



CureVac Publishes in Nature Preclinical Data of Second-Generation COVID-19 Candidate, CV2CoV, Demonstrating Comparable Antibody Levels to Licensed mRNA Vaccine

TÜBINGEN, Germany/ BOSTON, USA – November 18, 2021 – CureVac N.V. (Nasdaq: CVAC), a global biopharmaceutical company developing a new class of transformative medicines based on messenger ribonucleic acid (“mRNA”), today announced the online publication of the extended preclinical study of the second-generation vaccine candidate, CV2CoV, jointly developed with GSK, in the journal [Nature](#). The newly published data features a direct comparison of CV2CoV with the licensed mRNA vaccine, Comirnaty® (Pfizer/BioNTech). Neutralizing antibody levels measured following full vaccination of animals with either 12µg of CV2CoV or a 30µg standard dose of Comirnaty® were shown to be highly comparable.

The data confirm how targeted optimizations of a non-chemically modified mRNA can significantly improve immune responses in a preclinical model, providing substantiated support for the unmodified mRNA technology approach. This applies not only to the development of COVID-19 vaccines but to the mRNA technology field as a whole.

The study, conducted in collaboration with Dan Barouch, MD, PhD, of Beth Israel Deaconess Medical Center, investigated immune responses as well as the protective efficacy of CV2CoV and first-generation candidate, CVnCoV, against SARS-CoV-2 challenge in cynomolgus macaques. It was made available via the bioRxiv preprint server in August 2021. For additional details, please refer to the previously issued [press release](#).

About the Study

Within the study, CV2CoV and CVnCoV were tested in cynomolgus macaques immunized with a 12µg dose of the respective candidate on day 0 and day 28. For comparison with Comirnaty®, animals were vaccinated twice, on day 0 and day 21, with 30µg of the licensed vaccine and antibody titers were measured at peak immunity at week 5. Within the comparison of CV2CoV with CVnCoV, CV2CoV consistently showed better activation of innate and adaptive immune responses, resulting in earlier response onset, higher antibody titers and stronger memory B and T cell activation. Higher antibody neutralizing capacity was observed with CV2CoV across a range of relevant variants, including the Delta variant. During challenge with the original SARS-CoV-2 virus, animals vaccinated with CV2CoV were found to be better protected than animals vaccinated with CVnCoV based on effective clearance of the virus in the lungs and nasal passages.

About CV2CoV

CV2CoV is CureVac’s first candidate based on the advanced second-generation mRNA backbone from the broad second-generation program currently developed in collaboration with GSK. The vaccine candidate, presently at a preclinical development stage, is a non-chemically modified mRNA, encoding the prefusion stabilized full-length spike protein of the SARS-CoV-2 virus, and formulated within Lipid Nanoparticles (LNPs). CV2CoV was engineered with specifically optimized non-coding regions to exhibit improved mRNA translation for increased and extended protein expression compared the first-generation mRNA backbone.

About CureVac

CureVac is a global biopharmaceutical company in the field of messenger RNA (mRNA) technology, with more than 20 years of expertise in developing and optimizing the versatile biological molecule for medical purposes. The principle of CureVac's proprietary technology is the use of optimized mRNA as a data carrier to instruct the human body to produce its own proteins capable of fighting a broad range of diseases. In July 2020, CureVac entered in a collaboration with GSK to jointly develop new products in prophylactic vaccines for infectious diseases based on CureVac's second-generation mRNA technology. This collaboration was later extended to the development of second-generation COVID-19 vaccine candidates, and modified mRNA vaccine technologies. Based on its proprietary technology, CureVac has built a deep clinical pipeline across the areas of prophylactic vaccines, cancer therapies, antibody therapies, and the treatment of rare diseases. CureVac had its initial public offering on the New York Nasdaq in August 2020. It is headquartered in Tübingen, Germany, and employs more than 700 people at its sites in Tübingen, Frankfurt, and Boston, USA. Further information can be found at www.curevac.com.

CureVac Investor Relations Contact

Dr. Sarah Fakh, Vice President Corporate Communications and Investor Relations
CureVac, Tübingen, Germany
T: +49 7071 9883-1298
M: +49 160 90 496949
sarah.fakh@curevac.com

CureVac Media Contact

Anna Kamilli, Manager Communications
CureVac, Tübingen, Germany
T: +49 7071 9883-1684
anna.kamilli@curevac.com

Bettina Jödicke-Braas, Manager Communications
CureVac, Tübingen, Germany
T: 49 7071 9883-1087
bettina.joedicke-braas@curevac.com

Forward-Looking Statements CureVac

This press release contains statements that constitute "forward looking statements" as that term is defined in the United States Private Securities Litigation Reform Act of 1995, including statements that express the opinions, expectations, beliefs, plans, objectives, assumptions or projections of CureVac N.V. and/or its wholly owned subsidiaries CureVac AG, CureVac Real Estate GmbH, CureVac Inc., CureVac Swiss AG and CureVac Corporate Services GmbH (the "company") regarding future events or future results, in contrast with statements that reflect historical facts. Examples include discussion of the potential efficacy of the company's vaccine and treatment candidates and the company's strategies, financing plans, growth opportunities and market growth. In some cases, you can identify such forward-looking statements by terminology such as "anticipate," "intend," "believe," "estimate," "plan," "seek," "project," or "expect," "may," "will," "would," "could," "potential," "intend," or

“should,” the negative of these terms or similar expressions. Forward-looking statements are based on management’s current beliefs and assumptions and on information currently available to the company. However, these forward-looking statements are not a guarantee of the company’s performance, and you should not place undue reliance on such statements. Forward-looking statements are subject to many risks, uncertainties and other variable circumstances, including negative worldwide economic conditions and ongoing instability and volatility in the worldwide financial markets, ability to obtain funding, ability to conduct current and future preclinical studies and clinical trials, the timing, expense and uncertainty of regulatory approval, reliance on third parties and collaboration partners, ability to commercialize products, ability to manufacture any products, possible changes in current and proposed legislation, regulations and governmental policies, pressures from increasing competition and consolidation in the company’s industry, the effects of the COVID-19 pandemic on the company’s business and results of operations, ability to manage growth, reliance on key personnel, reliance on intellectual property protection, ability to provide for patient safety, and fluctuations of operating results due to the effect of exchange rates or other factors. Such risks and uncertainties may cause the statements to be inaccurate and readers are cautioned not to place undue reliance on such statements. Many of these risks are outside of the company’s control and could cause its actual results to differ materially from those it thought would occur. The forward-looking statements included in this press release are made only as of the date hereof. The company does not undertake, and specifically declines, any obligation to update any such statements or to publicly announce the results of any revisions to any such statements to reflect future events or developments, except as required by law.

For further information, please reference the company’s reports and documents filed with the U.S. Securities and Exchange Commission (SEC). You may get these documents by visiting EDGAR on the SEC website at www.sec.gov.