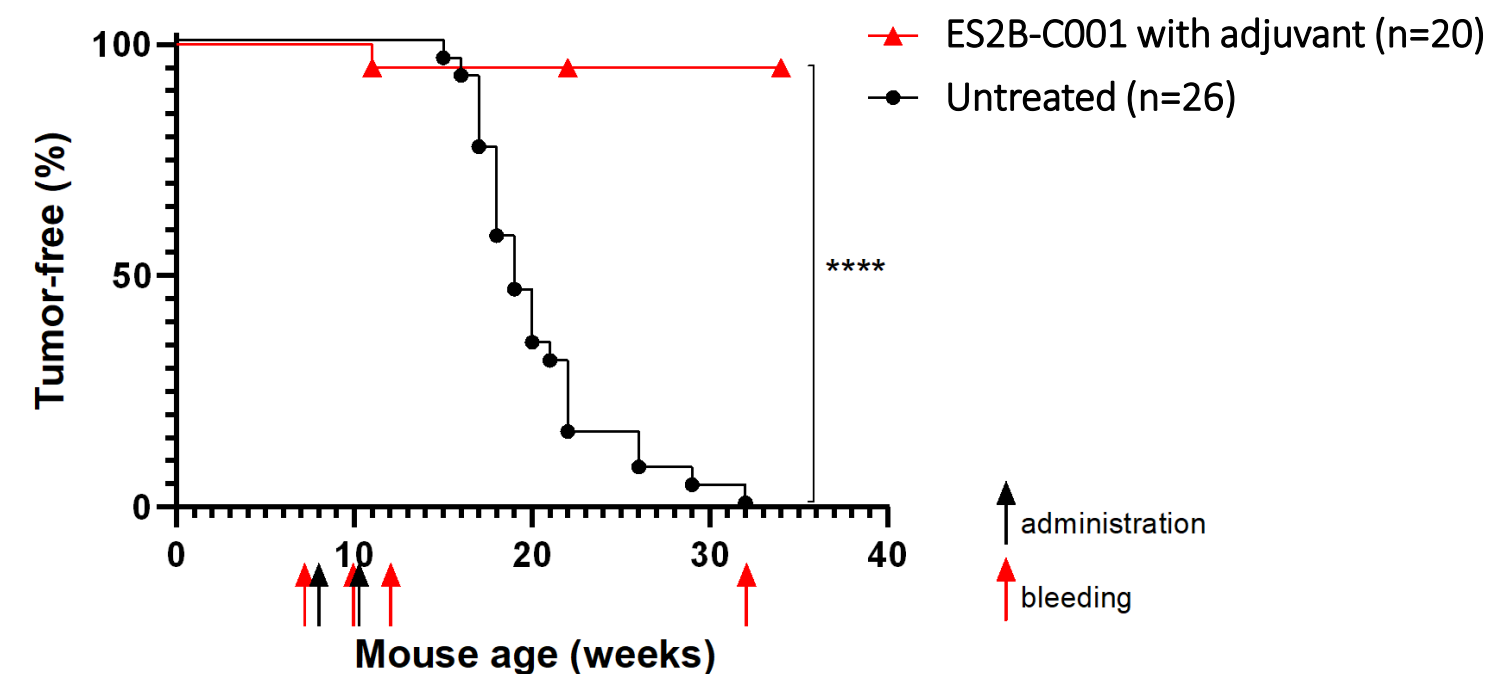
Tumor growth in FVB mice
(HER2-intolerant)



- Two weeks after the inoculation of tumor cells, the first vaccine administration was given. Repeated every 2nd week during the study
- **ES2B-C001 formulated in an adjuvant totally blocks tumor development. ES2B-C001 without adjuvant partly blocks tumor development** and if tumors develop, growth is significantly inhibited

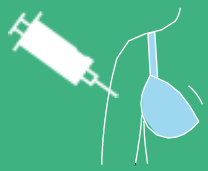
Kaplan-Meier survival curves

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



- At mouse age 6-8 weeks, 2 vaccinations with 2 weeks interval were administered to Delta16 mice
- **Two vaccinations prevented tumor development with 95% efficiency** as compared to a control group, where all mice spontaneously developed tumors

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



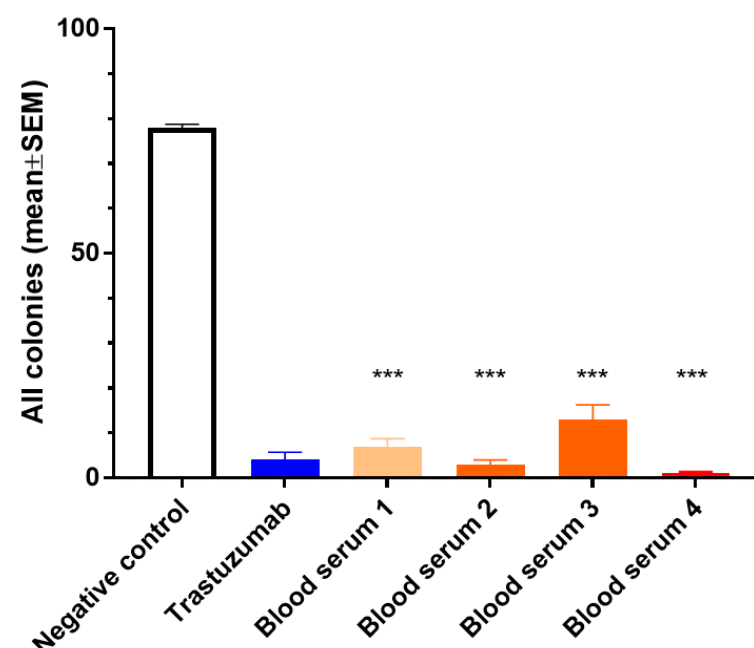
ES2B-C001 Preclinical Proof-of-Concept (II)

ES2B-C001 has demonstrated *in vivo* proof-of-concept

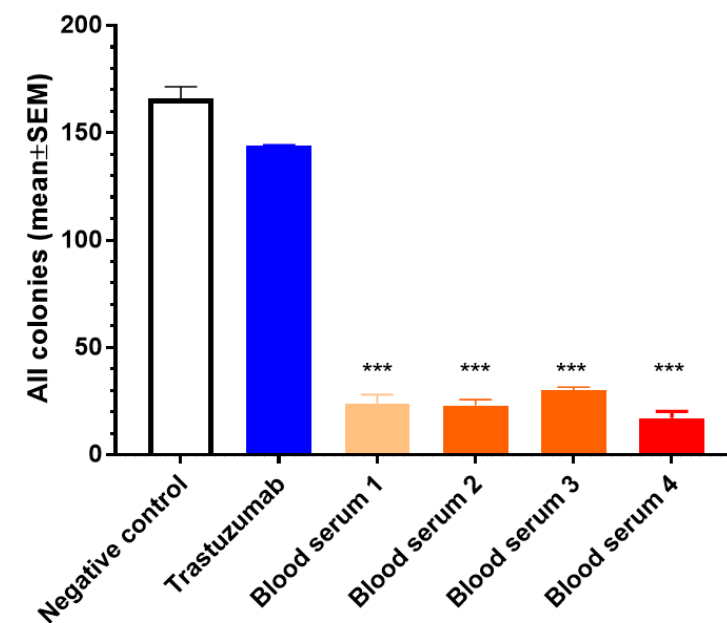
Overcomes trastuzumab-resistance of tumors *in vitro*

