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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549  
FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF THE  
SECURITIES EXCHANGE ACT OF 1934**

For the month of May, 2021

**Commission File Number: 001-39446**

**CureVac N.V.**

*(Exact Name of Registrant as Specified in Its Charter)*

**Friedrich-Miescher-Strasse 15, 72076  
Tübingen, Germany  
+49 7071 9883 0**

*(Address of principal executive office)*

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F                          Form 40-F   

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes                                            No                     

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes                                            No                     

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On May 13, 2021, CureVac N.V. (the “Company”) issued a press release together with its collaboration partner GSK announcing first preclinical data for its second-generation COVID-19 vaccine candidate, CV2CoV, in a rat model.

The information in this Form 6-K (including Exhibit 99.1) shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act.

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CUREVAC N.V.

By: /s/ Franz-Werner Haas, LLD, LLM  
*Chief Executive Officer*

Date: May 13, 2021

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EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
<a href="#">99.1</a>	<a href="#">CureVac N.V. Press Release dated May 13, 2021.</a>

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## Second-Generation COVID-19 Vaccine Candidate, CV2CoV, Demonstrates High Immunogenicity Against Virus Variants in Preclinical Study

- *Second-generation lead COVID-19 vaccine candidate, CV2CoV, developed in collaboration by CureVac and GSK*
- *CV2CoV mRNA shows high levels of antigen production in rat model*
- *Fast onset of strong neutralizing antibody titers after first vaccination*
- *High cross-neutralizing capacity of induced antibodies against selected Variants of Concern*

**TÜBINGEN, Germany/ BOSTON, USA – May 13, 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 together with its collaboration partner GSK, first preclinical data in a rat model, showing that its second-generation COVID-19 vaccine candidate, CV2CoV, induces high levels of antigen production as well as strong and dose-dependent immune responses in vaccinated animals. CV2CoV is a co-development between CureVac and GSK and is based on a new mRNA backbone, which differs from CureVac's first-generation vaccine candidate, CVnCoV, currently in late-stage clinical testing. Preclinical data in rats immunized with CV2CoV in the dose range of 0.5-40µg demonstrated fast onset of strong immune responses already after the first dose. In addition, the serum of vaccinated animals showed significant cross-neutralization against variants first discovered in Denmark (B.1.1.298), the UK (B.1.1.7) and South Africa (B.1.351). The full manuscript of the preclinical data is available on the pre-print server [bioRxiv](https://www.biorxiv.org/).

“mRNA technology has made tremendous progress since the clinical development of first-generation mRNA COVID-19 vaccine candidates started in early 2020, “ said Dr. Igor Splawski, Chief Scientific Officer of CureVac. “Spurred by the emergence of virus variants that have the potential to affect the efficacy of currently approved first-generation mRNA COVID-19 vaccines, CureVac and GSK aim to jointly develop second-generation vaccine candidates that offer improved immune responses and target emerging variants. Combined with lower doses, these second-generation vaccines could enable also broad protection against selected strains in a multivalent vaccine format.”

Roger Connor, president R&D GSK vaccines said “to successfully fight the COVID-19 pandemic in the long term, we will need different vaccines and we need to be able to respond effectively to emerging variants. We are pleased with these pre-clinical results as they show the potential of the next generation mRNA technology we are developing together with CureVac.”

CV2CoV is based on a new mRNA backbone that features targeted optimizations designed to improve intracellular mRNA stability and translation for increased and extended protein expression. These optimizations potentially allow for strong immune responses at low doses, which will support the development of multivalent vaccines to target rapidly spreading COVID-19 variants. First clinical trials for CV2CoV are expected to start in the third quarter of 2021.

Development of CV2CoV is carried out in collaboration with GSK. The CureVac-GSK COVID-19 collaboration announced in February 2021 extends the existing strategic mRNA technology partnership both companies entered in July 2020. The partnership targets second-generation vaccines and those with the potential for a multivalent or combination approach to address multiple emerging variants in one vaccine.

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### **About CVnCoV**

CureVac began development of its mRNA-based COVID-19 vaccine candidates in January 2020. The vaccine candidate chosen first for clinical development, CVnCoV, is an optimized, non-chemically modified mRNA, encoding the prefusion stabilized full-length spike protein of the SARS-CoV-2 virus, and formulated within Lipid Nanoparticles (LNPs). Phase 1 and 2a clinical trials of CVnCoV began in June and September 2020, respectively. Phase 1 interim data reported in November 2020 showed that CVnCoV was generally well tolerated across all tested doses and induced strong antibody responses in addition to first indication of T cell activation. The quality of immune response was comparable to recovered COVID-19 patients, closely mimicking the immune response after natural COVID-19 infection. In December 2020, CureVac initiated a pivotal Phase 2b/3, the HERALD study, with a 12µg dose of CVnCoV. In February 2021, CureVac initiated a rolling submission with the European Medicines Agency (EMA) for CVnCoV.

### **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 non-chemically modified mRNA as a data carrier to instruct the human body to produce its own proteins capable of fighting a broad range of diseases. Based on its proprietary technology, the Company 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 600 people at its sites in Tübingen, Frankfurt, and Boston, USA. Further information can be found at [www.curevac.com](http://www.curevac.com).

### **About GSK**

GSK is a science-led global healthcare company with a special purpose: to help people do more, feel better, live longer. For further information please visit [www.gsk.com/about-us](http://www.gsk.com/about-us).

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## **Forward-Looking Statements**

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 (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](http://www.sec.gov).

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