



CureVac Conference Call, April 28, 2022

## **Fourth Quarter and Full-Year 2021 Financial Results and Business Updates**

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### **Presenters**

Dr. Franz-Werner Haas	Chief Executive Officer CureVac
Dr. Klaus Edvardsen	Chief Development Officer
Pierre Kemula	Chief Financial Officer CureVac
Dr. Sarah Fakhri	Vice President Corporate Communications & Investor Relations CureVac

**SARAH**

Thank you. Good morning, good afternoon and welcome to our conference call. My name is Sarah Fakhri, and I'm the Vice President of Corporate Communications and Investor Relations at CureVac.

Please let me introduce today's speakers.

On the call with me from CureVac are Franz-Werner Haas, the Chief Executive Officer of CureVac, Klaus Edvardsen, our Chief Development Officer and Pierre Kemula, Chief Financial Officer of CureVac.

Please note that this call is being webcast live and will be archived on the Events and Presentations section under Investor Relations on our website.

Before we begin, a few Forward-Looking Statements: The discussion and responses to your questions on this call reflect management's view as of today, Thursday, April 28th, 2022.

We will be making statements and providing responses to your questions that state our intentions, beliefs, expectations or predictions of the future. These constitute forward-looking statements for the purpose of the Safe Harbor provisions. These statements involve risks and uncertainties that could cause actual results to differ materially from those projected.

CureVac disclaims any intention or obligation to revise any forward-looking statements. For more information, please refer to our filings with the U.S. Securities and Exchange Commission.

I will now turn the call over to Franz.

**FRANZ** Thank you Sarah. Ladies and gentlemen, a warm welcome to this conference call from all of us here at CureVac.

CureVac has made significant progress over the past several months. We are expanding our solid product development pipeline, broad technology platform, and robust manufacturing capacities to strengthen our competitive position as a central mRNA player.

Let me give you a short overview of selected key developments in these three areas.

In prophylactic vaccines, we are successfully executing on the infectious disease and dedicated COVID-19 programs in collaboration with our partner GSK. We are extending our technology platform into multivalent as well as modified mRNA approaches to identify highly differentiated vaccine product candidates.

Together with GSK, we have advanced two vaccine candidates for COVID-19 and influenza respectively into Phase 1 testing, which we believe will establish the clinical value of our improved second-generation mRNA backbone. While these first two studies are investigating unmodified candidates, two additional studies for these indications with modified candidates will be initiated later this year.

A recently completed preclinical study assessing a bivalent COVID-19 candidate, combining two mRNAs encoding for the Beta and the Delta variant, has provided first evidence of the flexible variant adaptation of our second-generation mRNA backbone. Encouragingly, the data also showed a potentially increased breadth of immune response against tested variants, including Omicron, demonstrating the potential of our multivalent mRNA vaccination approach.

Most recently, together with GSK we were awarded a tender for pandemic preparedness by the German government – a strong sign of confidence in our ability to help safeguard public health. In case of

an ongoing COVID-19 or other infectious disease emergency, the five-year contract grants the government access not only to CureVac's manufacturing capacity but also to 80 million doses of vaccines developed by CureVac and GSK.

Leveraging our technology platform advances, we are preparing to expand our oncology pipeline – the next growth-driver beyond our progress in prophylactic vaccines.

Our goal is to establish a meaningful pipeline of cancer vaccines, with a strong focus on T cell mediated immune responses and supported by complementary antigen discovery and vaccine optimization technologies.

Our progress in oncology will be supported by the fast and flexible processes of The RNA Printer<sup>®</sup>, our end-to-end solution for automated manufacturing of GMP-grade RNA vaccines and therapeutics. In March this year, we launched a fully owned company to accelerate development of The RNA Printer<sup>®</sup> with a dedicated operational infrastructure and experienced management team.

Lastly, on the financial side, we closed 2021 with a solid cash position of 811 million euros. Pierre will later walk you through the financial details.

On slide 5 I would like to draw your attention to one of CureVac's most valuable yet potentially most undervalued assets – our extensive intellectual property portfolio.

Over the last two years, the development of safe and effective COVID-19 vaccines in record time was accomplished based on a technology that had to be developed over decades of intense scientific research. For mRNA to become a key technology in the fight against COVID-19, discoveries in multiple disciplines had to converge,

most notably immunology, virology and molecular biology, but also mRNA design, delivery and advances in manufacturing.

As the pioneers in harnessing the medical potential of mRNA, CureVac has played a critical role in developing many of the innovations that have enabled today's mRNA vaccines against COVID-19.

