

H. C. Andersen Capital Seminar, Copenhagen  
17 September 2024

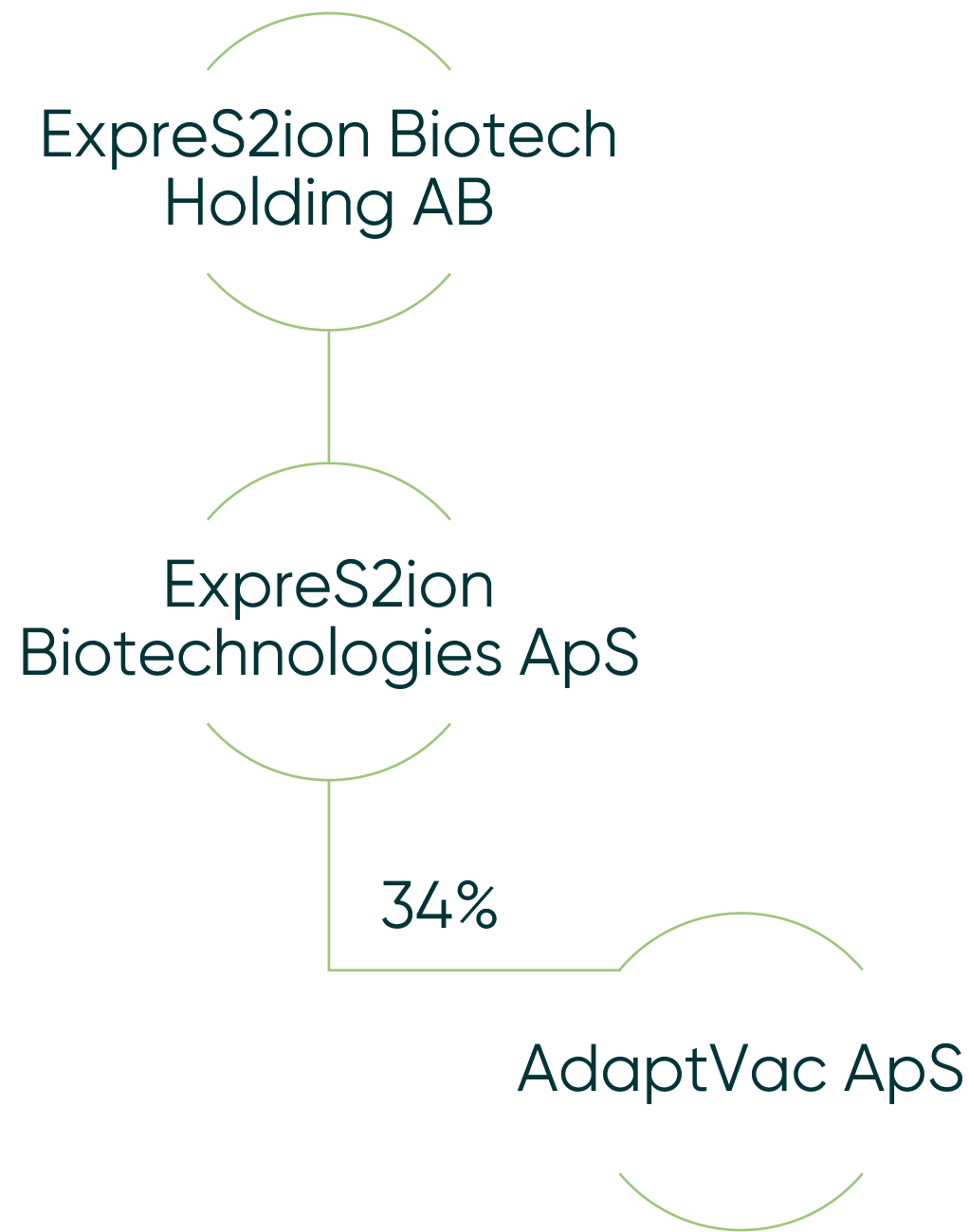
# Revolutionizing breast cancer treatment: **ES2B-C001**

STO: EXPRS2

Expres2ion Biotech Holding AB  
Org. Nr. 559033-3729



# About Expres2ion



## Expres2ion Biotech Holding AB

- Listed on the Nasdaq First North Growth Market since 2016
- Holding company for Expres2ion Biotechnologies ApS, which it owns 100%

