



PARETO SECURITIES ANNUAL HEALTHCARE CONFERENCE 2020

September 2020



Today's presenter
Andreas Andersson
Chief Executive Officer
M.Sc. Industrial Engineering
& Management
Joined Intervacc in 2018



Intervacc at brief



- 1 Developing modern **animal health vaccines** with **lead product Strangvac®** expected to be launched commercially in Europe in 2021
- 2 Addressing a **resilient, growing and large end-market** of next generation animal health vaccines contributing to **improved animal health and reduced use of antibiotics**
- 3 **Pipeline of vaccine candidates** developed based on world leading expertise from the **Karolinska Institute, KI**, and the **Swedish University of Agricultural Sciences, SLU**, with a platform within **fusions of recombinant proteins**
- 4 Focused **commercialization strategy** with **several routes to market** expected to generate multiple commercial milestones
- 5 **Swedish company listed on Nasdaq First North** with experienced leadership team and investor base

Strangvac[®] - a safe and efficacious vaccine against strangles

STRANGVAC[®] IS A MULTICOMPONENT FUSION PROTEIN SUBUNIT VACCINE

- **Excellent** safety profile
- Up to **94% efficacy** in clinical trials
- Minimum **12 months** memory cells
- Administered to +100 horses in multiple clinical trials conducted in the UK at the Animal Health Trust
- **Easy intramuscular** administration
- **Large global market** with unmet medical need



A safe, easy to administrate and protective vaccine is a game changer in the fight against strangles

Source: Company information.

Strangvac[®] targets the highly contagious disease Strangles

DESCRIPTION OF STRANGLES

→ The **most frequently** diagnosed infectious equine disease in the world

→ There are some **60 million horses** in the world

→ **Highly** contagious

→ Outbreaks are **very costly** to control (quarantine, transportation restrictions, sanitation)

Anatomy of a healthy horse and an infected horses with nasal discharge and ruptured abscesses



Source: (clockwise from left) horsetalk.co.nz; horseandcountry.tv; horsevet.co.uk; thearabianmagazineonline.com; eurodressage.com

Strangvac[®] targets a global market

STRANGVAC[®] ADDRESSES A GLOBAL POPULATION OF 60 MILLION HORSES



Vaccines **target all horses** since it is disease preventing



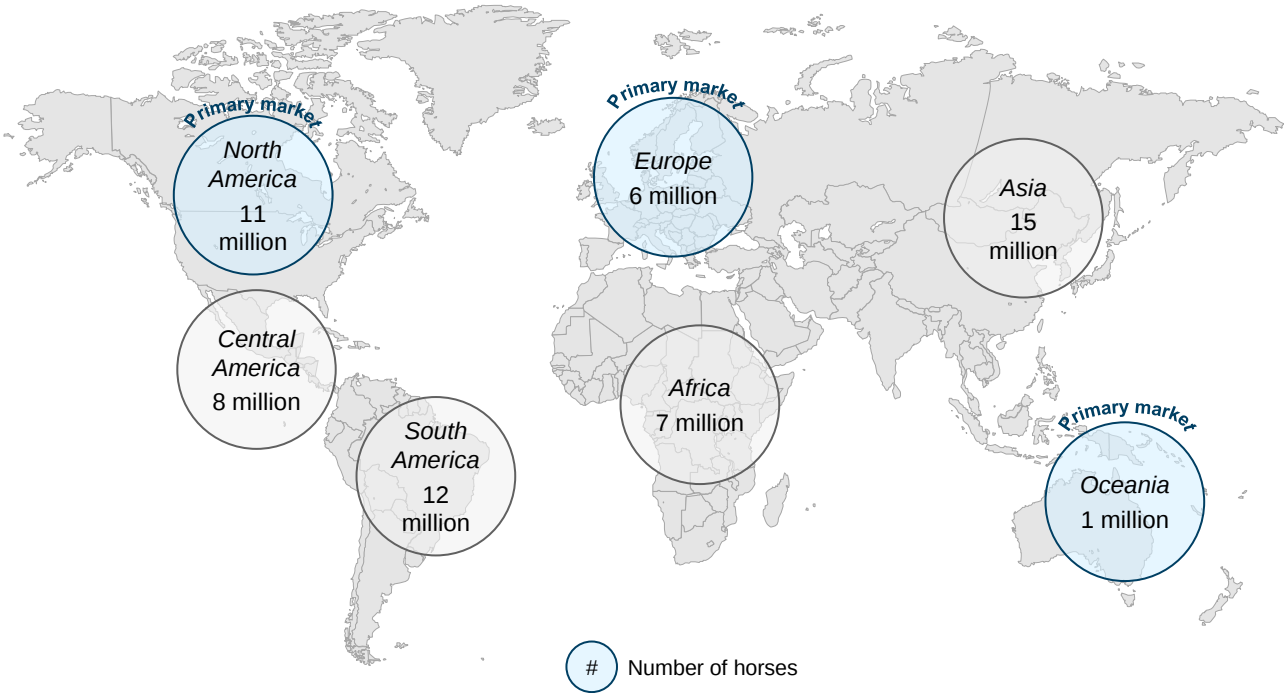
Intervacc's primary markets comprise **~1/3** of global horse population