Inhibited tumor development in delta16 HER2 tg mice

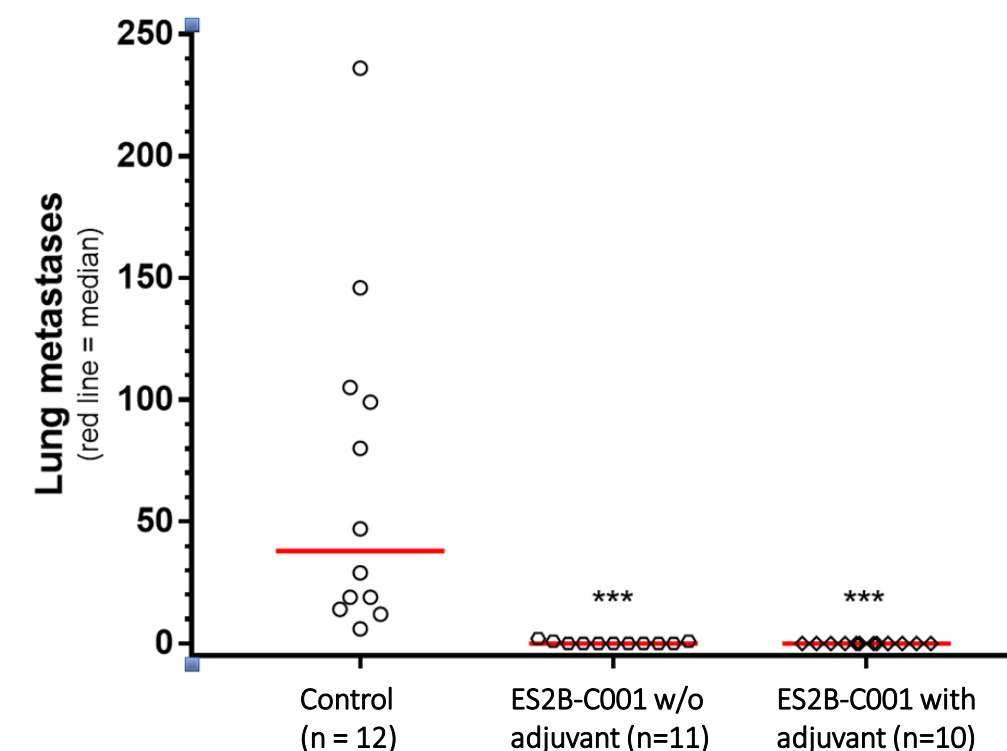
Trastuzumab-sensitive cells



Trastuzumab-resistant cells



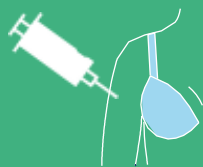
Lung metastasis development in Delta 16 mice



- In vitro* PoC data in a growth inhibition assay: Blood serum from ES2B-C001-vaccinated mice **significantly inhibited the growth of HER2+ trastuzumab-sensitive as well as trastuzumab-resistant human tumor breast cancer cells**

- One week after the intravenous (i.v.) injection of HER2+ tumor cells, the first vaccine administration was given. Repeated every 2nd week during the study
- All mice vaccinated with E2SB-C001 with adjuvant were tumor-free**
- 73% of mice (8/11) vaccinated with ES2B-C001 without adjuvant were tumor-free, the remaining had 1-2 tumor lung nodules

*** statistical significance (*in vitro* assay: $p < 0.001$ vs negative control, Tukey's test; metastatic outgrowth *in vivo* model: $p < 0.0001$ vs control, Dunn's non parametric, multiple comparisons test)



Progression as Planned

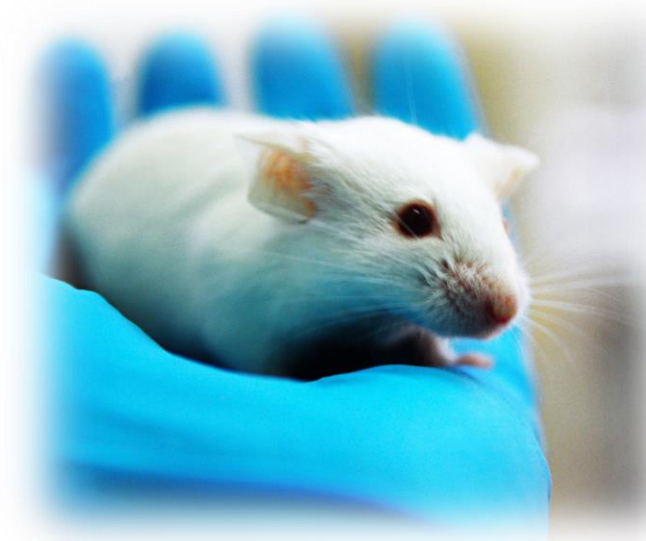
Important steps as ES2B-C001 is moving closer to the planned clinical Phase I trial in 2024

- GMP Manufacturing





- Certified GMP (Good Manufacturing Practice) Manufacturers selected and Work Order Statements executed
- ExpreS²ion's processes for manufacturing of material for HER2 antigen and VLP are being transferred to the contract manufacturers
- Development of GMP manufacturing processes are progressing as planned

- Preclinical Safety

- Certified GLP (Good Laboratory Practice) CRO (Contract Research Organisation) selected and Master Service Agreement executed
- In accordance with feedback from DKMA (Danish Medicines Agency) preclinical safety studies have been planned in two species (1-month short-term testing in a rodent and non-rodent model) as well as long-term general GLP study in NHP (non-human primates)
- The *in vivo* part of the short term rodent safety study has been carried out, and the final report of the study is expected end of Q4 2022



Advancing Towards Key Catalysts

	2022		2023		2024	
 <p>CORONAVIRUS (ABNCoV2)</p> <ul style="list-style-type: none"> ✓ BN Phase II study initiation Q3 21 ✓ BN Phase II study readout H1 2022 BN Phase III study initiation Q3 2022 BN Phase III completion H2 2022 				<p>BN ready for market launch (subject to regulatory approval)</p>		
 <p>BREAST CANCER (ES2B-C001)</p> <ul style="list-style-type: none"> ✓ Executed in-licensing (Feb 2021) ✓ Preclinical animal studies initiated (Q2) ✓ Preclinical animal proof-of-concept results H1 2022 GMP manufacturing processing 			<p>Preclinical safety studies readout</p>	<p>Filing of clinical study application H2 2023</p>	<p>Initiation of first human clinical study 2024</p>	<p>Outlicensing window opens pending human data</p>
 <p>INFLUENZA</p> <ul style="list-style-type: none"> ✓ Advance/support further development of one or more candidates in 2022 			<p>cGMP/Preclinical safety studies initiation (subject to new grant funding)</p>			
 <p>MALARIA</p> <ul style="list-style-type: none"> ✓ Phase IIa results from the Rh5 vaccine published in 2021 ✓ RH5 Additional phase I study in a malaria endemic region in Africa launched during 2021, with alternative adjuvant 		<p>Pfs 48/45 phase I study initiation 2022</p>		<p>RH5-VLP phase I initiation 2023</p>	<p>RH5 phase I study readout H2 2023</p>	

