ExpreS²ion announces positive Phase I/IIa malaria vaccine trial results by The Jenner Institute, University of Oxford

Horsholm, Denmark, October 31 2018 – Today, ExpreS²ion Biotech Holding AB ("ExpreS²ion") announces that The Jenner Institute of the University of Oxford presents positive results from its Phase I/IIa clinical studies with their RH5.1 blood-stage malaria vaccine at a scientific meeting in New Orleans. The vaccine, developed and manufactured using ExpreS²ion's ExpreS² platform, was shown to be safe and it is the first vaccine to demonstrate a reduction in the parasite multiplication rate following a blood-stage controlled human malaria infection.

In the results it is concluded, that RH5.1 is safe, immunogenic, and has a moderate, but significant, impact on parasite multiplication rate following primary and secondary controlled human malaria infection (CHMI) with blood-stage *P. falciparum*. Furthermore, the delayed fractional dosing arm of the study shows highly promising improved immunogenicity leading to a stronger, longer-lasting, and improved avidity antibody response. The AS01B adjuvant used in this study was supplied by the global pharmaceutical company GlaxoSmithKline.

"The promising results from this clinical study are a great achievement from the University of Oxford group and an important step towards creating a malaria vaccine for a broader large-scale use. We are excited to be a collaboration partner and delighted that our ExpreS² platform is used for the development and production of their cutting-edge RH5.1 malaria vaccine," **says ExpreS²ion's CEO Dr. Steen Klysner.**

"The encouraging results from this RH5.1 Phase I/IIa malaria study are in line with our preclinical findings and form a solid foundation on which to build the next steps in our blood-stage malaria vaccine clinical programme. We are grateful to ExpreS²ion for providing the enabling ExpreS² development and production platform, and their contribution to the project as a whole," **says Professor Dr. Simon Draper, Leader of The Jenner Institute's Blood-Stage Malaria Vaccine Group.**

In addition to the RH5.1 clinical program, ExpreS²ion's patented ExpreS² platform is currently being used in several other malaria vaccine projects, of which one is also a collaboration with University of Oxford. ExpreS² is also utilised in a number of projects elsewhere for the development of vaccines for major health threats such as Ebola and breast cancer. The breast cancer project is developed by the Company's joint venture AdaptVac.

The RH5.1 vaccine
RH5.1 is a novel, recombinant malaria antigen developed at The Jenner Institute, University of Oxford. It is based on a recombinant RH5.1 protein produced with the ExpreS² platform using *Drosophila* Schneider-2 cells. The RH5 antigen is a part of a larger protein complex expressed by the malaria parasite during infection, helping it to invade red blood cells and causing the disease. The RH5.1 vaccine is intended to induce antibodies that block red blood cell invasion and thus effectively block the progression of the disease.

The clinical study
The Phase I/IIa study was funded by Leidos Inc as part of the company's prime contract with the United States Agency for International Development (USAID) for the creation and testing of malaria vaccines. The study's main goals were to assess the safety, immune responses, dosing regimen and efficacy of RH5.1. The results from the study were presented at the annual American Society of Tropical Medicine and Hygiene (ASTMH) meeting on the 31st of October in New Orleans.

The abstract for the presentation of the results can be found at:
https://www.abstractsonline.com/pp8/#!/4692/presentation/18959

Malaria
Malaria is a major global problem, with 3.2 billion people living at risk of malaria infection. In 2015, malaria was thought to have caused 438,000 deaths, most of which (70%) occurred in children under five years old. This means that there is a great need for safe, effective malaria vaccines.

The Jenner Institute and the University of Oxford
The Jenner Institute is a research partnership between University of Oxford and The Pirbright Institute focused on the development of vaccines against major global diseases. The University of Oxford's Medical Sciences Division is one of the

largest biomedical research centres in Europe. The University is rated as the best in the world and it has one of the largest clinical trial portfolios in the UK and great expertise in taking discoveries from the laboratory into the clinic.

Certified Advisor
Sedermera Fondkommission is appointed as Certified Adviser for ExpreS²ion.

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This press release contains information that ExpreS2ion is obligated to make public pursuant to the EU Market Abuse Regulation. The information was submitted for publication through the agency of the contact person set out above October 31, 2018.

About ExpreS²ion
ExpreS²ion Biotechnologies ApS is the fully owned Danish subsidiary of Sweden-based ExpreS²ion Biotech Holding AB with company registration number 559033-3729. The subsidiary holds a unique proprietary platform, ExpreS², made for fast and efficient development and robust production of complex proteins with focus on new vaccines, immune therapy and diagnostics. Since it was founded in 2010, the company has produced more than 250 proteins and 35 virus-like particles (VLPs) for and in collaboration with leading research institutions and companies, demonstrating superior efficiency and success rates. In addition, ExpreS²ion develops novel vaccines based on a ground-breaking VLP platform through its Danish joint venture AdaptVac ApS, founded in 2017.