Correspondingly, we hold one of the largest and most diverse patent portfolios in this field.

Our patent portfolio comprises 120 patent families with more than 1,550 patent family members divided into large clusters that define our core competencies in RNA technology, product development and manufacturing.

Our technology cluster encompasses fundamental RNA optimization expertise as well as targeted strategies to improve mRNA immunostimulation and protein expression profiles.

Looking at an extract from an independent analysis of the patent landscape related to COVID-19 vaccines on slide 6, you can see the global patent portfolios of a number of industry players listed according to size and technological strength.

While the orange bars represent portfolio size, the blue bars represent the Patent Asset Index™ – a measure for the technological strength of the portfolio based on the frequency with which a patent is cited in other patent filings.

The CureVac portfolio shows by far the strongest technology relevance in comparison to other RNA but also mRNA companies. The CureVac Patent Asset Index™ is in fact almost twice as high as the Patent Asset Index™ of the next mRNA vaccine company – reflecting the strength of our innovation and our central position in the RNA field.

On slide 7, let me highlight the CureVac pipeline to show how we are translating our strong mRNA technology expertise into a diverse portfolio of product candidates across three therapeutic areas to address diseases with a high unmet medical need: prophylactic vaccines, oncology and molecular therapy.

Our technology platform improvements, with the development of a second-generation mRNA backbone, have led to significant progress in our clinical pipeline for prophylactic vaccines.

We have advanced development of CV2CoV, an unmodified mRNA vaccine candidate and the first of our second-generation COVID-19 vaccine candidates.

In addition, we have successfully extended our technology platform – and most notably also our manufacturing capabilities – to develop our first and highly differentiated **multivalent** unmodified mRNA influenza vaccine candidate together with GSK.

Both candidates have been advanced into Phase 1 clinical trials, and Klaus will talk about the clinical studies of both candidates in greater detail on the next few slides.

Together with GSK, we have broadened our development strategy to also test chemically modified mRNA technologies. This unrestricted technology approach will enable data-driven decisions to identify the best-performing product candidates.

Clinical programs with chemically modified mRNA for COVID-19 and influenza are expected to start later this year.

In oncology, our lead candidate, CV8102, is currently being assessed in a Phase 1 clinical trial in solid tumors. A CV8102 expansion cohort in advanced melanoma is ongoing, and we expect to provide an updated readout in the second half of this year.

Our technology platform improvements will have a clear read-through into our immuno-oncology pipeline, where we plan to build a meaningful portfolio of cancer vaccine candidates eliciting strong systemic and tumor-directed immune responses.

In the third therapeutic area, molecular therapy, we are developing optimized mRNA therapeutics together with several renowned collaboration partners for the development of antibodies and therapeutic proteins intended to treat diseases characterized by missing or inactive proteins.

Looking at the number of studies on [clinical-trials-dot-gov](https://clinicaltrials.gov), only 10-15 percent of more than 2000 registered clinical trials involving mRNA relate to SARS-CoV-2 vaccines, demonstrating the huge potential of mRNA technology to revolutionize medicine in years to come.

The era of RNA technology has only just begun, and we expect the global mRNA pipeline to grow dramatically over the next decade.

Let me now hand over the call to Klaus to dive deeper into the recent progress of our prophylactic vaccine and oncology programs.

**KLAUS**

Thank you Franz. I am now on slide 8 to walk you through the Phase 1 clinical trials that we are conducting in collaboration with GSK for our jointly developed COVID-19 and influenza vaccine candidates.

The first two clinical trials with the unmodified candidates have already been initiated. The availability of unmodified mRNA clinical trial material based on existing manufacturing licenses initially prioritized these candidates.

In the meantime, clinical trial material for the modified candidates has been produced, and clinical trials are expected to start later this year.

For CV2CoV, a Phase 1 dose-escalation study was initiated in the U.S in March of this year.

CV2CoV encodes for the original SARS-CoV-2 strain, which has allowed us to directly compare its significantly improved immune responses to our first-generation candidate in several preclinical studies.

In addition, a recent preclinical study in mice has shown that the second-generation mRNA backbone used in CV2CoV can be flexibly targeted to other variants and elicits good immune responses against encoded variants. I will update you on these new findings later in this presentation.

The Phase 1 trial is expected to recruit up to 210 participants in six dose groups ranging from two to twenty micrograms per dose. It targets seropositive participants to test administration of two doses of CV2CoV as a booster vaccination.

Recruitment of participants is progressing according to plan.