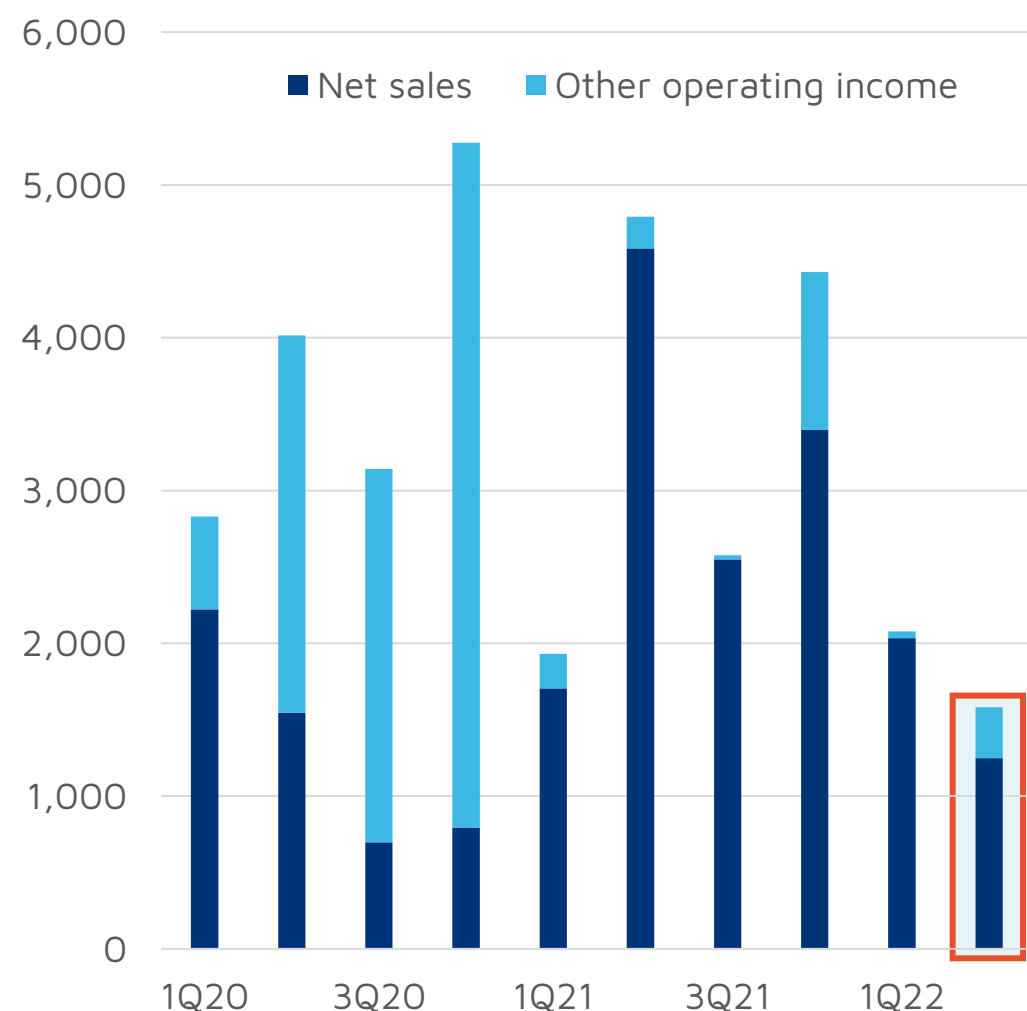
Note: Timeline for ABNCoV2 is based on Bavarian Nordic's communicated timeline, and is subject to potential revision

Q2 2022 Financial Results

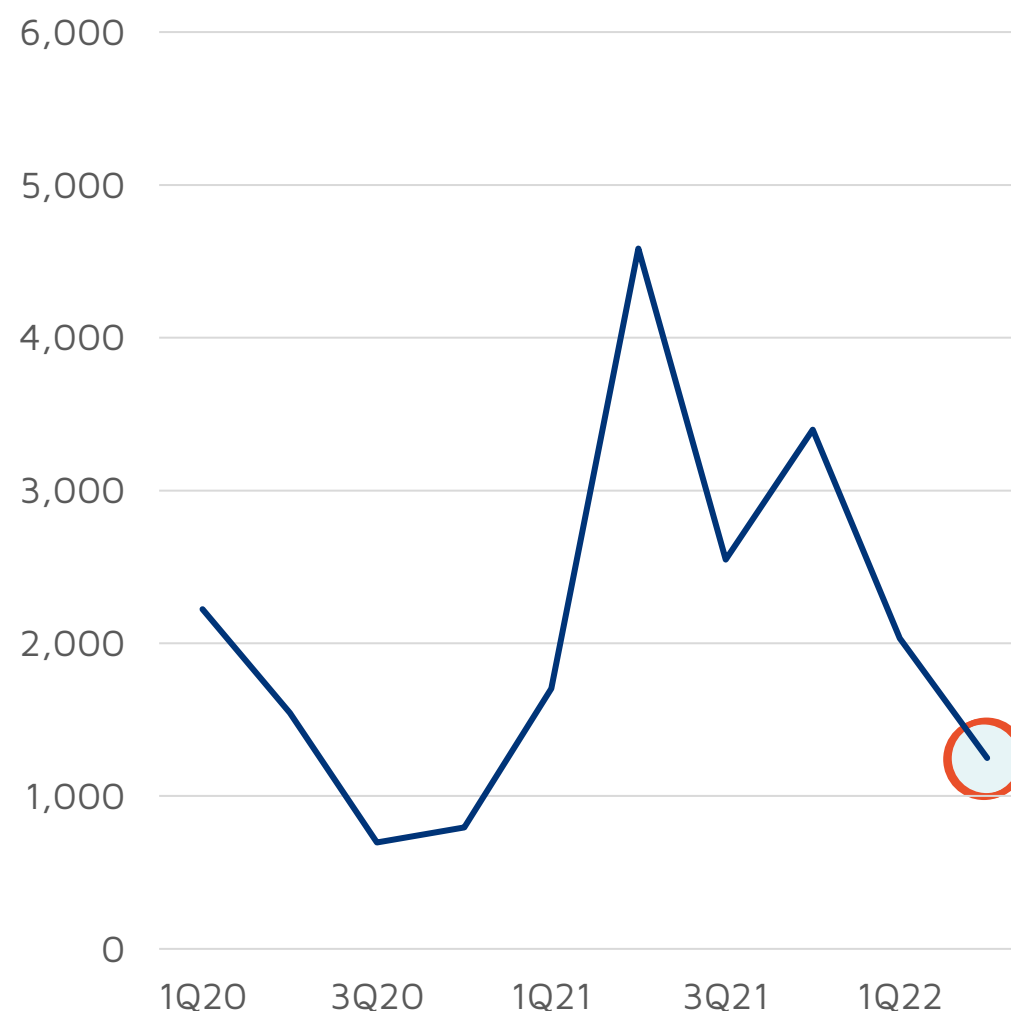
The background features a dark, almost black, space filled with numerous glowing, semi-transparent spheres and rings. The colors range from deep purples and blues to bright oranges and yellows, creating a vibrant, ethereal atmosphere. The objects vary in size and focus, with some appearing sharp and others blurred, suggesting a sense of depth and movement.

