NEWS RELEASE

INOVIO Expands Manufacturing of COVID-19 DNA Vaccine INO-4800 With New Funding from CEPI

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INOVIO and Richter-Helm BioLogics will expand existing DNA manufacturing agreement to support large-scale manufacturing of INO-4800

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

PLYMOUTH MEETING, Pa., April 30, 2020 /PRNewswire/ -- INOVIO (NASDAQ:INO) today announced it has entered into an agreement to expand its manufacturing partnership with the German contract manufacturer Richter-Helm BioLogics GmbH & Co. KG, to support large-scale manufacturing of INOVIO's investigational DNA vaccine INO-4800, which currently is in Phase 1 clinical testing in the U.S. for COVID-19 and could potentially advance to Phase 2/3 efficacy trials this summer. The agreement is being partly funded by an initial grant of $1.3 million from the Coalition for Epidemic Preparedness Innovations (CEPI), which brings CEPI's total support to date for the development of INO-4800 to $17.2 million.

"We are grateful to CEPI for its continued generous funding and pleased to expand our work with Richter-Helm BioLogics to support large-scale manufacturing capacity for INO-4800," said INOVIO's President & CEO, Dr. J. Joseph Kim. "Richter-Helm has deep experience working with our optimized DNA plasmids, which are the building blocks of our DNA vaccines, and have consistently produced DNA medicines of the highest quality under stringent GMP standards."

INOVIO has been working with Richter-Helm BioLogics, which manufactures INOVIO's DNA medicine candidate VGX-3100, since 2014. Currently, VGX-3100 is in Phase 3 clinical trials for the treatment of precancerous cervical dysplasia caused by high-risk human papillomavirus (HPV). INOVIO has established commercial-scale plasmid production at Richter-Helm BioLogics for its DNA medicines platform, with successful technology transfer already demonstrated for VGX-3100 and an Advanced Therapy Medicinal Product (ATMP) certification granted by the European Medicines Agency (EMA) in May 2019.

"Richter-Helm BioLogics has a strong, long-standing relationship with INOVIO and is a leading manufacturer of DNA

plasmids," said Richter-Helm BioLogics' Managing Director Dr. Kai Pohlmeyer. "We will mobilize all our resources to ensure sufficient supply of late-stage clinical and commercial batches of INO-4800 and contribute to the fight against the deadly COVID-19 pandemic."

INOVIO plans to produce one million doses of INO-4800 by the end of 2020. Additional capacity provided by Richter-Helm will significantly expand manufacturing of this DNA vaccine candidate to meet urgent needs in the midst of the pandemic.

"Having a trusted and proven partner with extensive experience manufacturing INOVIO's DNA medicines is critical as we scale up our INO-4800 production," said Robert Juba, INOVIO's vice president of Biological Manufacturing and Clinical Supply Management. "We look forward to continue to work closely together in our efforts to reduce the worldwide impact of COVID-19."

Richter-Helm Biologics is using manufacturing technology developed by VGXI Inc., a wholly owned subsidiary of GeneOne Life Science (KSE:011000} and INOVIO's contract manufacturer for early-stage clinical trial supply, under a license agreement from VGXI. Richter-Helm BioLogics will transfer and rapidly scale up the current (400 L scale) production process for the INO-4800 DNA plasmid from VGXI. Richter-Helm BioLogics and VGXI already share a long-term partnership that has resulted in numerous joint projects and project transfers followed by plasmid DNA production for commercial supply at Richter-Helm BioLogics´ facilities, including the technology transfer and Phase 3 manufacturing for VGX-3100.

About INOVIO's Global Coalition Advancing INO-4800

INOVIO has assembled a global coalition of collaborators, partners 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 one million doses of INO-4800 by year-end and seeking additional external funding and partnerships to scale up the manufacturing capacities to satisfy the urgent global demand for a safe and effective vaccine. To date, CEPI, the Bill & Melinda Gates Foundation, and the US 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 designed using INOVIO's proprietary DNA medicine platform rapidly 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**.

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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, including the planned initiation and conduct of clinical trials, and the availability and timing of data from those trials. Actual events or results may differ from the expectations set forth herein as a result of a number of factors, including uncertainties inherent in pre-clinical 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 medicines, our ability to support our pipeline of DNA medicine 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.

View original content:**http://www.prnewswire.com/news-releases/inovio-expands-manufacturing-of-covid-19-dna-vaccine-ino-4800-with-new-funding-from-cepi-301049889.html**

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