## Expres2ion Biotechnologies ApS

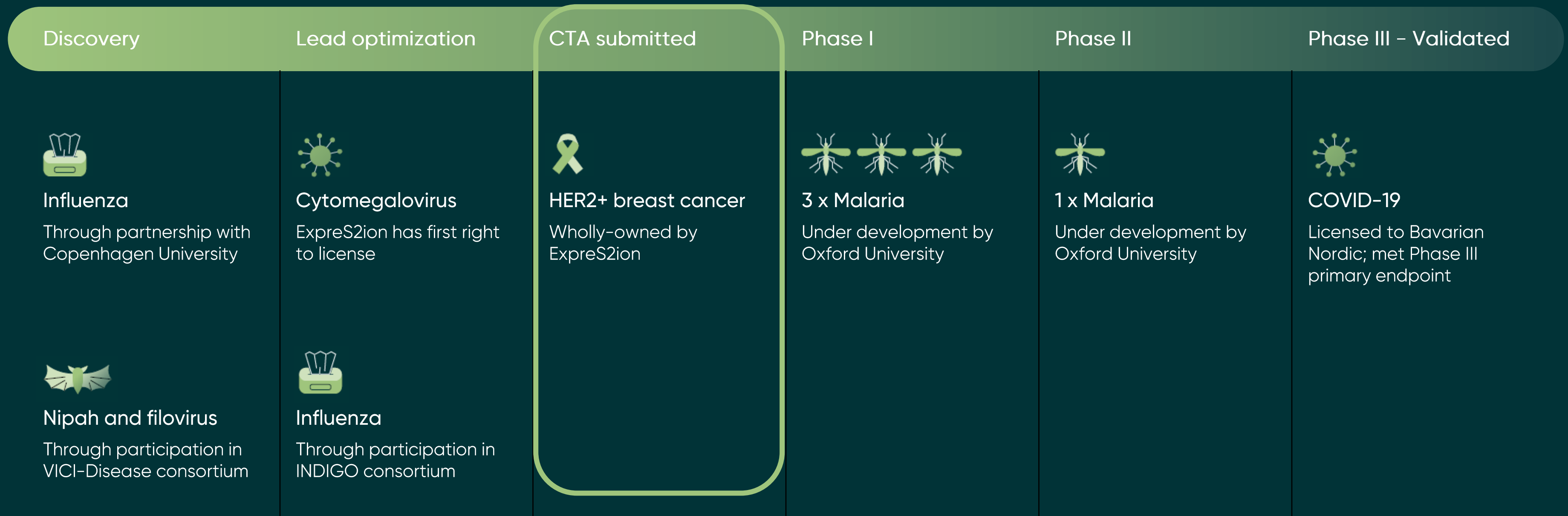
- Established in 2010
- **Expres2™ protein production platform, vaccine pipeline and CRO business**
- Owns 34% of AdaptVac ApS

## AdaptVac ApS

- Co-founded in 2017 by Expres2ion and researchers from Copenhagen University
- **Virus-like particle (VLP) platform** – AdaptVac's VLP is a delivery vehicle in Expres2ion's breast cancer vaccine candidate, ES2B-C001 (HER2-VLP)

# Expres2 platform proofs-of-concept

+ applied in numerous additional pharmaceutical and biotech protein production projects



# Groundbreaking novel cancer therapy

ES2B-C001 summary: A therapeutic vaccine to treat HER2-positive breast cancer



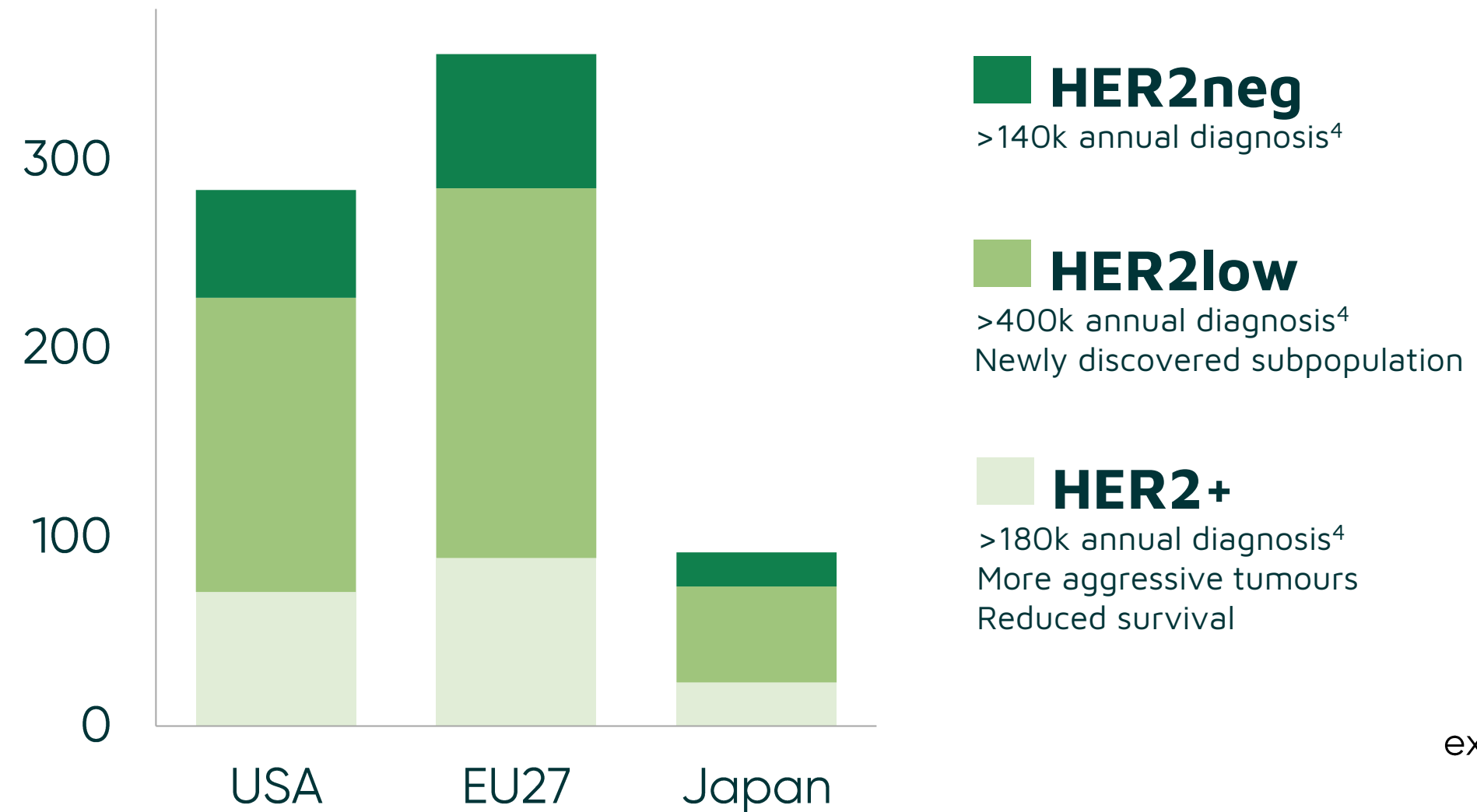
- A HER2-cVLP vaccine targeting HER2-expressing breast cancer, addressing a €27B global market with 7.2% CAGR next 5 years<sup>1</sup>
- ES2B-C001 demonstrated significant tumour growth inhibition, resulting in 100% survival of treated animals
- Effectively breaking tolerance, and overcoming monoclonal antibody resistance
- CTA submitted in Q3 '24 and aim to complete first-in-human Phase I clinical trial by Q1 '26
- ExpreS2ion committed to ensure completion of Phase II clinical proof-of-concept studies during 2026-2029