In primary markets **30 – 60%** of horses are vaccinated



Annual vaccinations result in **recurring revenue**



No competing vaccine available on a global scale

Source: Company information.

2020 Half year report/Q2 – todays Agenda



- Strong cash position
- Strengthened the organization
- Regulatory process in Europe for Strangvac progressing as planned
- We are starting to look at US market and regulatory process
- We are preparing for market launch in Europe, including distribution channel
- We are progressing in our earlier phase R&D projects
- Strangvac studies publication in Vaccine

Successful directed share issue

6,537,973 shares at a subscription price of **SEK 22.50 per share**, raising gross proceeds of **~SEK 147 million**

The subscription price of SEK 22.50 per share corresponded to a **discount of ~4.5%**

Use of the net proceeds:

- i. prepare for commercialization of Strangvac[®], including regulatory process with the USDA, technology transfer to the US, and regulatory processes in selected other markets outside the US and EMA jurisdictions;
- ii. advance pre-clinical vaccine projects to next stage; and
- iii. continue to build and strengthen the organization to support the Company's growth strategy and general corporate purposes.

Two new board members that adds international experience within Animal Health

Individual	Joined BoD	Selected experience
Björn Sjöstrand <i>Chairman of the Board</i>	2017	• CEO at Scandinavian Biopharma • CEO at SBL Vaccin in Sweden • CEO at Swiss Berna Biotech
Newton Aguiar <i>Member of the Board</i>	2018	• Senior healthcare advisor at Warburg Pincus • Partner at Avista Partners • Board Member at Nycomed and Phadia
Marianne Hansson <i>Member of the Board</i>	2018	• CEO at Mariham consulting • CEO at Atlas Antibodies • Business Development Manager at Affibody
Bengt Guss <i>Member of the Board</i>	2001	• Co-founder of Intervacc • Professor in Veterinary Bacteriology at Swedish University of Agricultural Sciences • Professor in Microbiology, specialized in Bacteriology at Swedish University of Agricultural Sciences
Stefan Ståhl <i>Member of the Board</i>	2009	• Professor and Deputy Head of Department, Department of Protein Science, School of Engineering in (CBH¹⁾) Royal Institute of Technology • Co-founder at Creative Peptides • Co-founder and CSO at Affibody • Co-founder Atlas Therapeutics
 Niels Holck <i>Member of the Board</i>	2020	• Novo Nordisk • SmithKline Beecham Animal Health • Pfizer Animal Health Group
 Ed Torr <i>Member of the Board</i>	2020	• Senior non-executive at Animalcare Group Plc • Senior Positions at Dechra Pharmaceuticals • National Sales Manager at Alfa Laval Agri

1) Chemistry, Biotechnology and Health;

Dr. Andrew Waller joined as CSO from July first 2020



We welcome
Andrew Waller



A new generation of vaccines within animal health

Chief Scientific Officer at Intervacc

Previously Head of Bacteriology Research at
Animal Health trust

Andrew's research is dedicated to improving the
health of animals by reducing the incidence of
streptococcal disease, such as Strangles.

