NEWS RELEASE

INOVIO Announces Strategy to Address Omicron (B.1.1.529) and Future SARS-CoV-2 Variants

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INO-4800 has maintained broad T cell responses against previously known variants of concern

PLYMOUTH MEETING, Pa., Nov. 30, 2021 /PRNewswire/ -- INOVIO (NASDAQ:INO), a biotechnology company focused on bringing to market precisely designed DNA medicines to help protect people from infectious diseases and treat cancer and HPV-associated diseases, today announced the company is rapidly moving to evaluate its COVID-19 DNA vaccine candidates INO-4800 and INO-4802 against the emerging B.1.1.529 (Omicron) variant of concern. Concurrently, INOVIO has initiated pre-clinical development of an Omicron-specific DNA vaccine candidate and will progress if needed.

The Omicron variant of SARS-CoV-2 is the latest variant to emerge, following previous variants of concern (VOCs), Alpha, Beta, Gamma and Delta. Notably, INO-4800 has maintained T cell responses against these previously identified VOCs as well as the ability to generate binding and neutralizing antibodies against them. Generally, T cell immune responses are less likely to be evaded by multiple mutations, and the ability to generate a strong T cell response is likely to play a crucial role in reducing mortality and the severity of symptoms in those infected. More specifically, Omicron mutations at the T cell level is predicted to be only 2%, supporting that majority of the T cell epitopes induced by T cell generating vaccines such as INO-4800 will likely remain capable of targeting this variant. INOVIO plans to test clinical samples from our INO-4800 vaccine candidate as well as our Pan-COVID-19 vaccine candidate INO-4802 against the Omicron variant to assess the generation of immune responses, with data expected in the coming weeks.

Dr. J. Joseph Kim, INOVIO's President and CEO, said, "INOVIO is moving rapidly to test its COVID-19 vaccine candidates against the emerging Omicron variant. Both INO-4800, our lead candidate vaccine currently in Phase 3 testing) and INO-4802, our Pan-COVID-19 vaccine candidate, have maintained T cell responses and generated neutralizing antibodies against previous SARS-CoV-2 VOCs. In particular, we believe that INO-4800's ability to generate durable T cell responses, which could be resilient to changes in the SARS-CoV-2 virus, positions INO-4800 as a potentially important tool in the U.S. and international arsenal against both current and future variants."

Since late 2020, INOVIO has been advancing a comprehensive strategy to address both existing and new VOCs.

To address the Omicron variant, INOVIO is:

1) Rapidly assessing INO-4800 samples from clinical trial participants against the Omicron variant using lab-based read-outs. INOVIO has generated clinical data demonstrating that immune responses following vaccination with INO-4800 are reactive to the Alpha, Beta, Gamma and Delta VOCs. INOVIO is working rapidly to assess the immune responses against the Omicron variant; data are expected in the coming weeks.

2) Testing INO-4802, a Pan-COVID-19 vaccine candidate, against Omicron. INOVIO has been proactively developing INO-4802 as a second-generation Pan-COVID 19 vaccine to potentially address future variants. Published preclinical data with INO-4802 in multiple animal models revealed both broader and increased levels of neutralizing antibodies against a panel of variants over strain-matched vaccines. INOVIO will analyze the preclinical samples from INO-4802 to assess the immune responses against the Omicron variant and anticipates data in the coming weeks.

INO-4800 is undergoing Phase 3 evaluations as a 2-dose regimen. However, given its tolerability and immunologic profile to date, as well as lack of an anti-vector response, INO-4800 may also serve as a heterologous booster independent of the primary vaccination regimen. INO-4800 is composed of a precisely designed DNA plasmid that is administered intradermally followed by electroporation using a proprietary smart device, which delivers the DNA plasmid directly into cells in the dermis of the skin and is intended to produce a well-tolerated immune response. INO-4800 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. The ability to distribute INO-4800, and to license to global manufacturers, without the burden and expense of frozen cold-chain logistics, indicate the suitability of this DNA vaccine for international deployment at scale.

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 vaccine candidate 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 therapeutic 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 vaccine candidate against COVID-19, in a Phase 2/3 clinical trial; the Phase 3 segment of which has received regulatory

authorizations to proceed in Colombia, Mexico, Brazil, Philippines, India, Thailand, and the United States. 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**.

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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, our ability to successfully manufacture and produce large quantities of our product candidates if they receive regulatory approval and planned collaborations with third parties. 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 September 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 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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