NEWS RELEASE

INOVIO Announces Online Preprint Publication of Homologous Boosting Data for its COVID-19 DNA Vaccine Candidate, INO-4800

10/12/2021

Online preprint details full Phase 1 data set of 120 participants, of which 82.5% received a booster dose of INO-4800
INO-4800 was well-tolerated, with no serious adverse events reported
Booster dose significantly increased the immune responses that resulted from the second dose

PLYMOUTH MEETING, Pa., Oct. 12, 2021 /PRNewswire/ -- INOVIO (NASDAQ:INO), a biotechnology company focused on bringing to market precisely designed DNA medicines to treat and protect people from infectious diseases, cancer, and HPV-associated diseases, today announced the online preprint publication in MedRxiv of Phase 1 clinical data on homologous boosting of its COVID-19 DNA vaccine candidate, INO-4800.

The paper, titled "SARS-CoV-2 DNA Vaccine INO-4800 Induces Durable Immune Responses Capable of Being Boosted in a Phase 1 Open-Label Trial," found that among the full Phase 1 cohort of 120 participants – of which 82.5%, or 99 participants, received a booster (or third) dose – INO-4800 produced robust immune responses and was well-tolerated as both a two-dose series and as a homologous booster dose in all adults, including participants 65 years of age and older. Of note, a durable antibody response was observed six months following the second dose, and a homologous booster dose administered 6 to 10.5 months following the second dose also significantly increased antibody and T cell responses. INO-4800 was well-tolerated, with no treatment-related serious adverse events reported. Most adverse events were mild in severity and did not increase in frequency with age and subsequent dosing.

Dr. J. Joseph Kim, President and CEO of INOVIO, said, "We are pleased to share the clinical data on the homologous boosting of INO-4800, as well as for our full Phase 1 cohort. As much of the world's population remains unvaccinated and susceptible to COVID-19, there remains an urgent need for additional safe and effective vaccines that are affordable, scalable and can be distributed to countries where the infrastructure may not be supportive of ultra-cold chain transport and storage. We believe that INO-4800, if approved, will be well suited to support the

continued fight against COVID-19 – both as a primary vaccination and as a booster. We look forward to contributing to the international public health knowledge base via our global Phase 3 clinical trial."

The detailed trial write-up can be found at: **medRxiv.org - the preprint server for Health Sciences**.

The newly reported results are consistent with previously **shared** data from the Phase 2 segment of INOVIO's INNOVATE clinical trial. Advancing in its efforts in the fight against COVID-19, INOVIO, with partner Advaccine, recently **announced** that it has received regulatory authorization from Mexico, Brazil, Colombia, and the Philippines to proceed with the global Phase 3 segment of INNOVATE.

INOVIO also **announced** in August that it had received the authorization from China to proceed with two Advaccine-sponsored clinical trials investigating the safety, tolerability, and immunogenicity of heterologous boost combinations with INO-4800 and an inactivated COVID vaccine.

About INO-4800

INOVIO's DNA vaccine candidate against SARS-CoV-2, INO-4800, is composed of a precisely designed DNA plasmid that is injected intradermally followed by electroporation using a proprietary smart device, which delivers the DNA plasmid directly into cells in the body and is intended to produce a well-tolerated immune response. As one of the only nucleic-acid based vaccines that is stable at room temperature for more than a year, at 37°C for more than a month, has a five-year projected shelf life at normal refrigeration temperature and does not need to be frozen during transport or storage, INO-4800 is anticipated to be well-positioned for first-in line usage as well as for boosting.

About INOVIO

INOVIO is a biotechnology company focused on rapidly bringing to market precisely designed DNA medicines to treat and protect people from infectious diseases, cancer, and diseases associated with HPV. INOVIO is the first 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 met primary and secondary endpoints for all evaluable subjects in REVEAL 1, the first of two, Phase 3 trials for precancerous cervical dysplasia, demonstrating ability to destroy and clear both high-grade cervical lesions and the underlying high-risk HPV-16/18. INOVIO is also evaluating INO-4800, a DNA vaccine candidate against COVID-19, in a Phase 2/3 clinical trial; the Phase 3 efficacy segment of which has received regulatory approvals to begin in Mexico, Brazil, Colombia, and the Philippines. INOVIO's partners, Advaccine Biopharmaceuticals, and International Vaccine Institute, are also evaluating INO-4800 in ongoing clinical trials in China and South Korea, respectively.

Partners and collaborators include Advaccine, ApolloBio Corporation, AstraZeneca, The Bill & Melinda Gates Foundation, Coalition for Epidemic Preparedness Innovations, Defense Advanced Research Projects Agency/Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense/Department of Defense, HIV Vaccines Trial Network, International Vaccine Institute, Kaneka Eurogentec, Medical CBRN Defense Consortium, National Cancer Institute, National Institutes of Health, National Institute of Allergy and Infectious Diseases, Ology Bioservices, the Parker Institute for Cancer Immunotherapy, Plumbline Life Sciences, Regeneron, Richter-Helm BioLogics, Thermo Fisher Scientific, University of Pennsylvania, Walter Reed Army Institute of Research, and The Wistar Institute. 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 and commercialize DNA medicines, our expectations regarding our research and development programs, including the planned initiation and conduct of pre-clinical studies and clinical trials and the availability and timing of data from those studies and trials, and our ability to successfully manufacture and produce large quantities of our product candidates if they receive regulatory approval. 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, our ability to secure sufficient manufacturing capacity to mass produce our product candidates, 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 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, 2020 , our Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 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:**https://www.prnewswire.com/news-releases/inovio-announces-online-preprint-publication-of-homologous-boosting-data-for-its-covid-19-dna-vaccine-candidate-ino-4800-301397849.html**

SOURCE INOVIO Pharmaceuticals, Inc.