Intervacc appoints international bacteriology expert as Chief Scientific Officer

Stockholm 11 June 2020 – The Swedish biotechnology company Intervacc AB (publ), which is developing modern, effective and safe vaccines for animal health has appointed Dr. Andrew Waller as the new Chief Scientific Officer, CSO. The company has thus appointed an international leader in bacterial research in veterinary species to lead the company's exciting development program for vaccines based on recombinant proteins. This appointment follows on the success of Intervacc's lead vaccine project against strangles in horses, Strangvac®, which was evaluated by Andrew's former laboratory at the Animal Health Trust. Dr. Andrew Waller will in his new role work together with the company's co-founder Professor Jan-Ingmar Flock to lead the continued research to develop a new generation of vaccines within animal health.

Andrew Waller is one of the world's leading scientists in research related to streptococcal infections of animals with particular expertise on equine strangles. In addition to conducting the clinical trials of Strangvac®, his experience of the molecular genetics and epidemiology of these pathogens has informed the advice given to veterinarians and owners and led to the development of gold-standard diagnostic tests that are used around the world to prevent and resolve outbreaks. He will greatly contribute towards establishing Strangvac® on the market and he will strengthen Intervacc's research to develop vaccines against *Streptococcus suis* and *Staphylococcus aureus*. As CSO he will lead the research, product development and clinical activities in close collaboration with our great research teams at Karolinska Institute and Swedish University of Agricultural Sciences (SLU).

"I have known Andrew for many years and I am really glad that he has decided to join us in our future enterprises as new CSO and it will be great to collaborate with him even more closely," Jan-Ingmar Flock says. *"In addition to his knowledge of strangles, Andrew's appointment ensures continuity and provides modern bacteriological expertise within the company."*

"I am excited that we have been able to recruit yet another strong and leading researcher to Intervacc. Andrew adds a fantastic energy and competence in the very important launch of our strangles vaccine, as well as in the further development of our promising pipeline projects" says Andreas Andersson CEO.

"The technology at the heart of Strangvac® directs an immune response to simultaneously target an array of proteins used by invading bacteria and has enormous potential for the development of new vaccines with which to improve animal health" says Andrew Waller. *"I am delighted to be joining Intervacc at such an exciting period in the company's history"*

Strangvac® - on track for EMA approval

- ✓ **Strangvac® clinical trials completed**
- ✓ **Commercial scale manufacturing secured**
- ✓ **Dossier submitted to the European Medicines Agency for registration**

The European Medicines Agency confirms that Intervacc's application for the granting of a Community marketing authorization for Strangvac is complete and correctly submitted

2020-03-18 | Legal Press releases

Stockholm March 18, 2020 – Intervacc AB (publ) announces that the European Medicines Agency, EMA, has today confirmed that the company's application for the granting of a Community marketing authorization for Strangvac is complete and correctly submitted. The regulatory review process for the vaccine against equine strangles, a highly contagious infectious disease now can be initiated.

