NEWS RELEASE

INOVIO Reports Positive Interim Phase 1/2 Results for INO-3107 for the Treatment of Recurrent Respiratory Papillomatosis

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- Treatment with INO-3107 resulted in 16 of 21 (76%) participants with a reduction in number of surgical interventions compared with previous year; 6 participants required no surgical intervention during the trial

- INO-3107 demonstrated statistical significance based on clinical endpoint of reduction in overall number of surgical interventions compared with previous year

- INO-3107 was found to be well-tolerated and immunogenic

PLYMOUTH MEETING, Pa., Oct. 13, 2022 /PRNewswire/ -- INOVIO (NASDAQ:INO), a biotechnology company focused on developing and commercializing DNA medicines to help treat and prevent infectious diseases, cancer, and diseases associated with HPV, today announced positive interim results from an ongoing Phase 1/2 clinical trial evaluating INO-3107 for the treatment of HPV 6 and HPV 11-associated Recurrent Respiratory Papillomatosis (RRP) in adults. In the first cohort of 21 participants, INO-3107 showed a statistically significant improvement in the clinical endpoint of the number of surgical interventions needed to control papilloma growth. INO-3107 was also observed to be well-tolerated and immunogenic in the trial. INO-3107 **received** Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) in July 2020.

Dr. Jacqueline Shea, INOVIO's President and CEO, said, "RRP is a debilitating, often life-long condition for which surgery is the standard of care and there are no currently FDA-approved therapeutic vaccines or drugs. The positive results observed in this trial are a step toward potentially shifting the treatment paradigm for RRP and substantially improving the quality of life for patients suffering from its symptoms and the repeated surgeries needed to control them. As a potential first-in-class therapeutic candidate, INO-3107 is building on our body of work indicating that DNA medicines have the potential to treat HPV-associated diseases."

Dr. Ted Mau, Professor of Otolaryngology, Head and Neck Surgery at UT Southwestern Medical Center and investigator for INOVIO's RRP Phase 1/2 clinical trial, said, "These preliminary results show great promise in this new therapy for patients with RRP. For our patients who have required multiple surgeries a year, and especially those who have done so for many years of their lives, this is a potential game changer."

About the Trial

INO-3107 was evaluated in a Phase 1/2 open-label, multicenter trial to assess its safety, tolerability, immunogenicity, and efficacy in 32 participants with HPV 6 and/or HPV 11-associated RRP **(NCT:04398433)**. The trial demonstrated statistical significance based on the clinical endpoint of a reduction in the number of RRP surgical interventions in the year following administration of INO-3107 compared with the year prior to treatment, in the initial cohort of 21 participants. In the trial, there was a median decrease of 3 surgical interventions (95% confidence interval 1, 3). In addition, 16 of 21 (76%) participants showed a decrease in surgical interventions in the year following administration of INO-3107 relative to the number of surgeries in the year prior to the trial. Of the 16 participants, six (6) required no surgical intervention during the trial period.

In the trial, treatment with INO-3107 induced cellular responses against both HPV 6 and HPV 11, inducing both CD4 and CD8 T cells. All 21 participants demonstrated an increase in peripheral T cells to one or more antigens in INO-3107 post-baseline. T-cell responses against HPV 6 and HPV 11 were also still observed at Week 52, which was 43 weeks after treatment with INO-3107, indicating a persistent cellular memory response.

INO-3107 was well-tolerated, with all participants completing the trial follow-up. Treatment-emergent adverse events (TEAEs) observed in the trial were generally low-grade, with 86% of participants experiencing at least one TEAE, most of which were Grade 1. Three participants (14%) experienced a Grade 3 TEAE, but none were deemed related to INO-3107. The most commonly reported TEAEs were injection site pain (38%) and fatigue (19%). While two serious adverse events were reported, these were also deemed unrelated to INO-3107.

Dr. Jeffrey Skolnik, INOVIO's Senior Vice President of Clinical Development, said, "We are very encouraged by the results of the Phase 1/2 trial, where we observed a median reduction of three surgical interventions from the year prior, with six participants being surgery-free, after receiving treatment with INO-3107 during the trial. We believe the ability of INO-3107 to induce antigen-specific immune responses may play an important role in the future treatment of RRP."

Results from the second cohort of 11 patients are expected in the first half of 2023.

About RRP

RRP is a debilitating and rare disease caused primarily by HPV types 6 and/or 11. RRP is characterized by the development of small, wart-like growths, or papillomas, in the respiratory tract. While papillomas are generally benign, they can cause severe, life-threatening airway obstruction and respiratory complications. RRP can also significantly affect quality of life for patients by affecting the voicebox, limiting the ability to speak effectively. In RRP, the papillomas have a tendency to grow back after they have been removed surgically, which is the current standard of care, because the underlying HPV infection is not eradicated.

The incidence of RRP is rapidly changing, but has previously been estimated to be 4.3 per 100,000 children and 1.8 per 100,000 adults. RRP is often a life-long disease that affects both children and adults. Patients may undergo numerous surgeries during their lifetimes to control their RRP.

About INO-3107

INO-3107 is INOVIO's clinical-stage DNA medicine product candidate being developed as a potential treatment for RRP. INO-3107 is designed to elicit a targeted T cell response against HPV 6 and HPV 11, the HPV types responsible for causing RRP among other HPV-associated diseases. These targeted T cells seek out and kill infected cells, leading potentially to a regression of existing papillomas and the possibility of clearing or reducing the levels of the virus which could prevent or slow the growth of new papillomas. The U.S. FDA granted Orphan Drug Designation for INO-3107 for the treatment of RRP in 2020. For more information about our HPV franchise, please visit **https://ir.inovio.com/investors-and-media/default.aspx**.

About INOVIO

INOVIO is a biotechnology company focused on developing and commercializing DNA medicines to help treat and protect people from infectious diseases, cancer, and diseases associated with HPV. Our DNA medicines in development are delivered using our investigational proprietary smart device to produce immune responses against targeted pathogens and cancers. For more information, visit **www.inovio.com**.

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Forward-Looking Statements

This press release contains certain forward-looking statements relating to our business, including our plans to

develop and commercialize DNA medicines and our expectations regarding our research and development programs, including the availability and timing of data from clinical 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 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, 2021, our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, 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 the 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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