<sup>1</sup>Mordor Intelligence, breast cancer therapeutics market, 2024-2029 estimates

# The persistent challenge of HER2+ breast cancer

- 1 in 8 women are diagnosed with invasive breast cancer, leading to approximately 685,000 deaths each year<sup>1</sup>
- HER2 is overexpressed in about 15–20% of breast cancer tumours<sup>2</sup>
- Overexpression of HER2 is associated with
  - More aggressive disease
  - Higher recurrence rate
  - Increased mortality<sup>3</sup>

Annual diagnoses ('000s)

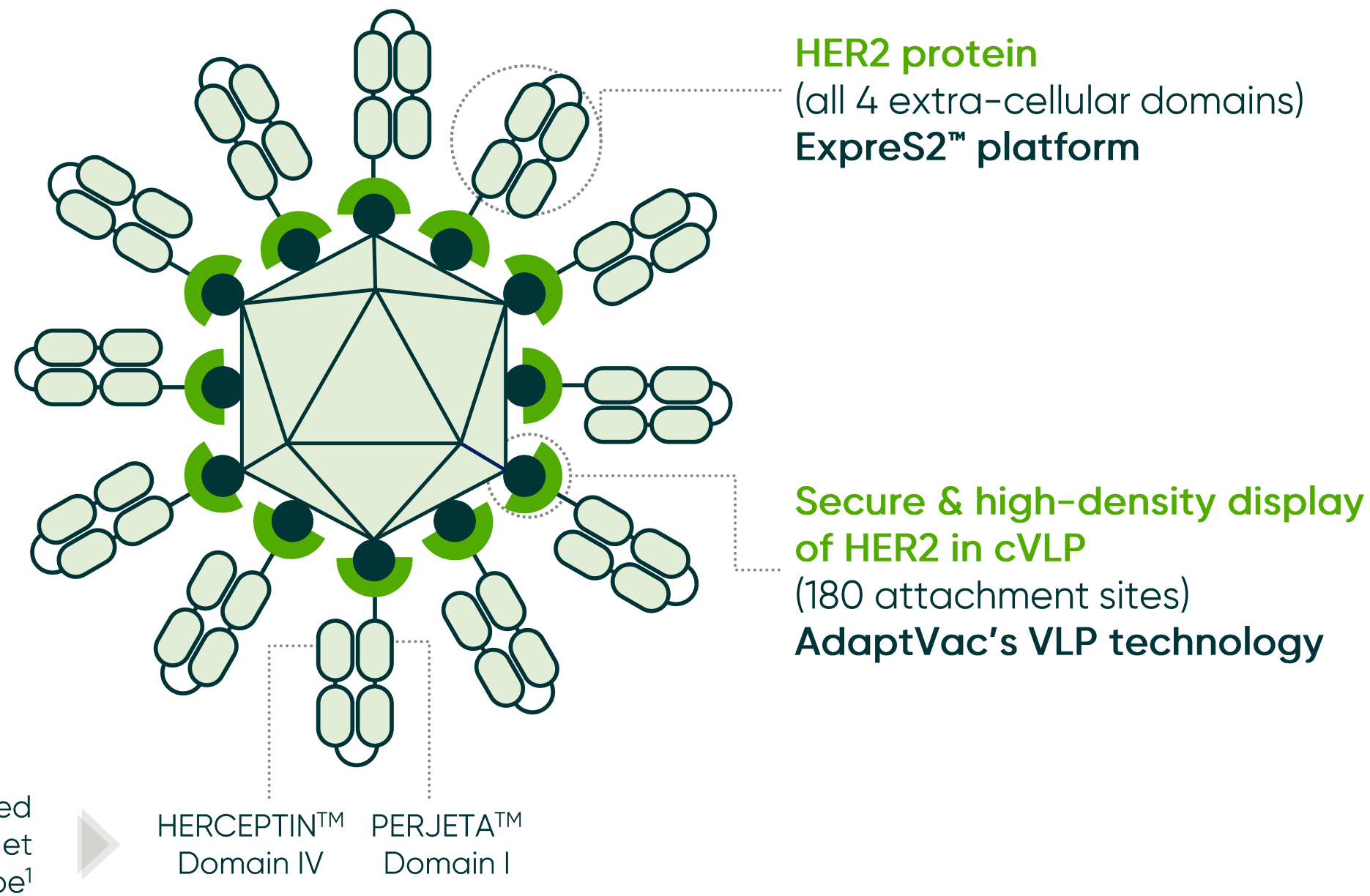


Level of HER2 expression in tumor cells

<sup>1</sup> Breast Cancer Research Foundation (<https://www.bcrf.org/breast-cancer-statistics-and-resources>)  
<sup>2</sup> The American Cancer Society (<https://www.cancer.org/cancer/types/breast-cancer/treatment/targeted-therapy-for-breast-cancer.html>)  
<sup>3</sup> Mitri Z et al. The HER2 Receptor in Breast Cancer: Pathophysiology, Clinical Use, and New Advances in Therapy (Chemother Res Pract. 2012; 2012: 743193)  
