NEWS RELEASE

INOVIO Announces U.S. FDA Breakthrough Therapy Designation Granted for INO-3107 for the Treatment of Recurrent Respiratory Papillomatosis

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• Designation based on clinical evidence indicating INO-3107 may demonstrate substantial improvement over existing therapies

• First Breakthrough Therapy designation for an INOVIO DNA medicine candidate

PLYMOUTH MEETING, Pa., Sept. 7, 2023 /PRNewswire/ -- INOVIO (NASDAQ:INO), a biotechnology company focused on developing and commercializing DNA medicines to help treat and protect people from HPV-related diseases, cancer, and infectious diseases, today announced that the U.S. Food and Drug Administration (FDA) has granted Breakthrough Therapy designation for INO-3107 as a potential treatment for patients with Recurrent Respiratory Papillomatosis (RRP). The FDA's Breakthrough Therapy designation is a process designed to expedite the development and review of drug candidates that are intended to treat a serious or life-threatening condition and for which preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy on a clinically significant endpoint(s).

"This is yet another important step for INO-3107 and recognition that this first-in-class DNA medicine candidate has the potential to improve the lives of patients with RRP," said INOVIO's President and Chief Executive Officer, Dr. Jacqueline Shea. "As we recently announced, we have been interacting with the FDA with the goal to launch a pivotal trial for INO-3107 in the near term. With this Breakthrough Therapy designation, we look forward to continuing to work with the agency so that we can generate the evidence needed to support approval of INO-3107 as quickly and efficiently as possible, with an ultimate aim to help RRP patients and deliver on the promise of DNA medicine."

The President of the Recurrent Respiratory Papillomatosis Foundation, Kim McClellan, said: "RRP patients will tell you that even one reduction in the number of disruptive, invasive surgeries they face would be life-changing. The

potential impact of this treatment gives me great hope for the future and I'm happy to see that RRP is finally getting the attention it deserves."

INO-3107 is an investigational DNA medicine candidate designed to elicit a targeted T cell response against HPV-6 and HPV-11, the HPV types that cause RRP and other HPV-related disease. This Breakthrough Therapy designation for INO-3107 follows receipt of Orphan Drug designation from the European Commission in May 2023 and from the FDA in 2020.

INOVIO plans to initiate a pivotal trial of INO-3107 in the first quarter of 2024, subject to FDA clearance. As part of its development efforts, the company has engaged a leading Clinical Research Organization to help run the pivotal trial, as well as key opinion leaders and investigators interested in developing a new treatment option for RRP patients.

The Breakthrough Therapy designation is supported by data from INOVIO's completed Phase 1/2 open-label, multicenter trial that assessed INO-3107's safety, tolerability, immunogenicity, and efficacy in patients with HPV-6 and/or HPV-11-related RRP **(NCT:04398433)**. Overall, 81.3% (26/32) patients in the trial had a decrease in surgical interventions in the year after INO-3107 administration compared to the prior year, including 28.1% (9/32) that required no surgical intervention during or after the dosing window. Patients in the trial had a median range of 4 surgeries (2-8) in the year prior to dosing. After dosing, there was a median decrease of 3 surgical interventions (95% confidence interval -3, -2). Patients received four doses of INO-3107 on Day 0, and Weeks 3, 6, and 9. At the outset of the study (Day 0), patients could have RRP tissue surgically removed, but any surgery performed after Day 0 during the dosing window was counted against the efficacy endpoint. INO-3107 was well-tolerated by participants in the trial.

Data from this Phase 1/2 trial has been presented at scientific and medical conferences, including the 2023 Annual Meeting of the American Broncho-Esophageal Association (ABEA) in May and at the European Laryngological Association's Annual Meeting in June. Data from the trial was also published in May in the peer-reviewed journal, The Laryngoscope, under the title "Interim Results of a Phase 1/2 Open-Label Study of INO-3107 for HPV-6 and/or HPV-11–Associated RRP." The Laryngoscope is the official journal of the Triological Society (TRIO), the American Laryngological Association (ALA), and the ABEA.

About RRP

RRP is a debilitating and rare disease caused primarily by HPV-6 and/or HPV-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 voice box, limiting the ability to speak effectively.

Surgery to remove papillomas is the standard of care for RRP; however, the papillomas often grow back because the underlying HPV infection has not been eradicated.

The most widely cited U.S. epidemiology data published in 1995 estimated that there were 14,000 active cases and about 1.8 per 100,000 new cases in adults each year. More recent pediatric epidemiology data cites a range of 0.5 - 0.7 per 100,000 new cases in children in the U.S. each year.

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-related diseases. These targeted T cells are designed to seek out and kill infected cells, with the aim of potentially preventing or slowing the growth of new papillomas. INO-3107 **received Orphan Drug designation from the European Commission** in May 2023 and **from the U.S. Food and Drug Administration** in 2020. For more information about our HPV franchise, please visit **https://ir.inovio.com/events-and-presentations/default.aspx**.

About INOVIO

INOVIO is a biotechnology company focused on developing and commercializing DNA medicines to help treat and protect people from HPV-related diseases, cancer, and infectious diseases. INOVIO's DNA medicines in development are delivered using its investigational proprietary device, CELLECTRA®, 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 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 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, 2022, our Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, 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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