For the influenza candidate, CVSQIV, an equivalent Phase 1 dose-escalation study was initiated in February this year. The candidate is a differentiated multivalent vaccine featuring multiple mRNA constructs. It was designed to elicit an immune response against

recent antigens of the four different flu strains that cause the seasonal outbreaks.

The trial was initiated in Panama to be separated from the flu season in Europe and North America. It is fully recruited with 240 participants in five dose groups ranging from three to twenty-eight micrograms per dose. In accordance with conventional flu vaccines, it applies a one-dose booster vaccination.

A preliminary set of reactogenicity data across all dose groups has confirmed good tolerability with no serious, adverse events or other dose-limiting effects up to the highest dose of twenty-eight micrograms.

Let me give you a more detailed overview of the preliminary safety and tolerability profile of CVSQIV on the next slide.

On slide 9 you can see the percentage occurrence of the solicited systemic as well as local symptoms for all tested dose groups, stratified according to predefined age groups, including a younger population between the ages of 18 and 55 and an older age group at or above the age of 65.

From left to right, the data shows adverse events in ascending order of severity, starting from grade zero for no side effects to grade 3 for severe side effects.

While we see an expected and general dose-dependent increase in adverse event severity, CVSQIV was well tolerated. Among systemic symptoms, there were only very few grade-three fever events seen in the six and twenty microgram dose groups in the younger population and the three-microgram dose group in the older population.

Notably, there were no grade three events in the highest, twenty-eight microgram dose group. Overall, all adverse events were transient and rapidly resolved within 24 to 48 hours.

Taken together, these first preliminary safety data further strengthen our confidence in the increased clinical value of our second-generation backbone based on the targeted optimizations we implemented going from the first- to the second-generation mRNA backbone.

I am now on slide 10 to discuss our most recent preclinical COVID-19 study conducted in collaboration with the Friedrich-Loeffler-Institut. The study assessed CV2CoV, CV2CoV adaptations for the Beta or the Delta variant as well as a first bivalent candidate combining Beta and Delta-specific mRNAs in one vaccine candidate.

In the study, mice were fully vaccinated with a 0.5 microgram dose of each candidate, including the bivalent candidate, which was composed of 0.25 micrograms per mRNA.

Impact on neutralizing titers against the Beta or the Delta variant is shown on the left-hand side of the slide. It illustrates very nicely how candidates show higher antibody titers against the variants they encode for – that is CV2CoV-Beta performed better against the Beta variant than CV2CoV-Delta, and CV2CoV-Delta performed better against the Delta variant than CV2CoV-Beta.

Importantly, although the combined CV2CoV-Beta/Delta candidate contains only half the dose per variant mRNA, it elicits neutralizing antibody titers against both variants that are fully comparable to the individual candidates specifically encoding for the tested variant.

The middle graph shows that high neutralizing antibody titers are accompanied by robust T cell responses.

When vaccinated animals were directly exposed to the live Beta or Delta virus, all vaccine candidates efficiently suppressed viral replication in the lung or brain. Shown in the graph on the right-hand side of the slide is the detection of residual viral load in the upper respiratory tract, where protection is known to be challenging.

In case of exposure of the animals to the Delta variant, virus replication was almost fully suppressed in all but the control animals.

In the case of exposure of the animals to the Beta variant, all candidates strongly reduced the viral load. Again, the bivalent vaccine was equivalent to the matched CV2CoV-Beta candidate despite containing only half the dose of Beta mRNA.

In a separate set of experiments in the same study, serum from vaccinated Wistar rats was tested against the Delta or Omicron variant. Animals were vaccinated either with CV2CoV, CV2CoV-Delta, a bivalent candidate combining CV2CoV with CV2CoV-Delta or the CV2CoV Beta/Delta candidate.

Neutralizing antibody titers were three to nine times lower against the Omicron variant than against the Delta variant for all candidates – except for the bivalent CV2CoV-Beta/Delta candidate. Including Beta mRNA resulted in a two-fold increase of neutralizing antibody titers against Omicron compared to Delta.

Taken together, the preclinical study confirms the capacity of our second-generation mRNA backbone to encode for and to flexibly elicit strong immune responses against different COVID-19 variants.

Furthermore, we were able to extend the technology applied to our multivalent influenza candidate in our COVID-19 vaccine program.

Data for the bivalent Beta/Delta candidate suggests that combining mRNA for variants with unrelated lineages may increase the overall

breadth of the immune response and thus induce heterologous protection.