<sup>4</sup> EU, US, Japan

# ES2B-C001 vaccine design

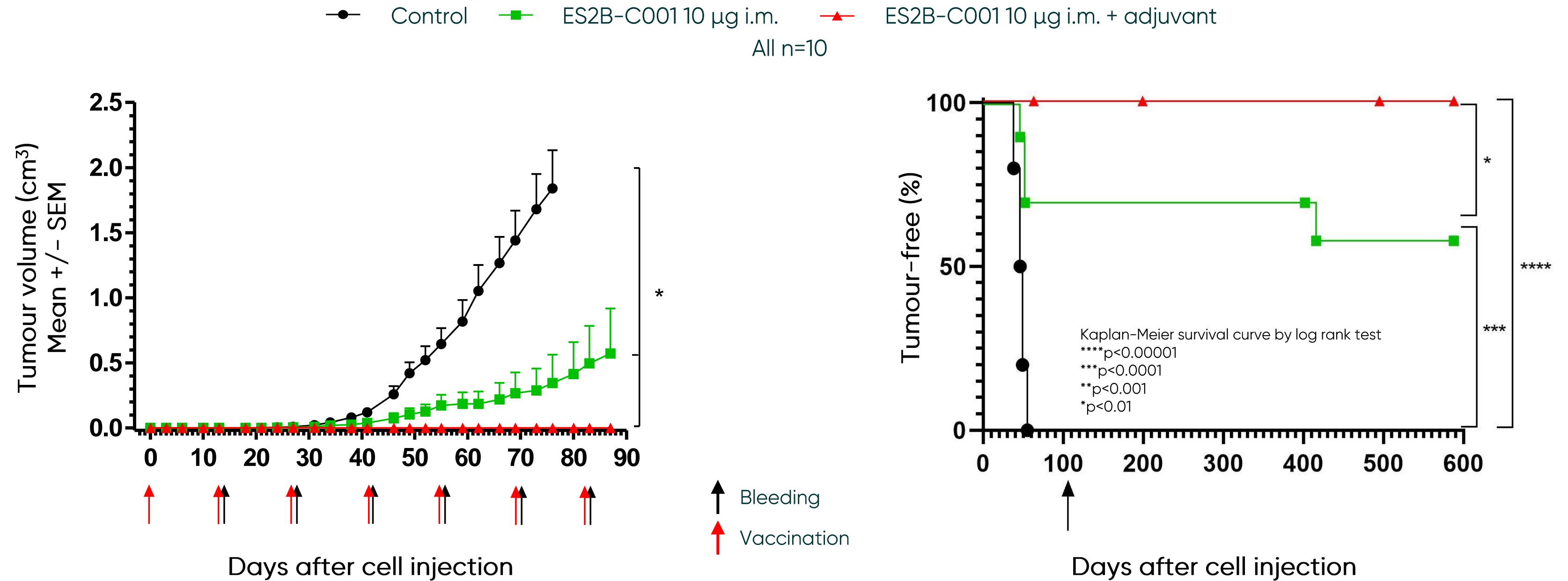
Combines unique full-length antigen with highly immunogenic VLP technology platform, leading to polyclonal antibody response



- **VLP concept in approved cancer vaccines**  
HPV vaccine against cervical cancer and HBV vaccine against liver cancer
- **Highly immunogenic**  
A wide range of epitopes presented to B-cells. Generates a strong polyclonal Ab response -> effective in tumour cells resistant to mAbs.
- **Safety profile**  
Technology validated in phase III testing of another indication & ES2B-C001 long-term GLP NHP studies
- **Longevity of immune response**  
Potent B-cell activation via VLP presentation. Break 'self-tolerance' for HER2+.
- **Combination with SoC**  
Applied on top of different LOTs.
- **Off-the-shelf, scalable, cost-effective**

