Fourth Large-Scale COVID-19 Vaccine Trial Begins in the United States

The trial is evaluating an investigational vaccine from Janssen that may require only one shot.

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A fourth Phase 3 clinical trial evaluating an investigational vaccine for coronavirus disease 2019 (COVID-19) has begun enrolling adult volunteers. The trial is designed to evaluate if the investigational Janssen COVID-19 vaccine (JNJ-78436725) can prevent symptomatic COVID-19 after a single dose regimen. Up to 60,000 volunteers will be enrolled in the trial at up to nearly 215 clinical research sites in the United States and internationally.

The Janssen Pharmaceutical Companies of Johnson & Johnson developed the investigational vaccine (also known as Ad.26.COV2.S) and is leading the clinical trial as regulatory sponsor. Janssen, the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, and the Biomedical Advanced Research and Development Authority (BARDA), part of the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response, are funding the trial.

U.S. and international trial sites part of the NIAID-supported COVID-19 Prevention Network (CoVPN) will participate in the trial. The CoVPN is composed of existing NIAID-supported clinical research networks with infectious disease expertise and designed for rapid and thorough evaluation of vaccine candidates and monoclonal antibodies for the prevention of COVID-19.

"Four COVID-19 vaccine candidates are in Phase 3 clinical testing in the United States just over eight months after SARS-CoV-2 was identified. This is an unprecedented feat for the scientific community made possible by decades of progress in vaccine technology and a coordinated, strategic approach across government, industry and academia," said NIAID Director Anthony S. Fauci, M.D. "It is likely that multiple COVID-19 vaccine regimens will be required to meet the global need. The Janssen candidate has showed promise in early-stage testing and may be especially useful in controlling the pandemic if shown to be protective after a single dose."

The Janssen vaccine candidate is a recombinant vector vaccine that uses a human adenovirus to express the SARS-CoV-2 spike protein in cells. Adenoviruses are a group of viruses that cause the common cold. However, the adenovirus vector used in the vaccine candidate has been modified so that it can no longer replicate in humans and cause disease. Janssen uses the same vector in the first dose of its prime-boost vaccine regimen against Ebola virus disease (Ad26.ZEBOV and MVA-

BN-Filo) that was recently granted marketing authorization by the European Commission.

Preclinical findings published in Nature show that the investigational Janssen COVID-19 vaccine induced neutralizing antibody responses in rhesus macaques and provided complete or near-complete protection against virus infection in the lungs and nose following SARS-CoV-2 challenge. The safety, reactogenicity and immunogenicity of the investigational vaccine are being evaluated in a Phase 1/2a trial in the United States and Belgium enrolling adult volunteers. Positive interim results from the Phase 1/2a clinical study demonstrated that the safety profile and immunogenicity after a single vaccination were supportive of further development.

“Scientific partners from government, industry and academia are working hand-in-hand to develop safe, effective vaccines to put this pandemic in our rear-view mirror,” said NIH Director Francis S. Collins, M.D., Ph.D. “While administrative steps are being streamlined to speed the process, safety and effectiveness measures are just as rigorous than ever.”

The Phase 3 trial is being conducted in collaboration with Operation Warp Speed (OWS), a multi-agency collaboration overseen by HHS and the Department of Defense that aims to accelerate the development, manufacturing and distribution of medical countermeasures for COVID-19. OWS and CoVPN also are assisting with additional COVID-19 preventive candidate vaccines, including mRNA-1273, an investigational vaccine co-developed by NIAID and the Cambridge, Massachusetts-based biotechnology company Moderna, Inc., and AZD1222, a vaccine candidate being developed by United Kingdom-based biopharmaceutical company AstraZeneca.

“To have just one candidate vaccine in Phase 3 trials less than a year after a virus was first reported would be a remarkable accomplishment; to have four candidates at that stage is extraordinary,” said HHS Secretary Alex Azar. “By building a portfolio of candidate vaccines, Operation Warp Speed is maximizing the chances that we will have substantial supplies of a safe and effective vaccine—and maybe multiple vaccine options—by January 2021.”

The Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV) public-private partnership helped to ensure the protocols of all NIH- and OWS-supported Phase 3 trials of investigational vaccines use the same assays and are designed to evaluate the same primary objective: whether the vaccine can prevent symptomatic COVID-19. This approach enables transparent evaluation of the relative performance of each vaccine approach across trials.

Paul A. Goepfert, M.D., director of the Alabama Vaccine Research Clinic at the University of Alabama in Birmingham; Beatriz Grinsztejn, M.D., Ph.D., director of the Laboratory of Clinical Research on HIV/AIDS at the Evandro Chagas National Institute of Infectious Diseases-Oswaldo Cruz Foundation in Rio de Janeiro, Brazil; and Glenda E. Gray, M.B.B.Ch., president and chief executive officer of the South African Medical Research Council and co-principal investigator of the HIV Vaccine Trials Network (HVTN), will serve as principal investigators for the Phase 3 trial of the investigational Janssen COVID-19 vaccine.

Volunteers must provide informed consent to participate in the trial. After providing a baseline nasopharyngeal and blood sample, participants will be assigned at random to receive either a

single dose of the investigational vaccine or a saline placebo. The trial is blinded, meaning neither investigators nor participants will know who is receiving the investigational vaccine. Participants will be followed closely for safety and will be asked to provide additional blood samples at specified time points after the injection and over two years. Scientists will analyze the blood samples to detect and quantify immune responses to COVID-19. Of note, specialized assays will be used that can distinguish between immunity as a result of natural infection and vaccine-induced immunity.

The trial is designed primarily to determine if the investigational vaccine can prevent moderate to severe COVID-19 after a single dose. It also aims to understand if the vaccine can prevent COVID-19 requiring medical intervention and if the vaccine can prevent milder cases of COVID-19 and asymptomatic SARS-CoV-2 infection.

An independent Data and Safety Monitoring Board (DSMB) will provide oversight to ensure the safe and ethical conduct of the study. All Phase 3 clinical trials of candidate vaccines supported through Operation Warp Speed are overseen by a common DSMB developed in consultation with ACTIV.

Adults who are interested in joining this study can visit Coronaviruspreventionnetwork.org or ClinicalTrials.gov and search identifier NCT04505722.

About the COVID-19 Prevention Network: The COVID-19 Prevention Network (CoVPN) was formed by the National Institute of Allergy and Infectious Diseases (NIAID) at the U.S. National Institutes of Health to respond to the global pandemic. Through the CoVPN, NIAID is leveraging the infectious disease expertise of its existing research networks and global partners to address the pressing need for vaccines and antibodies against SARS-CoV-2. CoVPN will work to develop and conduct studies to ensure rapid and thorough evaluation of vaccines and antibodies for the prevention of COVID-19. The CoVPN is headquartered at the Fred Hutchinson Cancer Research Center. For more information about the CoVPN, visit: coronaviruspreventionnetwork.org.

About HHS, ASPR, and BARDA: HHS works to enhance and protect the health and well-being of all Americans, providing for effective health and human services and fostering advances in medicine, public health, and social services. The mission of ASPR is to save lives and protect Americans from 21st century health security threats. Within ASPR, BARDA invests in the innovation, advanced research and development, acquisition, and manufacturing of medical countermeasures – vaccines, drugs, therapeutics, diagnostic tools, and non-pharmaceutical products needed to combat health security threats. To date, BARDA-supported products have achieved 55 FDA approvals, licensures or clearances. To learn more about federal support for the nationwide COVID-19 response, visit www.coronavirus.gov.

About Operation Warp Speed: OWS is a partnership among components of the Department of Health and Human Services and the Department of Defense, engaging with private firms and other federal agencies, and coordinating among existing HHS-wide efforts to accelerate the development, manufacturing, and distribution of COVID-19 vaccines, therapeutics, and diagnostics.

About the National Institute of Allergy and Infectious Diseases: NIAID conducts and supports research — at NIH, throughout the United States, and worldwide — to study the causes of infectious and immune-mediated diseases, and to develop better means of preventing, diagnosing and treating these illnesses. News releases, fact sheets and other NIAID-related materials are available on the NIAID website.

About the National Institutes of Health (NIH): NIH, the nation's medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary federal agency conducting and supporting basic, clinical, and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit www.nih.gov.

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