- ✓ **On track for EMA approval**



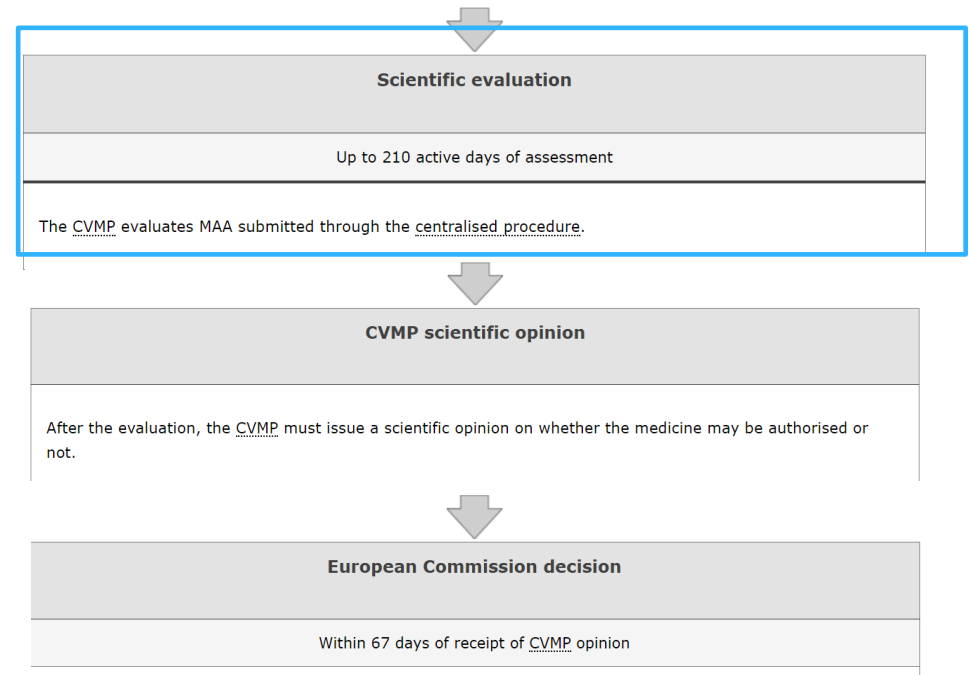
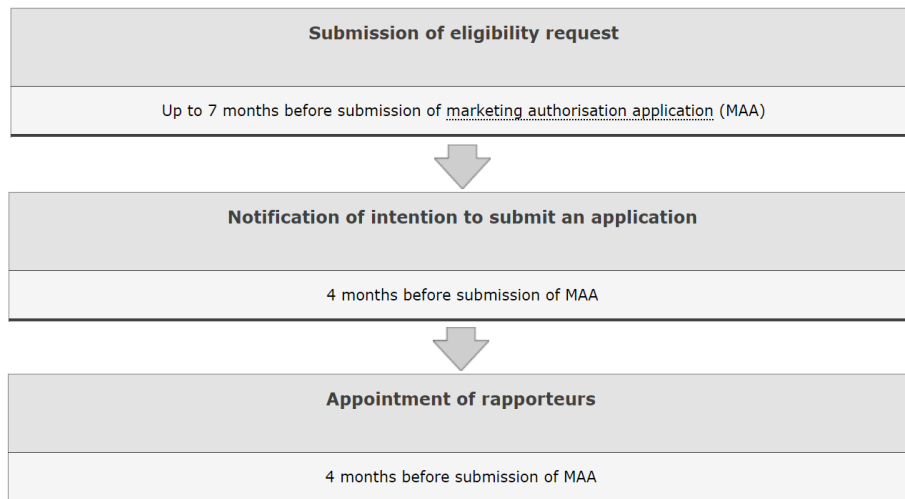
A safe, easy to administrate and protective vaccine is a game changer in the fight against strangles

EMA regulatory process for veterinary vaccines

Marketing authorisation

The European Medicines Agency (EMA) is responsible for the scientific evaluation of centralised [marketing authorisation applications](#) (MAA). Once granted by the European Commission, the centralised [marketing authorisation](#) is valid in all European Union (EU) Member States, Iceland, Norway and Liechtenstein.
UK recognize EMA MAH until Jan 2023 (prel information from 2020-09-01).

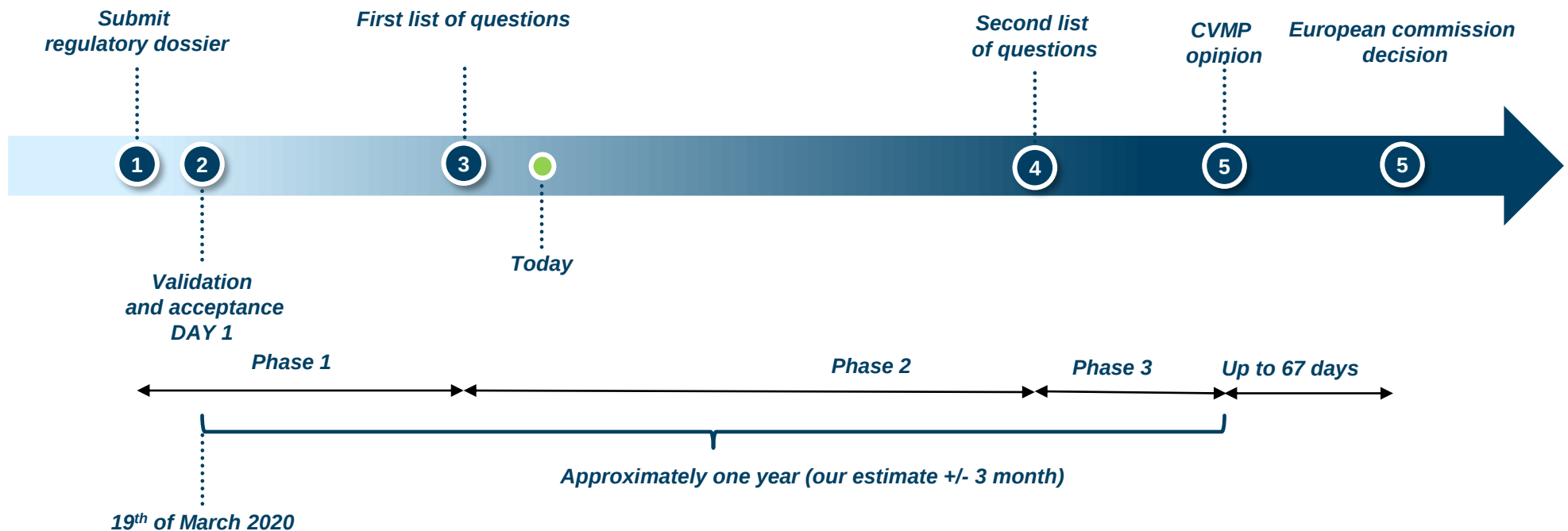
Steps involved in obtaining an EU marketing authorisation