# Promising non-clinical results

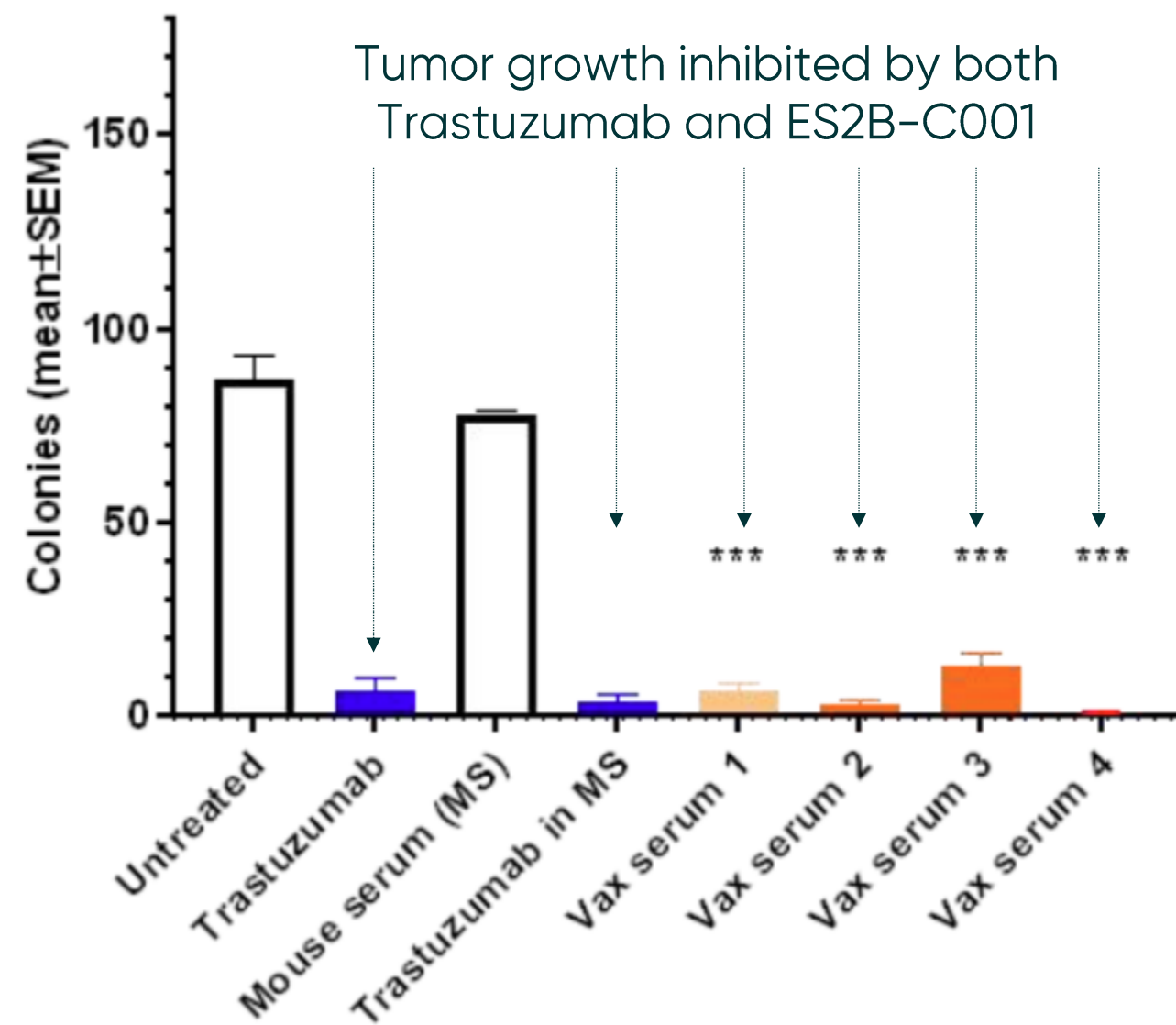
Significant *in vivo* tumour growth inhibition resulting in 100% survival of treated animals (used as a prophylactic and therapeutic vaccine)