Operating Income

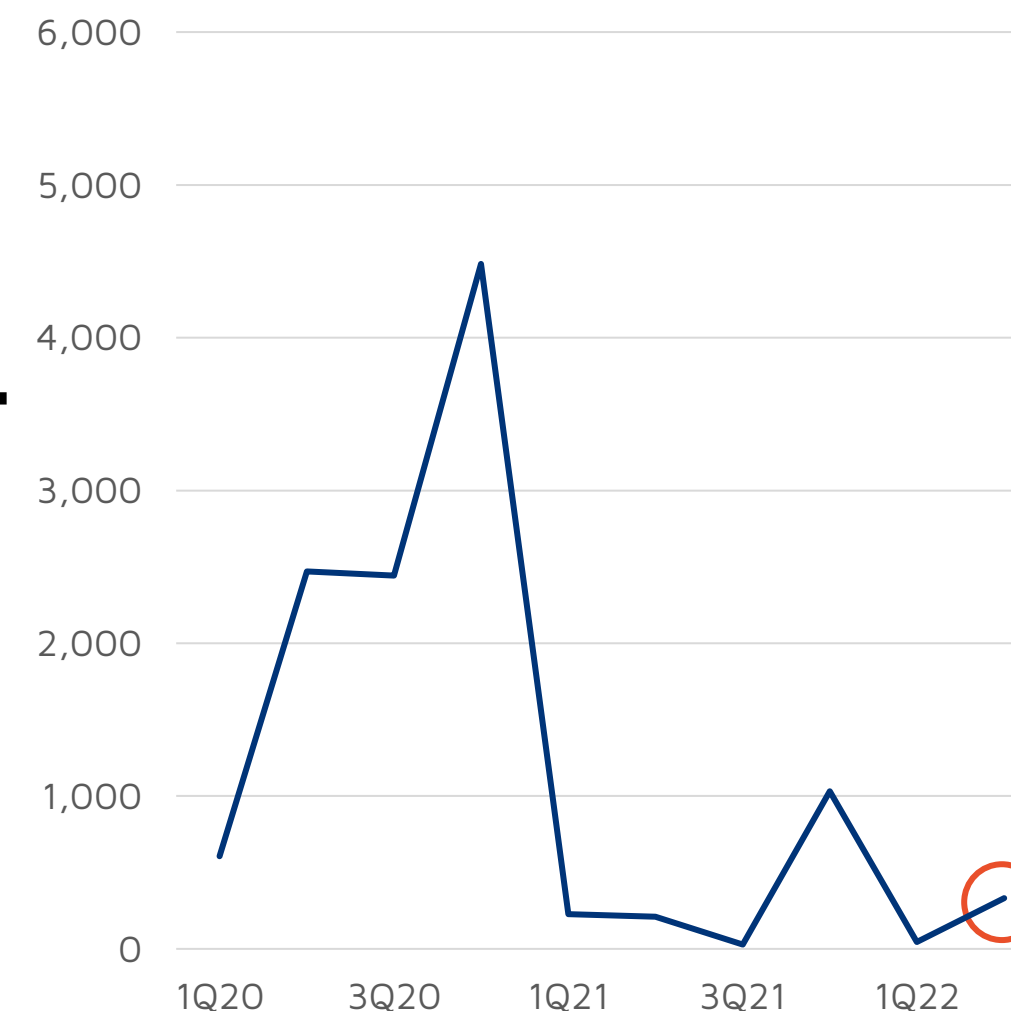
Operating income, SEK '000s



Net sales, SEK '000s



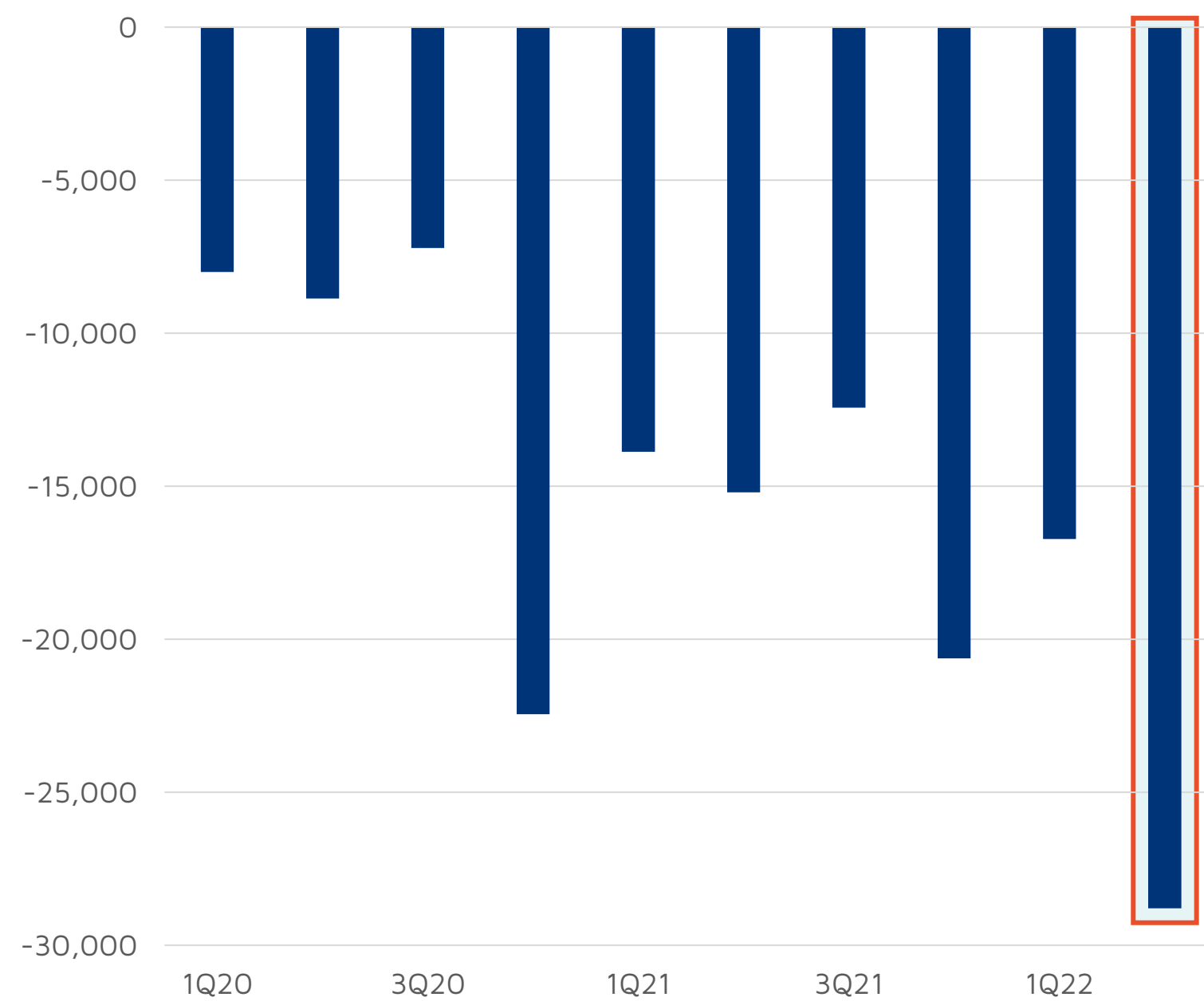