Source: Company information.

EMA regulatory process for veterinary vaccines

Scientific Evaluation



USDA regulatory process for veterinary vaccines

Marketing authorisation for the US market



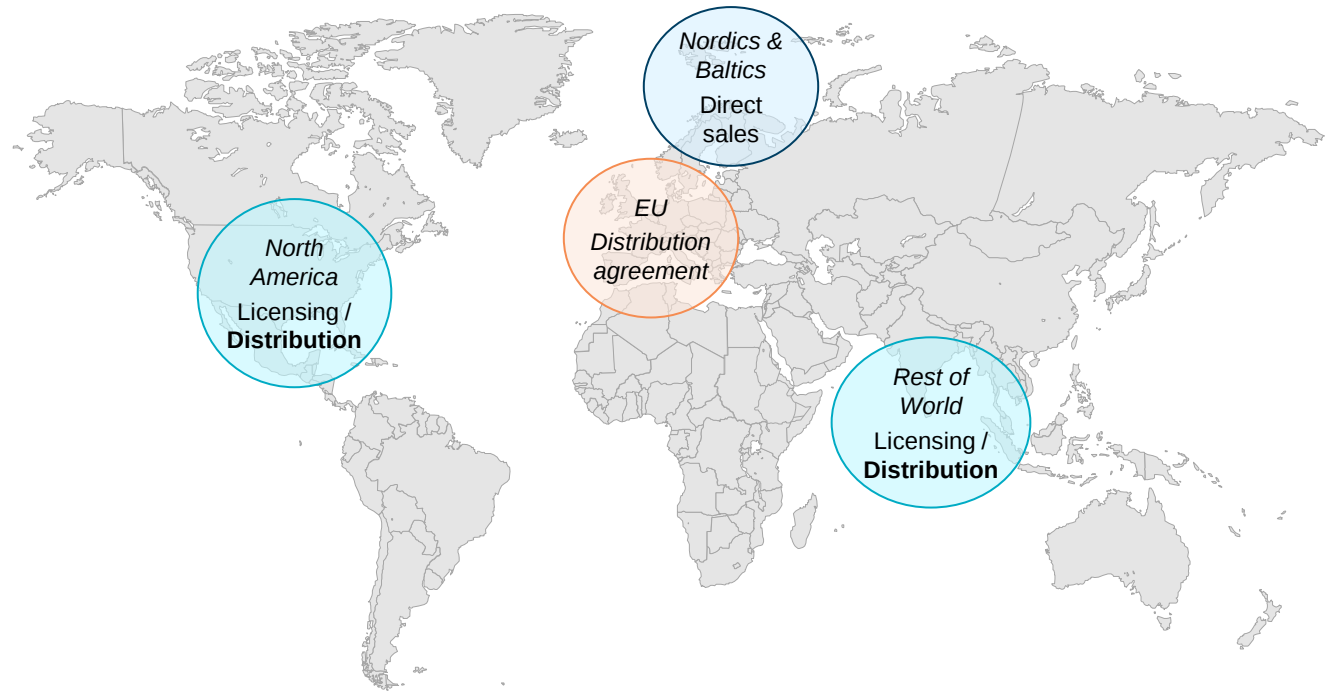
Center for Veterinary Biologics (CVB)

