Website address:
https://www.gesundheitsindustrie-bw.de/en/article/press-release/curevac-and-gsk-start-clinical-development-second-generation-covid-19-vaccine-candidate-cv2cov

CureVac and GSK Start Clinical Development of Second-Generation COVID-19 Vaccine Candidate, CV2CoV

CureVac N.V. (Nasdaq: CVAC), a global biopharmaceutical company developing a new class of transformative medicines based on messenger ribonucleic acid ("mRNA"), today announced that the first participant was dosed in a Phase 1 study of COVID-19 second-generation mRNA vaccine candidate, CV2CoV, developed in collaboration with GSK.

The clinical trial is expected to provide valuable data to further evaluate the performance of CureVac's second-generation mRNA backbone, which has the potential to be applied broadly in future vaccines against COVID-19 variants and other pathogens.

A preclinical study of CV2CoV in cynomolgus macaques, published in Nature in November 2021, demonstrated rapid induction of higher antibody titers, better induction of immune memory and stronger protective efficacy of CV2CoV compared to CureVac's first-generation vaccine candidate, CVnCoV. The same study demonstrated comparable neutralizing antibody titers in animals fully vaccinated with either 12µg of CV2CoV or a 30µg standard dose of a licensed mRNA COVID-19 vaccine.

"Continued innovation and progress in the development of mRNA-based vaccines is a critical prerequisite to combat the evolving COVID-19 pandemic and to further extend the possibilities of mRNA technology to a broad range of indications," said Dr. Klaus Edvardsen, Chief Development Officer of CureVac. "Our second-generation mRNA backbone was engineered to enable faster and stronger immune responses than our first-generation vaccine. This Phase 1 trial of CV2CoV will provide clinical data to further establish this backbone as a basis to flexibly address not only different COVID-19 variants, but also a range of other diseases and potential combination vaccines."

The Phase 1 dose-escalation study is being conducted at clinical sites in the U.S. and is expected to enroll up to 210 healthy adults to evaluate the safety, reactogenicity and immunogenicity of CV2CoV in the dose range of 2 to 20µg. Data results from the Phase 1 study are expected in the second half of 2022. The program follows the recent start of the Phase 1 clinical study for the jointly developed seasonal influenza vaccine candidate, CVSQIV, also applying the optimized second-generation mRNA backbone.

The CureVac-GSK infectious disease collaboration was first announced in July 2020 and focuses on the development of new products based on CureVac's mRNA technology for different targets in the field of infectious diseases. In 2022, both companies have broadened their development strategy to test chemically modified mRNA technologies in addition to unmodified mRNA. Clinical programs with chemically modified mRNA for COVID-19 and influenza are expected to start later this year.

About CV2CoV:

CV2CoV is CureVac's first COVID-19 vaccine candidate based on the advanced second-generation mRNA backbone from the broad second-generation program, currently developed in collaboration with GSK. The vaccine candidate 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 to the first-generation mRNA backbone. A clinical study to test the use of chemically modified mRNA is expected to begin later this year.

Press release

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Source: CureVac AG

Further information

- CureVac AG