Other operating income, SEK '000s



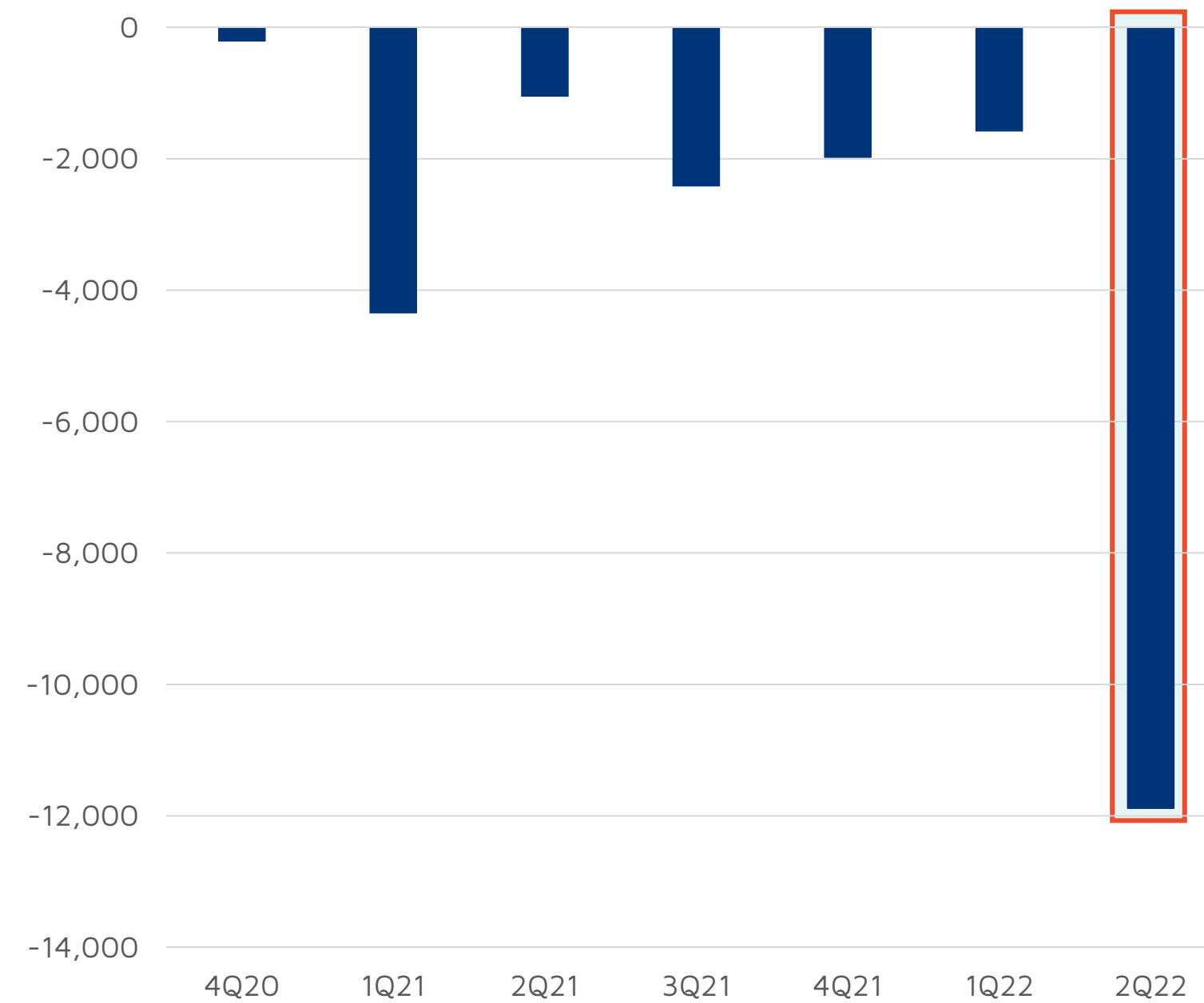
SEK '000s	2022	2021	Growth
2Q	1,580	4,793	-67%
1H	3,658	6,724	-46%

