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 April, 2022

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 ☒

On April 21, 2022, CureVac N.V. (the "Company") issued a press release announcing preclinical data demonstrating immune responses and protective efficacy of a bivalent second-generation COVID-19 vaccine candidate jointly developed with GSK, combining two mRNAs encoding for the Beta and the Delta variant.

The information included in this Form 6-K (including Exhibit 99.1, but excluding the statements of the Company's Chief Scientific Officer contained in Exhibit 99.1 hereto) is hereby incorporated by reference into the Company's Registration Statement on Form F-3 (File No. 333-259613).

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: April 21, 2022

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
99.1	CureVac N.V. Press Release dated April 21, 2022.

Exhibit 99.1

CureVac and GSK's Bivalent Second-Generation mRNA Vaccine Candidate Shown to be Highly Effective Against SARS-CoV-2 Variants in Preclinical Study

- *Vaccine candidate combining Beta- and Delta-specific mRNAs shows strong protection and immune responses during preclinical challenge study*
- *Demonstrated neutralizing capacity against the Omicron variant in vaccinated animals*
- *Technology adaptation for bivalent approach for COVID-19 vaccines potentially allows for broader protection against emerging variants*

TÜBINGEN, Germany/ BOSTON, USA – April 21, 2022 – CureVac N.V. (Nasdaq: CVAC), a global biopharmaceutical company developing a new class of transformative medicines based on messenger ribonucleic acid ("mRNA"), today announced preclinical data demonstrating immune responses and protective efficacy of a bivalent second-generation COVID-19 vaccine candidate jointly developed with GSK, combining two mRNAs encoding for the Beta and the Delta variant.

The preclinical study, conducted in collaboration with the Friedrich-Loeffler-Institut, Germany, assessed the bivalent candidate in comparison to the corresponding monovalent candidates targeting either variant in a mouse model. Despite containing only half the dose per variant-mRNA, the combined Beta/Delta candidate elicited neutralizing antibody titers fully comparable to the monovalent candidates of the respective variant. During exposure of the vaccinated animals to either the Beta or the Delta variant, the bivalent mRNA vaccine significantly reduced the viral load in the animals. High neutralizing antibody titers were accompanied by robust T cell responses. Notably, the bivalent Beta /Delta vaccine candidate induced two-fold higher virus neutralizing antibody titers against the Omicron variant than against the Delta variant in a rat model. This finding provides evidence for a potentially increased breadth of immune responses of the bivalent approach. The full manuscript of the preclinical data is available on the preprint server bioRxiv.

"Since the beginning of the pandemic, new COVID-19 variants have continued to evolve, each characterized by different virulence and transmissibility," said Dr. Igor Splawski, Chief Scientific Officer of CureVac. "New vaccine strategies, such as multivalent approaches, combining several variant-specific mRNAs within one vaccine, can be essential to take control over the COVID-19 virus dynamic and set new standards for broadly effective vaccines against other infectious diseases. Following our recent multivalent approach for influenza, we are now taking advantage of this advanced technology approach in our COVID-19 vaccine program."

Within the study, transgenic mice expressing the human ACE2 receptor were immunized on day 0 and day 28 with a 0.5 µg dose of the monovalent second-generation vaccine candidate against either the ancestral virus (CV2CoV), the Beta (CV2CoV.351) or the Delta (CV2CoV.617.2) variant, or with a 0.5 µg dose of the bivalent vaccine candidate combining the Beta and Delta variant (CV2CoV.351+ CV2CoV.617.2). Vaccinated animals were challenged on day 56 with either the Beta or the Delta virus variant. Vaccine induced T cells, including lung-resident memory $CD8^+$ T cells, were characterized by flow cytometry. Additionally, the neutralizing capacity of the mono- and bivalent candidates was tested against multiple virus variants, including Omicron in serum samples of immunized Wistar rats.

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, optimizing and manufacturing this 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 900 people at its sites in Tübingen, Frankfurt, and Boston, USA. Further information can be found at www.curevac.com.

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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.