- The regulatory process is handled by Center for Veterinary Biologics, CVB, a part of the Animal and Plant Health Inspection Service, APHIS, that is a division under United States Department of Agriculture, USDA.
- The CVB is actively advising through the regulatory process. The CVB recommend that applicants submit a licensing plan, including pivotal study protocols, to the CVB for review and comment prior to initiating work that will be used to support product licensure.
- A few local safety studies in the United States on American horses will be required.
- Local production of drug product (fill finish), may be required/help the process
- We have started discussions with regulatory consultants and partner laboratories for the US regulatory process and local trials
- We make the assessment that the whole process takes 18-24 months

Focused commercialization strategy for Strangvac®

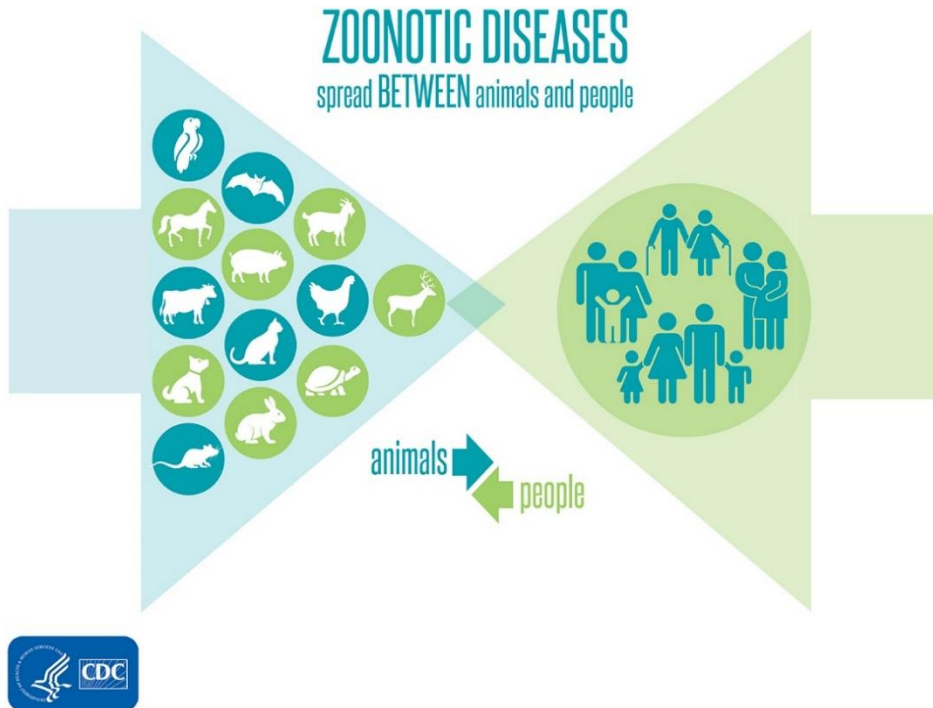
COMMERCIALIZATION STRATEGY

- Strangvac® has a global potential
- Intervacc intends to retain commercialization rights in the Nordics and potentially in other territories, including the Baltics
- The commercialization plan entails partnering with leading animal health players for commercialization in Europe, North America and rest of the world



Source: Company information.

