NEWS RELEASE

INOVIO Completes Enrollment in the Phase 1 U.S. Trial of INO-4800 for COVID-19 DNA Vaccine; Interim Results Expected in June

4/28/2020

INO-4800 Phase 2/3 U.S. clinical trial being prepared to start this summer

Parallel preclinical challenge studies ongoing

PLYMOUTH MEETING, Pa., April 28, 2020 /PRNewswire/ -- INOVIO (NASDAQ:INO) today announced that its Phase 1 U.S. clinical trial for COVID-19 DNA vaccine INO-4800 is fully enrolled with all 40 healthy volunteers receiving their first dose, with interim immune responses and safety results expected in late June. The 40 healthy volunteers now enrolled at sites at the University of Pennsylvania in Philadelphia, PA, and a clinic in Kansas City, MO, will receive two doses of INO-4800 four weeks apart. The Phase 1 study is designed to assess the safety profile and immunogenicity of INO-4800 in support of advancing rapidly to a Phase 2/3 efficacy trial, which is planned to potentially initiate this summer.

Dr. J. Joseph Kim, INOVIO's President and CEO, said, "We are extremely grateful to the volunteers in Philadelphia and Kansas City who have stepped forward in the midst of this deadly pandemic to help advance our promising DNA vaccine against COVID-19. Without these volunteers, we would not be able to advance the clinical study of INO-4800 at record speed and potentially provide INO-4800 as a viable vaccine against the global COVID-19 pandemic."

Working in parallel with the clinical trial program in humans, INOVIO is conducting several challenge studies in multiple animal models in collaborations with some of the leading research groups in the world – as well as working to scale up manufacturing of INO-4800. Preclinical data have shown that INO-4800 resulted in promising immune responses across multiple preclinical models, and the company is on track with its plan to deliver one million doses by year-end for additional studies and potential emergency use, pending appropriate regulatory guidance and external funding.

Lead Principal Investigator of the U.S. Phase 1 INO-4800 study Pablo Tebas, M.D., infectious disease specialist and

Professor of Medicine at the Hospital of the University of Pennsylvania, said, "We anticipated rapid enrollment of this study and the response at both our Philadelphia and Kansas City study sites exceeded all expectations. We are profoundly inspired by this level of volunteerism for the greater good as well as grateful to our dedicated team of health care professionals for their tireless dedication to this worldwide effort."

INOVIO has assembled a global coalition of collaborators, partners, manufactures, and funders to rapidly advance INO-4800. R&D collaborators to date include the Wistar Institute, the University of Pennsylvania, Université Laval, and the University of Texas. INOVIO has partnered with Beijing Advaccine and the International Vaccine Institute to advance clinical trials of INO-4800 in China and South Korea, respectively. INOVIO is also assessing preclinical efficacy of INO-4800 in several animal challenge models with Public Health England (PHE) and Commonwealth Scientific and Industrial Research Organization (CSIRO) in Australia. INOVIO is also working with a team of contract manufacturers including VGXI, Inc., Richter-Helm, and Ology Biosciences to produce an anticipated one million doses of INO-4800 by year end and seeking additional external funding and partnerships to scale up manufacturing capacities to satisfy the urgent global demand for a safe and effective vaccine. To date, CEPI, the Bill & Melinda Gates Foundation, and the U.S. Department of Defense have contributed significant funding to the advancement and manufacturing of INO-4800.

About INO-4800

INO-4800 is INOVIO's DNA vaccine candidate created to protect against the novel coronavirus SARS-CoV-2, which causes COVID-19. INO-4800 was rapidly designed using INOVIO's proprietary DNA medicine platform after the publication of the genetic sequence of the coronavirus that causes COVID-19. INOVIO has deep experience working with coronaviruses and is the only company with a Phase 2a vaccine for a related coronavirus that causes Middle East Respiratory Syndrome (MERS).

About INOVIO's DNA Medicines Platform

INOVIO has 15 DNA medicine clinical programs currently in development focused on HPV-associated diseases, cancer, and infectious diseases, including coronaviruses associated with MERS and COVID-19 diseases being developed under grants from the Coalition for Epidemic Preparedness Innovations (CEPI). DNA medicines are composed of optimized DNA plasmids, which are small circles of double-stranded DNA that are synthesized or reorganized by a computer sequencing technology and designed to produce a specific immune response in the body.