I am now on slide 12 to update you on our strategy in oncology, the next growth driver we are rapidly advancing beyond our progress in prophylactic vaccines.

Expanding our oncology footprint is based on mastering similar medical challenges as in infectious diseases, namely selection of antigens and induction of strong and targeted immune responses.

However, cancer is a complex and individual disease, and antigens vary greatly between patients. To address these challenges, we plan to execute on three strategic pillars:

- Apply our learnings, particularly from the second-generation mRNA backbone, to validate and optimize our technology for different classes of antigens and a focus on strongly T cell mediated immune responses.
- Build a meaningful pipeline of new cancer vaccine candidates based on accessing novel classes of antigens, leveraging the agility and speed of The RNA Printer<sup>®</sup>, our modular solution for integrated and automated manufacturing of GMP-grade mRNA vaccines and therapeutics.
- Finally, add highly complementary technology platforms to expand our expertise for efficient antigen discovery as well as new avenues for immuno-stimulation and vaccine design, including formulation.

With this, let me hand the call back to Franz.

## FRANZ

Thank you Klaus.

I am now on slide 13 to update you on the latest advances in The RNA Printer<sup>®</sup>. As Klaus already mentioned, the system is expected to play an important role in the planned expansion of our oncology pipeline. However, the scope of The RNA Printer<sup>®</sup> goes much further.

In March this year, we established a fully owned CureVac subsidiary to accelerate the development of The RNA Printer<sup>®</sup> under the leadership of Markus Bergmann, a seasoned manager in the high-tech field and physician by training.

The dedicated operational infrastructure will unlock the broad scope of the system as a product-enabling platform for academic and commercial partners but essentially also for CureVac. Its proprietary technology is designed to facilitate broad access to mRNA for the rapid translation of science to product.

Designed for flexible smaller-scale quantities, The RNA Printer<sup>®</sup> is expected to accelerate clinical developments and open new avenues for point-of-need pandemic preparedness as well as personalized mRNA-based cancer therapies.

As the system is currently in regulatory review, the next near-term catalysts expected this year are GMP certification, followed by a manufacturing license to produce first clinical trial material for the CureVac pipeline.

I am now on slide 14 to give you an overview of the pandemic preparedness tender we were recently awarded by the German government, together with GSK, to strengthen national resilience for the current COVID-19 pandemic as well as future infectious disease outbreaks.

The government tender seeks to secure manufacturing capacity in Germany as well as access to high volumes of pandemic vaccines to

mitigate risks associated with potential supply challenges in a public health emergency.

Correspondingly, the contracts, concluded with five different companies or consortia, differentiate between the contribution as a sole manufacturer and as a so-called originator, for the additional supply of 80 million doses of a pandemic vaccine. Out of the five consortia, the Curevac/GSK consortium is one of only two originators.

In this role, we plan to provide manufacturing capacity at our Germany-based, industrial-scale manufacturing facility, GMP IV, currently in an advanced state of construction. For the vaccine part of the contract, regulatory validation of our second-generation mRNA backbone will provide the basis for the rapid provision of pandemic vaccines developed by us and GSK. We plan to prepare both deliverables within the now ongoing two-year setup period.

Under the contract, the German government will pay CureVac and GSK an annual standby fee to maintain manufacturing capacity at constant readiness. Upon delivery of 80 million doses, payment per dose would be added.

We appreciate the strong commitment of the German government, acknowledging our ability to protect public health now and in the future based on new technologies – in our case mRNA technology.

Now let me hand over to Pierre for a review of the financial data.

**PIERRE** Thank you Franz and good morning, good afternoon to everyone on the call.

Looking at our current cash position, we closed the fourth quarter and full year 2021 with a strong cash position of 811 million euros.

In 2021, cash inflows were mainly provided by raising 404 million euros in net proceeds in a follow-on financing in Q1 2021, a 75-million-euro upfront payment in Q2 2021 related to our COVID-19 collaboration extension with GSK and an overall 93.5-million-euro grant received from the German Federal Ministry of Education and Research.

In 2021, cash used in operations was mainly allocated to the advancement of R&D activities and preparing for the supply of CVnCoV, our first-generation COVID-19 vaccine candidate, which we withdrew from the regulatory approval process in October 2021. Moving on to our Profit and Loss statement, revenues increased by 35.2 million euros to 41.2 million euros for the fourth quarter of 2021 and increased by 54.1 million euros to 103.0 million euros for the full year 2021, compared to the same periods in 2020.

