

Healthcare industry BW

CureVac's Optimized mRNA Platform Provides Positive Pre-Clinical Results at Low Dose for Coronavirus Vaccine Candidate

CureVac AG, a clinical-stage biopharmaceutical company developing a new class of transformative medicines based on optimized mRNA, today announced positive pre-clinical results at a low dose for its lead vaccine candidate against the novel Coronavirus (SARS-CoV-2). The data showed a fast induction of a balanced immune response with high levels of virus neutralizing titers (VNTs) and T-cell responses. VNTs are a major criterion supporting that the vaccine candidate has the potential to induce a strong immunologic response to neutralize SARS-CoV-2.

The results underline the strength of CureVac's mRNA technology platform and are in line with previously generated data in Rabies, Flu and Respiratory-Syncytial-Virus (RSV). In all such indications CureVac's mRNA based vaccine candidates were active at low dose and protected animals from virus infection in established challenge models. Recently, the Company also tested the Rabies mRNA vaccine product candidate in a Phase 1 human clinical trial. The product candidate induced adaptive immune response as shown by protective levels of rabies-specific VNTs in all healthy volunteers who received two administrations of a dose of 1 microgram.

With regard to the Coronavirus vaccine candidate, upon publication of the sequence of the novel virus in January 2020, CureVac launched pre-clinical tests with a variety of potential antigenic constructs based on the spike protein to elicit high immunogenicity. The Company intends to initiate the first phase 1/2a clinical trial in healthy volunteers in June 2020 with its lead vaccine candidate.

CureVac has already produced large quantities of material for its vaccine candidate in its GMP III manufacturing facility in Tübingen (Germany). The manufacturing capacity of the facility can potentially supply several hundred million doses per year, depending on the human dose defined in the clinical trials.

Dr. Mariola Fotin-Mleczek, Chief Technology Officer of CureVac, says: "This pre-clinical data validates our strategy to leverage the promising results in healthy volunteers of our Rabies vaccine candidate shown in our ongoing clinical trial. It is remarkable that with both vaccine candidates - Rabies and Coronavirus - as well as with our Flu and RSV projects, we were able to achieve positive results at such a low dose. The outcomes demonstrate the potential of our mRNA technology platform to revolutionize the field of vaccines."

Dr. Franz Werner-Haas, acting Chief Executive Officer and Chief Operating Officer, adds: “We have been working on our mRNA platform for almost two decades and are leveraging our deep scientific understanding of the technology. With recurring positive results for Flu, RSV, Rabies and now our Coronavirus vaccine candidate, we have demonstrated the sustained performance of our mRNA platform. We are convinced that with our expertise and advanced technology we are well positioned to fight viral outbreaks such as the current one and that our approach may provide the best chance to protect many people from SARS-CoV-2 and other health threats.”

The Company has received financial support for its Coronavirus vaccine development from the Coalition for Epidemic Preparedness Innovations (CEPI), the Bill & Melinda Gates Foundation as well as from the Defense Advanced Research Projects Agency (DARPA), an agency of the U.S. Department of Defense.

About CureVac’s mRNA technology platform

CureVac’s mRNA technology platform has shown potential in the development and production of mRNA based vaccines and therapeutics. CureVac’s RNAoptimizer platform aims to optimize the properties of mRNA medicines based on its three core pillars: protein design, mRNA optimization and mRNA delivery. The technology can be tailored to induce varying degrees of immune responses against specific protein antigens of choice, potentially providing potent prophylactic vaccines for the prevention of infectious diseases, such as Rabies, as well as immunotherapies for the treatment of cancer. The technology can also be adapted to avoid immune activation for purposes of protein therapy and antibodies, thereby providing potential new therapeutic modalities for patients suffering from a vast range of diseases.

About CureVac AG

CureVac is a leading clinical stage biotechnology company in the field of messenger RNA (mRNA) technology with 20 years of expertise in developing and optimizing this versatile molecule for medical purposes. The principle of CureVac's proprietary technology is the use of mRNA as a data carrier to instruct the human body to produce its own proteins capable of fighting a wide range of diseases. The company applies its technologies for the development of cancer therapies, antibody therapies, the treatment of rare diseases, and prophylactic vaccines. CureVac has received significant investments, amongst others from dievini Hopp BioTech holding and the Bill & Melinda Gates Foundation. CureVac has also entered into collaborations with multinational corporations and organizations, including Boehringer Ingelheim, Eli Lilly & Co, Genmab, CRISPR Therapeutics, the Bill & Melinda Gates Foundation, CEPI and others. CureVac is headquartered in Tübingen, Germany with sites in Frankfurt and Boston, USA.

Press release

14-May-2020

Source: CureVac AG

Further information

Thorsten Schüller, Corporate Communications
CureVac AG, Tübingen, Germany
Phone: +49 (0)7071 9883-1577
E-mail: [thorsten.schueller\(at\)curevac.com](mailto:thorsten.schueller@curevac.com)