Operating Costs

Operating costs, SEK `000s

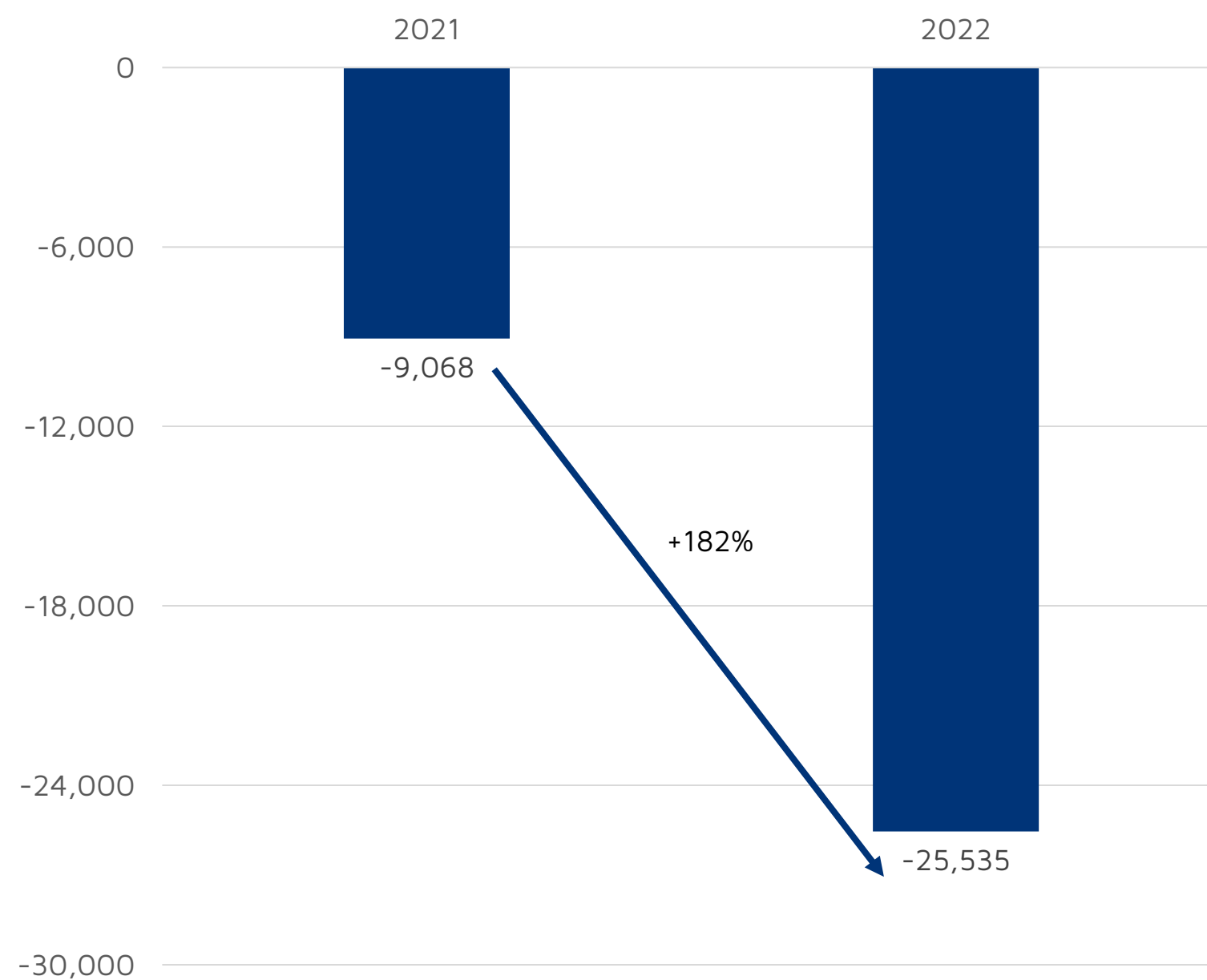


R&D costs (external), SEK `000s

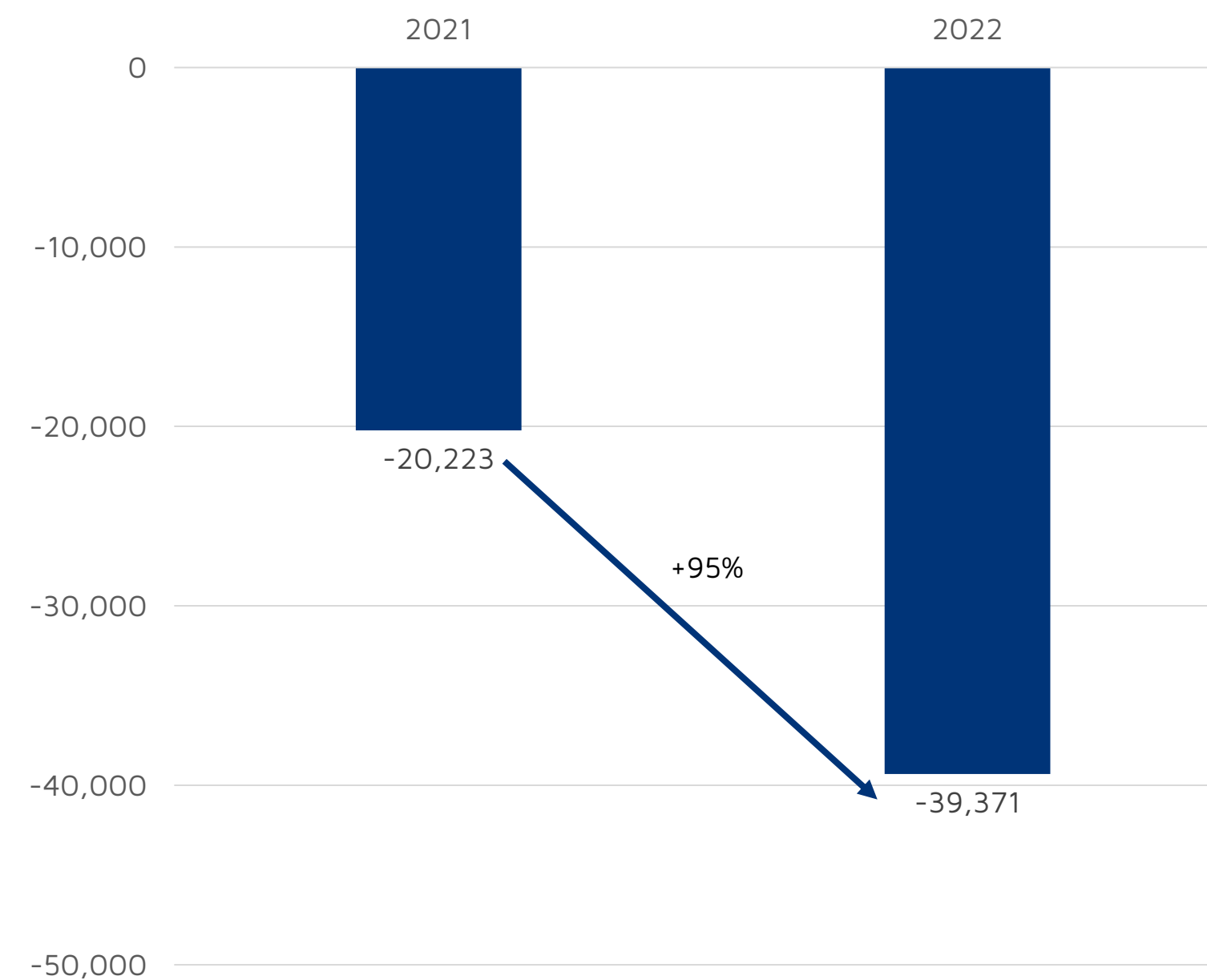


Profit / Loss for the Period

2Q profit / loss, SEK '000s

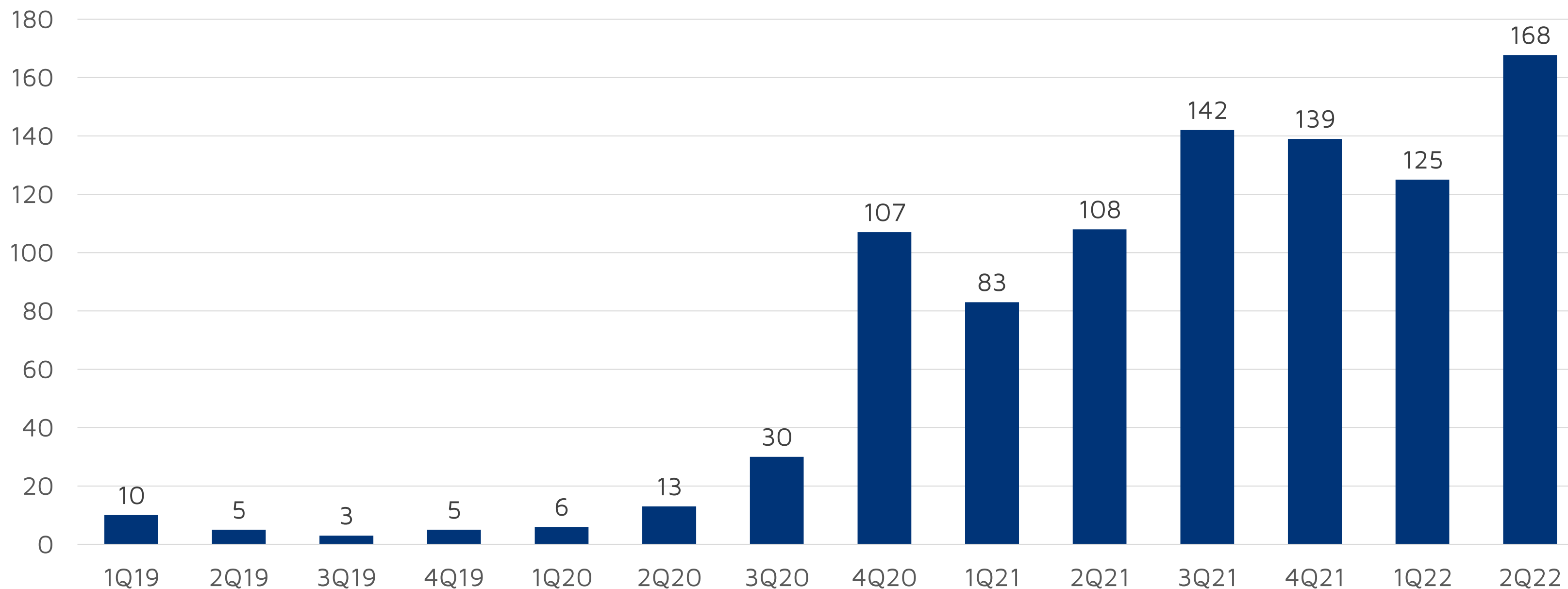


1H profit / loss, SEK '000s



Cash Balance¹, 2019-2022 Quarterly

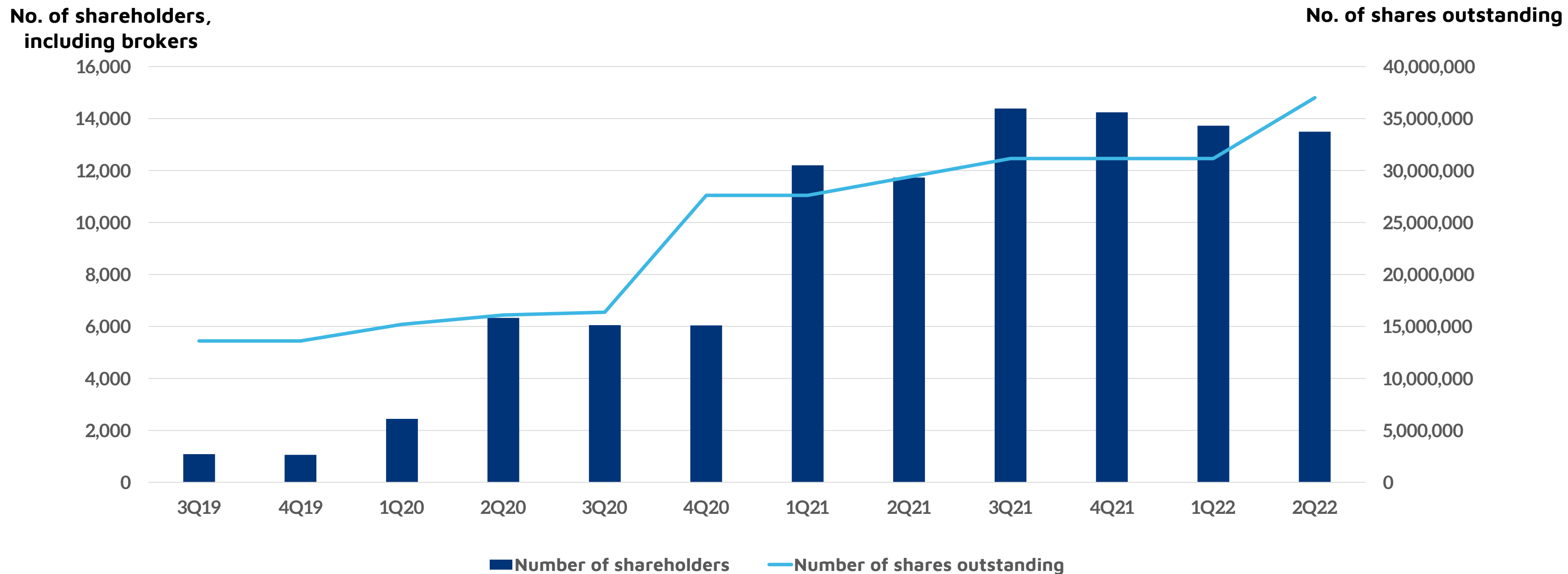
SEK millions

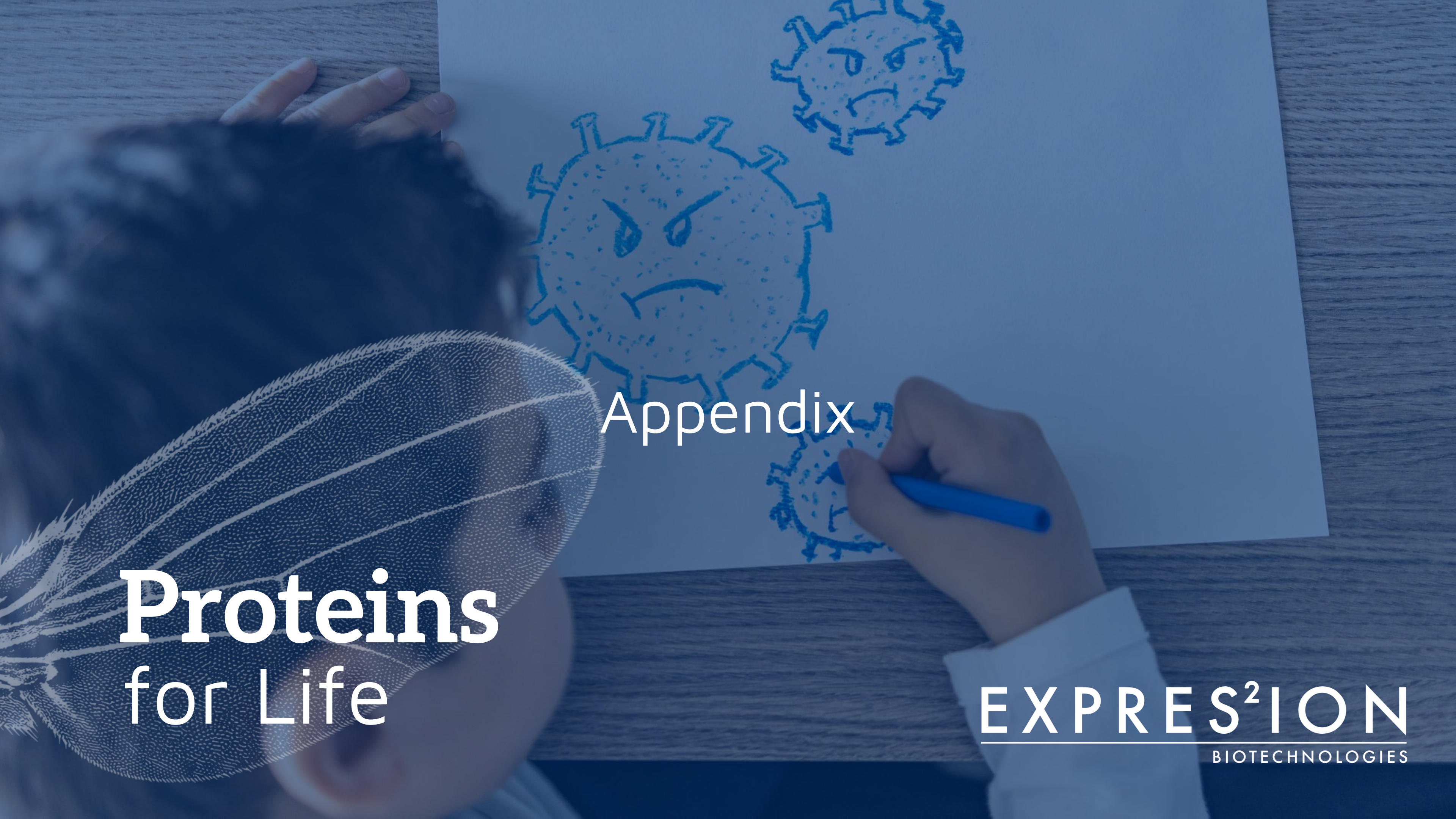