Development of new veterinary vaccines is very relevant and has high priority



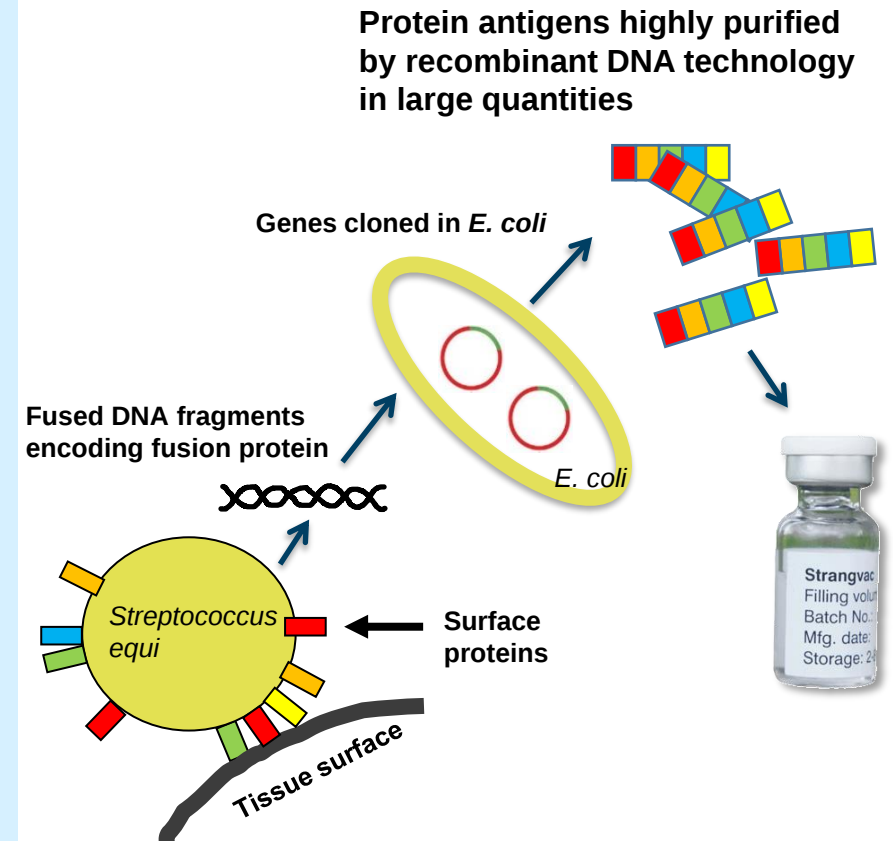
Technology platform results in vaccines with excellent safety profiles

Intervacc vaccines

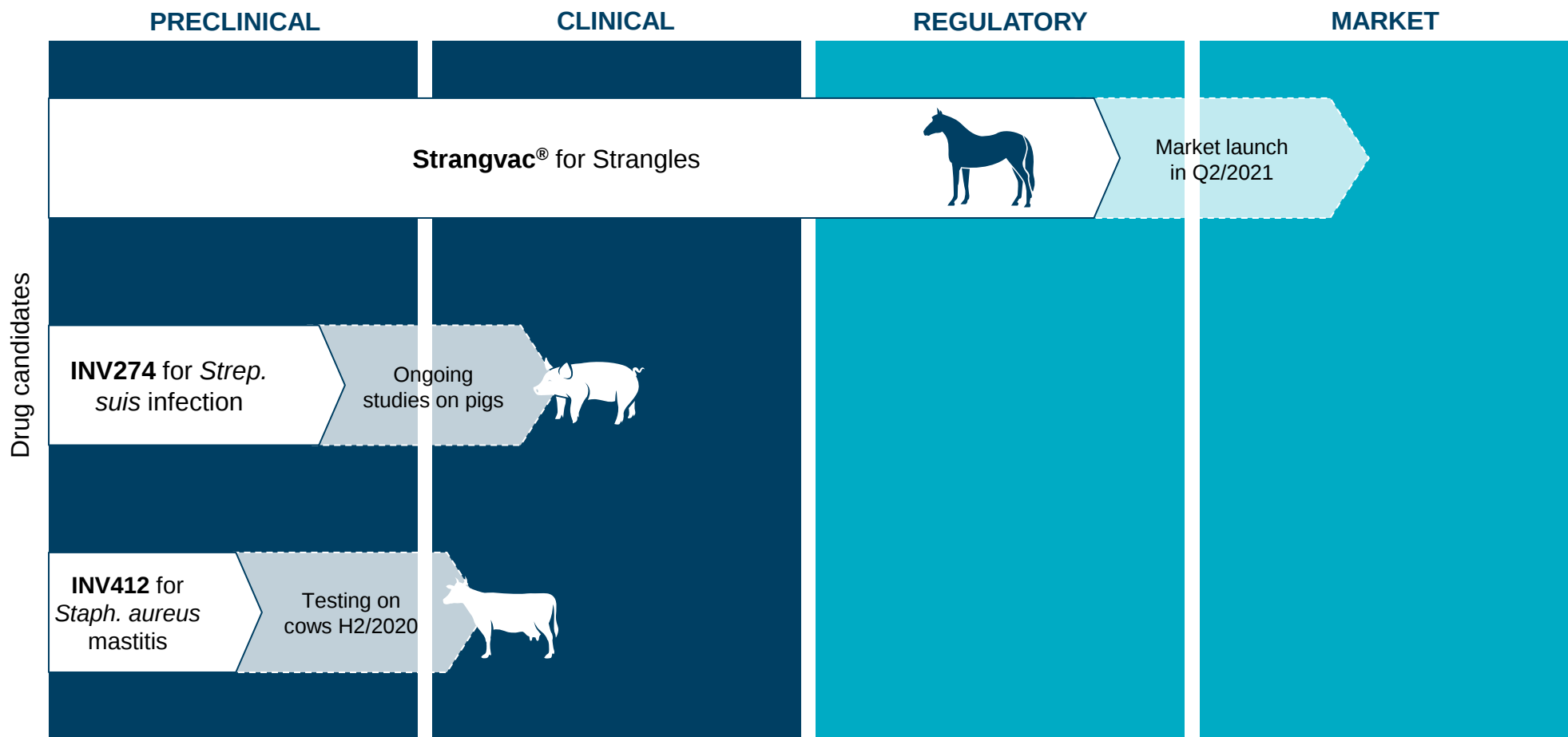
- ✓ Surface localized protein obtained by recombinant DNA technique
- ✓ Contains no live bacteria
- ✓ Completely safe and with good efficacy
- ✓ Global leadership in fusions of recombinant protein vaccine research through teams at Intervacc, KI and SLU