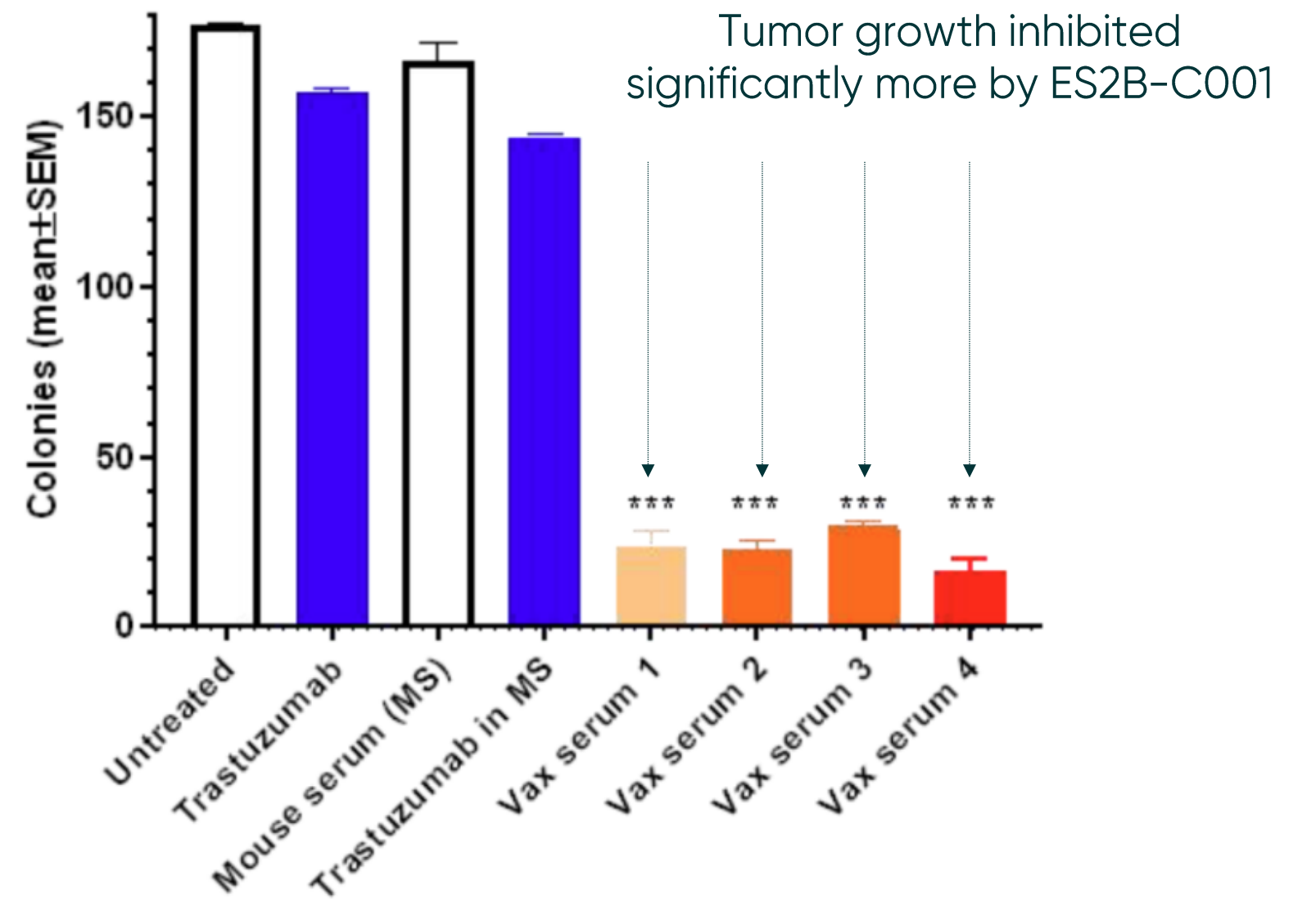
# Promising evidence of overcoming resistance

Significant *in vitro* tumour growth inhibition against monoclonal antibody resistant-human breast cancer cell lines

Trastuzumab-sensitive cell line



Trastuzumab-resistant cell line





# Significant improvement on competing HER2+ breast cancer therapies

	mAbs	ADCs	TKIs	Other vaccines	ES2B-C001
Cardiac toxicity	Yes	Yes	Yes	TBD	Not observed
Overcomes SoC resistance	N/A	Possible	Yes	TBD	Yes
Long-term effect	No	No	No	TBD	Yes
Easy to administer/ receive	No	No	Yes	Yes	Yes
VLP-based <sup>1</sup>	N/A	N/A	N/A	No	Yes
Cost effective	No (Over \$100k/year)	No	No	Varies	Yes

<sup>1</sup>All approved cancer vaccines are VLP-based, including those for HPV (Gardasil™, Cervarix™) and HBV (Engerix-B™)

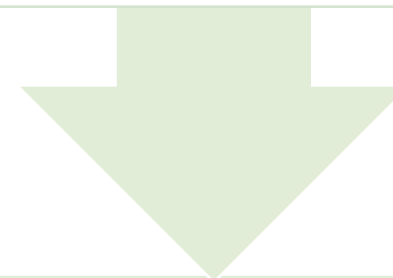
# Phase I focus is safety, tolerability, MTD, and potentially immunogenicity

## Key objectives

**Primary:** To determine the safety, tolerability, maximum tolerated dose (MTD) for ES2B-C001 alone or in combination with the adjuvant Montanide

**Secondary:** To investigate the immunogenicity of ES2B-C001 alone or in combination with the adjuvant Montanide

**Exploratory:** To determine the preliminary antitumor activity of ES2B-C001 alone or in combination with the adjuvant Montanide