¹ For Q4 2021 and Q1 2022, the cash balance combines funds on the Company's SKAT account (interest-free tax asset with Denmark's tax authorities), and cash and bank. See page 16 of the 2Q 2022 report for more information.

Shareholder Composition

No. of shareholders has increased to ~14,000, now holding ~37 million shares





Appendix

Proteins for Life

EXPRES²ION
BIOTECHNOLOGIES

Technology Platforms

ExpreS²ion's ExpreS² and AdaptVac's cVLP platform

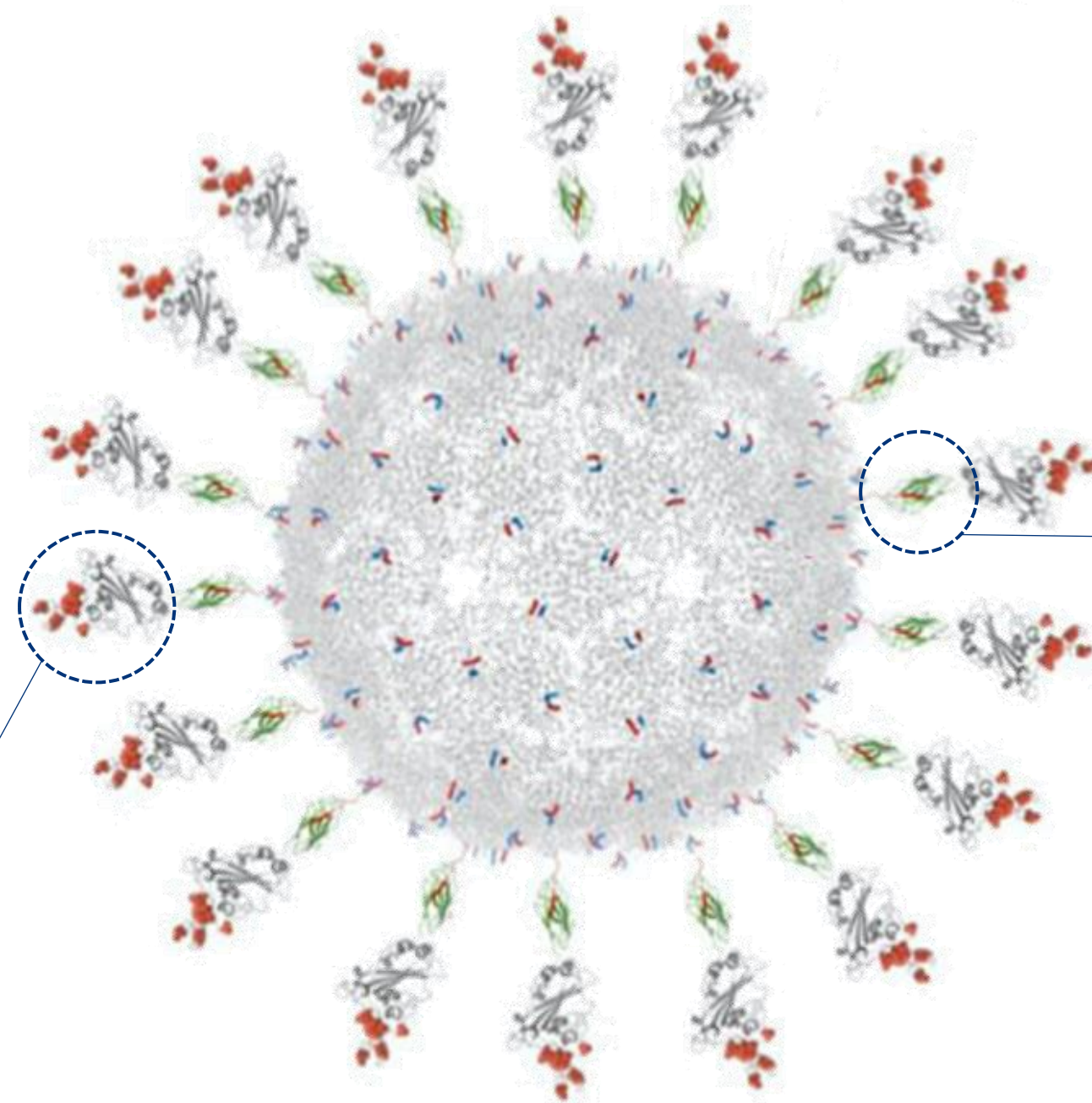


Cell line derived from *Drosophila melanogaster* (fruit fly) S2 cells¹

ExpreS² platform

Combines S2 cells with patented expression vectors (add a specific gene into a target cell and command the cell to produce the gene encoded protein), adapted culture agents and reagents (stimulating cell growth)

100% ownership



ExpreS² protein (antigen) combined with AdaptVac's cVLP containing no viral genetic material causing an immune reaction

Particle (VLP) technology

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

34% ownership