INOVIO's DNA medicines deliver optimized plasmids directly into cells intramuscularly or intradermally using INOVIO's proprietary hand-held smart device called CELLECTRA®. The CELLECTRA device uses a brief electrical pulse to reversibly open small pores in the cell to allow the plasmids to enter, overcoming a key limitation of other

DNA and other nucleic acid approaches, such as mRNA. Once inside the cell, the DNA plasmids enable the cell to produce the targeted antigen. The antigen is processed naturally in the cell and triggers the desired T cell and antibody-mediated immune responses. Administration with the CELLECTRA device ensures that the DNA medicine is efficiently delivered directly into the body's cells, where it can go to work to drive an immune response. INOVIO's DNA medicines do not interfere with or change in any way an individual's own DNA. The advantages of INOVIO's DNA medicine platform are how fast DNA medicines can be designed and manufactured, the stability of the products which do not require freezing in storage and transport, and the robust immune response, safety profile, and tolerability that have been demonstrated in clinical trials.

With more than 2,000 patients receiving INOVIO investigational DNA medicines in more than 6,000 applications across a range of clinical trials, INOVIO has a strong track record of rapidly generating DNA medicine candidates to meet urgent global health needs.

About INOVIO

INOVIO is a biotechnology company focused on rapidly bringing to market precisely designed DNA medicines to potentially treat and protect people from diseases associated with HPV, cancer, and infectious diseases. INOVIO is the first and only company to have clinically demonstrated that a DNA medicine can be delivered directly into cells in the body via a proprietary smart device to produce a robust and tolerable immune response. Specifically, INOVIO's lead candidate VGX-3100, currently in Phase 3 trials for precancerous cervical dysplasia, destroyed and cleared high-risk HPV 16 and 18 in a Phase 2b clinical trial. High-risk HPV is responsible for 70% of cervical cancer, 91% of anal cancer, and 69% of vulvar cancer. Also in development are programs targeting HPV-related cancers and a rare HPV-related disease, recurrent respiratory papillomatosis (RRP); non-HPV-related cancers glioblastoma multiforme (GBM) and prostate cancer; as well as externally funded infectious disease DNA vaccine development programs in Zika, Lassa fever, Ebola, HIV, and coronaviruses associated with MERS and COVID-19 diseases. Partners and collaborators include Advaccine, ApolloBio Corporation, AstraZeneca, The Bill & Melinda Gates Foundation, Coalition for Epidemic Preparedness Innovations (CEPI), Defense Advanced Research Projects Agency (DARPA)/Department of Defense (DOD), GeneOne Life Science/VGXI, HIV Vaccines Trial Network, International Vaccine Institute (IVI), Medical CBRN Defense Consortium (MCDC), National Cancer Institute, National Institutes of Health, National Institute of Allergy and Infectious Diseases, Ology Bioservices, Plumbline Life Sciences, Regeneron, Richter-Helm, Roche/Genentech, University of Pennsylvania, Walter Reed Army Institute of Research, and The Wistar Institute. INOVIO also is a proud recipient of 2020 Women on Boards "W" designation recognizing companies with more than 20% women on their board of directors. For more information, visit **www.inovio.com**.

CONTACTS:

Media: Jeff Richardson, 267-440-4211, **jrichardson@inovio.com**

Investors: Ben Matone, 484-362-0076, **ben.matone@inovio.com**

This press release contains certain forward-looking statements relating to our business, including our plans to develop DNA medicines, our expectations regarding our research and development programs, as well as commercialization activities, including the planned initiation and conduct of clinical trials, the availability and timing of data from those trials and our commercialization strategy and tactics. Actual events or results may differ from the expectations set forth herein as a result of a number of factors, including uncertainties inherent in preclinical studies, clinical trials, product development programs and commercialization activities and outcomes, the availability of funding to support continuing research and studies in an effort to prove safety and efficacy of electroporation technology as a delivery mechanism or develop viable DNA vaccines, our ability to support our pipeline of SynCon® active immunotherapy and vaccine products, the ability of our collaborators to attain development and commercial milestones for products we license and product sales that will enable us to receive future payments and royalties, the adequacy of our capital resources, the availability or potential availability of alternative therapies or treatments for the conditions targeted by us or our collaborators, including alternatives that may be more efficacious or cost effective than any therapy or treatment that we and our collaborators hope to develop, issues involving product liability, issues involving patents and whether they or licenses to them will provide us with meaningful protection from others using the covered technologies, whether such proprietary rights are enforceable or defensible or infringe or allegedly infringe on rights of others or can withstand claims of invalidity and whether we can finance or devote other significant resources that may be necessary to prosecute, protect or defend them, the level of corporate expenditures, assessments of our technology by potential corporate or other partners or collaborators, capital market conditions, the impact of government healthcare proposals and other factors set forth in our Annual Report on Form 10-K for the year ended December 31, 2019, and other filings we make from time to time with the Securities and Exchange Commission. There can be no assurance that any product candidate in our pipeline will be successfully developed, manufactured or commercialized, that final results of clinical trials will be supportive of regulatory approvals required to market products, or that any of the forward-looking information provided herein will be proven accurate. Forward-looking statements speak only as of the date of this release, and we undertake no obligation to update or revise these statements, except as may be required by law.

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