## Trial design

**Type:** Open label, dose-escalation study

**Study start:** Estimated Q1 2025

**Duration:** Approximately 20-months including 15-month enrolment period

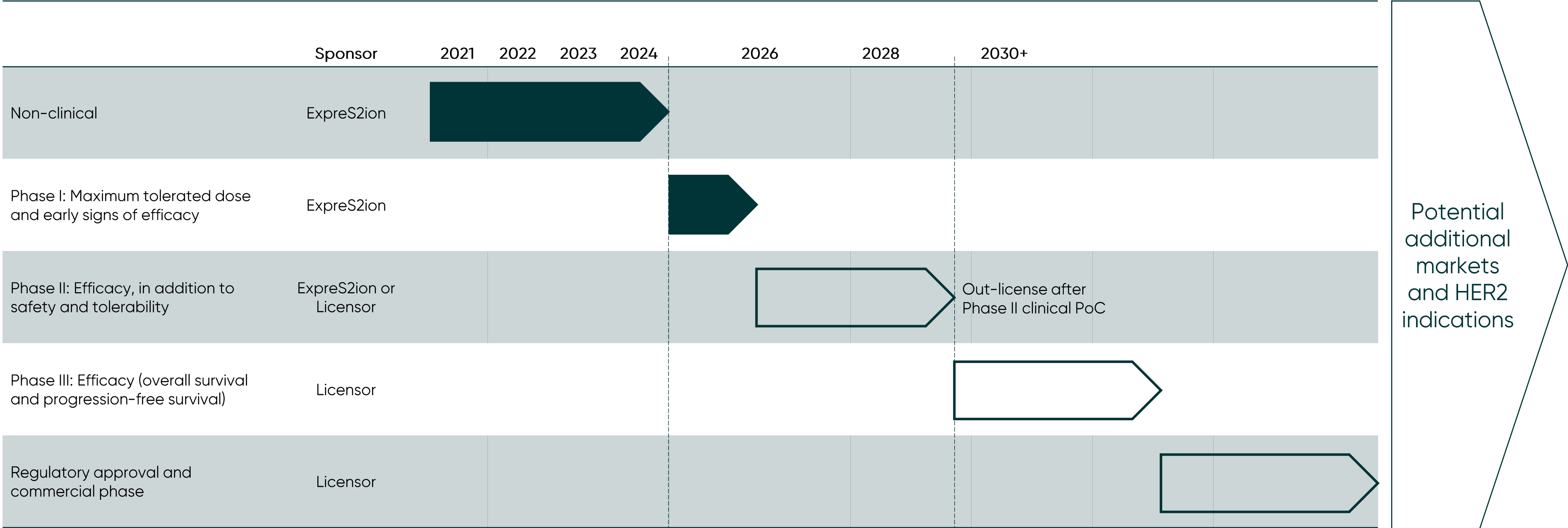
**Patients:** 18 patients and expansions may lead to a total of 36 patients

**Groups:** Non-adjuvanted + adjuvanted; up to three different doses

**Enrolment:** Staggered in each cohort, with clear inclusion / exclusion criteria





















# Path to clinical proof-of-concept and commercialisation

High-level summary of integrated development plan (iDP)



# Deep experience in breast cancer, vaccines and clinical development

## Leadership Team

	<b>Bent Frandsen</b> CEO	MSc, Copenhagen Business School	<ul style="list-style-type: none"> <li>&gt;25 years life science management, business development and finance experience</li> <li>Successfully participated in development of &gt;10 clinical-stage assets, closed over 25 license and partner deals worth &gt;€1B, and raised in public markets &gt;€40M</li> </ul>	  
	<b>Dr. Farshad Guirakhoo</b> CSO	PhD, Medical University of Vienna	<ul style="list-style-type: none"> <li>&gt;35 years broad translational research experience in vaccine development</li> <li>Successfully developed vaccines for Dengue Fever, Japanese Encephalitis, and West Nile Disease (horse and human), from inception to commercial stages</li> </ul>	  
	<b>Dr. Lars Damstrup</b> Director of Clinical Development	MD, PhD, University of Copenhagen	<ul style="list-style-type: none"> <li>40 years in oncology within academia (15 years), preclinical research (6 years) and industry (19 years)</li> <li>Led &gt;15 phase I/II trials, with several continuing to phase II &amp; one oncology drug granted FDA conditional approval</li> </ul>	  
	<b>Dr. Max Søgaard</b> SVP of R&D and Technology	PhD, University College London	<ul style="list-style-type: none"> <li>&gt;24 years research experience, including leading R&amp;D for cell line development, pipeline and client projects</li> <li>Led candidate selection and/or manufacturing process of &gt;20 oncology &amp; infectious disease vaccine candidates</li> </ul>	 
	<b>Thomas Jørgensen</b> Program & CMC Project Lead	MSc, University of Southern Denmark	<ul style="list-style-type: none"> <li>&gt;30 years CMC and program management experience with leading biotech and pharmaceutical companies</li> <li>Led CTA/BLA enabling activities for seven companies in the oncology, inflammation and infectious disease fields</li> </ul>	 
	<b>Keith Alexander</b> CFO	MBA, The Wharton School	<ul style="list-style-type: none"> <li>&gt;20 years in financial markets, primarily advising institutional investors, raising &gt;€30 million &amp; advising &gt;€1T</li> <li>Advised executive management on M&amp;A, JVs, growth strategies and competitive intelligence</li> </ul>	  

## Board of Directors



**Dr. Martin Roland Jensen, PhD, Co-Founder and Chairman**

- Co-Founder of ExpreS2ion Biotechnologies
- Co-founder, Chairman and CBO of Cell2Cure ApS
- Co-founder of Unikum Therapeutics



**Dr. Karin Garre, MD, Board Member**

- Chair of Bioneer and Board Member of Cervello
- Leadership and drug development experience with Symphogen, Astra, Novo Nordisk and Genmab



**Sara Sande, MSc, Board Member**

- Investment Partner at EIFO
- Board Member of Agreena, Monta and Biosyntia; Board Observer of Cellugy and Chromologics



**Jakob Knudsen, LL.M., MBA, Board Member**

- CEO of Virogates, Board Member of Ingeniørsystem and PV Fonden
- Commercial operations, business development, marketing and finance experience with ALK and Egalet

## Oncology Scientific Advisory Board

**Dr. Javier Cortes, MD, PhD**  
Doctor of Medical Oncology and Head of the International Breast Cancer Center, Barcelona