The increase was primarily driven by revenues from our GSK collaborations and the termination of the Boehringer Ingelheim collaboration agreement.

Both GSK collaborations provided a total 74.3 million euros for the full year 2021 compared to 8.8 million euros in 2020.

Following the termination of the Boehringer Ingelheim agreement, the remaining contract liability, related to the upfront payment, was fully recognized.

In addition, an option fee payment of 5 million euros and a 7-million-euro-development milestone were also recognized.

For full year 2021, this led to a total of 26.0 million euros being recognized as revenue stemming from the Boehringer Ingelheim collaboration compared to 1.9 million euros for full year 2020.

Operating loss was 5.5 million euros for the fourth quarter of 2021, representing a 41.1 million euro decrease compared to the fourth quarter of 2020. For the twelve months ended December 31, 2021, operating loss increased by 302.5 million euros to a total of 412.3 million euros.

As I underlined previously, this increase was mainly driven by R&D activities and preparing for supply of CVnCoV throughout 2021.

The operating result was affected by several key drivers:

- Cost of sales increased primarily due to the recognition of expenses related to CMO set-up activities and, to a lesser extent, write-offs related to inventory in the period preceding the withdrawal of the EMA application for CVnCoV
- R&D expenses increased primarily due to significantly higher development expenses related to the Phase 2b/3 clinical trial for CVnCoV with 40,000 subjects. These expenses were mainly composed of costs incurred to CROs, an onerous contract provision for the remaining CVnCoV clinical trial costs and personnel costs involved in the remaining CVnCoV development.

In addition, the increase was also driven by the recognition of settlement costs related to the termination of several CMO contracts and write-offs of CVnCoV-related prepayments and inventory.

- G&A expenses increased due to consulting services for CVnCoV product launch readiness, personnel related costs with increased headcount and higher expense recognized on share-based payments awards made in 2021.

The overall increase in expenses was partially compensated by income related to the release of governmental contract liabilities, related to the upfront payment from the European Commission and the grant by the German Federal Ministry of Education and Research. The Advanced Purchase Agreement with the European Commission automatically terminated when we withdrew CVnCoV from the regulatory approval process in October 2021.

Since we were able to demonstrate that the upfront payment was spent in accordance with the contract, no repayment was required and the amount of 450 million euros was released and recognized as income related to the release of governmental contract liabilities in the fourth quarter of 2021.

The arrangement with the German Federal Ministry of Education and Research consisted of a separate grant component and a supply component with the German Federal Ministry of Health. The amount attributed to the supply of future deliveries was presented in contract liabilities in the balance sheet. 124 million euros were recognized as income related to the release of governmental contract liabilities in the P and L.

67.7 million euros were recognized in other income, mainly driven by the grant component.

Financial results for the fourth quarter increased by 1.0 million euros to 11.7 million euros and decreased by 0.2 million euros to 19.8 million euros over the twelve months of 2021.

Net financial loss was based on negative interest on cash, held in liquid funds to support development and manufacturing activities of CVnCoV and CV2CoV. It was almost fully offset by foreign exchange gains.

Pre-tax losses were 4.5 million euros in the fourth quarter and 412.5 million euros for the full year 2021.

With this I would like to hand back to Franz for today's key messages.

**FRANZ** Thank you, Pierre.

Let me quickly summarize the key take aways from today's presentation.

- Over the last several months, we have made significant progress in each of our core competencies, including technology, product pipeline and manufacturing, propelling us forward in our corporate development.
- Our competitive positioning in these three core competencies is built on one of the largest and most diverse IP portfolios in the industry enabling our future ability to innovate and securing our competitive position as a central RNA player.
- A total of four clinical trials that will have begun in prophylactic vaccines this year in COVID-19 and influenza – two of which have already been initiated – will provide a wealth of clinical data to advance and validate our second-generation mRNA backbone covering multivalent and modified mRNA approaches.
- We are transferring our experience from our technology advances to our next growth driver, oncology, where we are preparing to build up a meaningful pipeline based on strategies for strong T cell induction, novel antigens and complementary platform technologies, supported by The RNA Printer®.
- The recent award of a pandemic preparedness tender by the German government signals strong confidence in our ability to contribute our technology and manufacturing expertise to protect public health.
- And lastly, our strong cash balance positions us well to execute on our programs and priorities in 2022 and beyond.

With this we conclude our presentation and would now like to open the webcast to your questions.

**SARAH** With this, we would like to conclude this conference call. Thank you very much for your participation, stay safe and please don't hesitate to contact us should you have any further questions.

Thank you and goodbye.