Conventional vaccines

- Live-attenuated
- Inactivated (killed)
- Toxoids



Diversified pipeline targeting significant unmet needs



Source: Company information.

Animal vaccine pipeline targeting sepsis, meningitis and mastitis

INV274 FOR *STREPTOCOCCUS SUI*S INFECTION

- *Streptococcus suis* infection in piglets is one of the most **common** bacterial causes of fatal infection in piglets leading to **big losses in production**
 - Global pig population estimated to approx. **1 billion pigs**
- Currently **no effective vaccine** against *Streptococcus suis* infection is available
- *Streptococcus suis* is a **zoonotic** bacteria that also **affects humans**
- Intervacc's vaccine candidates are being tested on piglets and sows



INV412 FOR *STAPHYLOCOCCUS AUREUS* MASTITIS

- Mastitis, caused by *Staphylococcus aureus* infections, is a common problem that causes **significant production losses** in the dairy industry
 - Global dairy cow population estimated to approx. **250 million cows**
- Currently **no effective vaccine** against *Staphylococcus aureus* infections in cows is available
- *Staphylococcus aureus* is also a **problem for humans** (MRSA)
- Intervacc has tested its vaccine candidate on rabbits and is progressing to the next step with tests on cows, starts after summer



Strangvac publication in Scientific journal

Positive results from Strangvac clinical trials published in scientific journal Vaccine

2020-06-04 | Legal Press releases

Results and analyses from clinical trials on the Strangvac® vaccine research project have been published online in the leading scientific journal 'Vaccine'. The article highlights that Strangvac® is safe and provides significant levels of protection to horses against strangles after only two doses. The study also showed that this initial course of two doses of Strangvac® induced an immunological memory that lasted for at least 12 months. Activation of the immune memory by a booster dose of Strangvac® given after 3 months successfully protected 94 % of ponies from strangles, highlighting the important role that this vaccine, pending approval, can play in minimizing the frequency and impact of this devastating infection. Importantly, the vaccination of horses with Strangvac® did not interfere with the diagnostic tests for strangles.



Strong momentum

- ✓ Strong cash position
- ✓ Strangvac on track for EMA approval
- ✓ Preparing for commercial launch Europe
- ✓ Preparing for Strangvac regulatory process for US market
- ✓ R&D projects based on same technology platform and partners as Strangvac shows good progress
- ✓ Attract International talent and grow organization for success