**Dr. Michael Andersson, MD, DMSci**  
Clinical Oncologist, Specialist in HER2-positive breast cancer

**Dr. Ulrik Lassen, MD, PhD**  
Professor of Clinical Oncology & Personal Medicine at the University of Copenhagen, Head of Oncology Department at the National Hospital (Rigshospitalet)

**Dr. Giuseppe Curigliano, MD, PhD**  
Associate Professor of Medical Oncology at the University of Milan, Head of Early Drug Development Division at the European Institute of Oncology

**Dr. Rupert Bartsch, MD**  
Associate Professor of Medicine at the Medical University of Vienna, Director of Breast Cancer Programme in the Department of Oncology

**Dr. Daniel Lenihan, MD, FACC, FESC, FIC-OS**  
Cardiologist at the St. Francis Healthcare System-Cape Girardeau in Missouri

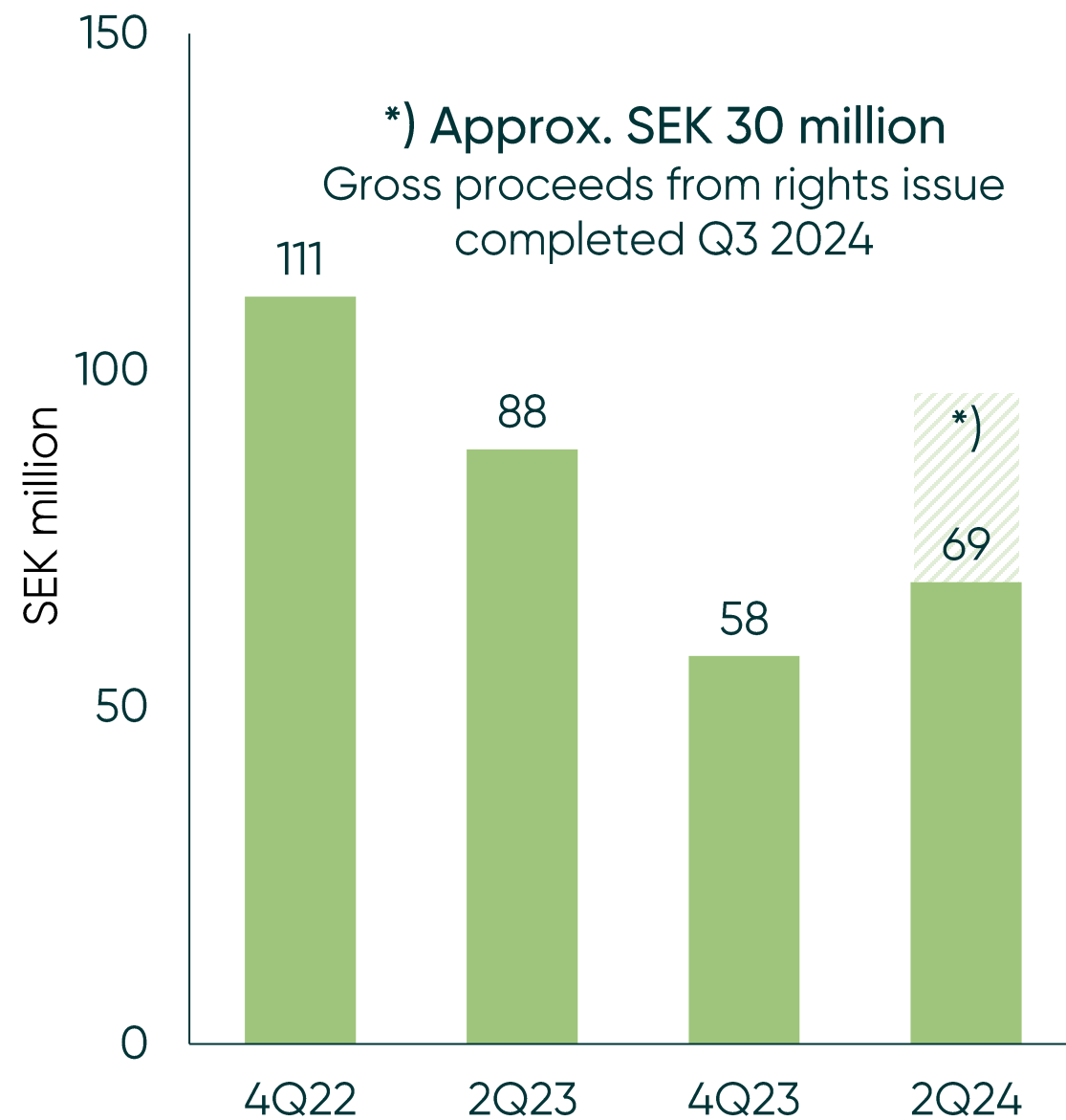
\*Not all icons for company experience shown on this slide.

# Pursuing next steps: Cash reserves and future funding

## Cash

## Milestones

## Important cash in-flow in the near-term



- CTA approval
- First-in-human
- Interim results

- TO 10 warrant subscription
- Subscription: Nov. 20 – Dec. 4, '24
  - Terms: 1 warrant = 1 new share
  - Price: 70% of the VWAP during Nov. 1-14 '24

- TO 11 warrant subscription
- Subscription: Sep. 18 – Oct. 2, '25
  - Terms: 1 warrant = 1 new share
  - Price: 70% of the VWAP during Sep. 1-12 '24

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