

## ExpreS<sup>2</sup>ion announces that the cVLP COVID-19 vaccine shows strong virus neutralization properties in animal proof-of-concept data

**Hørsholm, Denmark, June 09, 2020 – ExpreS<sup>2</sup>ion Biotech Holding AB (“ExpreS<sup>2</sup>ion”) hereby announces that the capsid virus-like particle (cVLP) COVID-19 vaccine being developed by ExpreS<sup>2</sup>ion and its joint venture AdaptVac has demonstrated excellent COVID-19 immunization with very high level of SARS-CoV-2 virus neutralization in a mice model, thus reaching an important pre-clinical milestone ahead of schedule. This is encouraging for the rapid development towards initiating clinical trials before the end of 2020.**

ExpreS<sup>2</sup>ion and its joint venture partner AdaptVac are 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 which is now demonstrated in animals.

The animal data from tests carried out by University of Copenhagen and Leiden University show a many-fold increase in immunogenicity and virus neutralization compared to a sub-unit vaccine control. The immune response itself from the antigen-coated cVLP is many hundred-fold higher than the antigen without display on the cVLP, and the mice bleed's ability to neutralize the virus is at least at par compared to published animal data from other COVID-19 vaccines. These data are an advancement of the previously announced development timeline that estimated announcement of animal data in early Q3 2020, which is encouraging for the ambitious goal of initiating the first human clinical study before the end of 2020.

The ExpreS<sup>2</sup>-system achieved robust expression of the SARS-CoV-2 Spike Receptor Binding Domain (RBD) protein. Following immunization of mice with the VLP displayed RBD, high-level antigen-specific antibody responses were measured after even a single vaccination. Most importantly, significantly improved functionality was demonstrated for the cVLP vaccine in an *in vitro* SARS-CoV-2 viral neutralization assay compared to the control sub-unit vaccine. Neutralization titres were impressively high.

### **ExpreS<sup>2</sup>ion's CEO Bent Frandsen comments**

“Reaching proof-of-concept in animals for our unique cVLP COVID-19 vaccine, utilizing the advantageous properties of AdaptVac’s capsid VLP and ExpreS<sup>2</sup>ion’s ExpreS<sup>2</sup> platforms, is a key scientific milestone in our COVID-19 vaccine project. Having achieved this progress ahead of schedule, with excellent SARS-CoV-2 virus neutralization data, is very encouraging with respect to our ambitious goal to initiate the first clinical trial of the vaccine before the end of 2020.”

### **About the COVID-19 Coronavirus outbreak**

A novel Coronavirus (COVID-19) outbreak was reported in Wuhan, China in late December 2019 and declared a pandemic by WHO on March 11<sup>th</sup>, 2020. The COVID-19 Coronavirus is a part of the same family as SARS and MERS, and there have been more than 7 million confirmed cases and over 400 000 deaths reported as of June 9<sup>th</sup>, 2020. The latest situation updates are available on the WHO web page: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

### **About AdaptVac**

[AdaptVac](#) is a joint venture between ExpreS<sup>2</sup>ion Biotechnologies and NextGen Vaccines, owned by the inventors of the novel proprietary and ground-breaking capsid virus-like particle (cVLP) platform technology spun out from the University of Copenhagen. The Company aims to accelerate the development of highly efficient therapeutic and prophylactic vaccines within high value

segments of oncology, infectious diseases and immunological disorders. Granting of the core patent in the U.S. has expanded AdaptVac's patent protection to include our entire pipeline of vaccines and immunotherapies in development.

**About the PREVENT-nCoV consortium**

ExpreS<sup>2</sup>ion Biotechnologies and AdaptVac are members of the PREVENT-nCoV consortium that earlier this year received an EU Horizon 2020 grant to rapidly advance a unique cVLP vaccine candidate against COVID-19 into the clinic. In addition to to [ExpreS<sup>2</sup>ion](#) and [AdaptVac](#), the 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, and the Laboratory of Virology at [Wageningen University](#).

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*This press release contains information that ExpreS<sup>2</sup>ion 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 on June 9, 2020.*

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**About ExpreS<sup>2</sup>ion**

ExpreS<sup>2</sup>ion Biotechnologies ApS is a fully owned Danish subsidiary of ExpreS<sup>2</sup>ion Biotech Holding AB with company register number 559033-3729. ExpreS<sup>2</sup>ion has developed a unique technology platform, ExpreS<sup>2</sup>, for fast and efficient non-clinical development and production of complex proteins for new vaccines and diagnostics. ExpreS<sup>2</sup> is regulatorily validated for clinical supply. The platform includes functionally modified glycosylation variants for enhanced immunogenicity and pharmacokinetics. Since 2010, the Company has produced more than 300 proteins and 40 virus-like particles (VLPs) in collaboration with leading research institutions and companies. Since 2017, ExpreS<sup>2</sup>ion develops novel VLP based vaccines through its joint venture AdaptVac ApS. For additional information, please visit [www.expres2ionbio.com](http://www.expres2ionbio.com) and [www.adaptvac.com](http://www.adaptvac.com).