NEWS RELEASE

Data Published in The Laryngoscope shows INO-3107 Resulted in Long-Term Surgery Reduction in Recurrent Respiratory Papillomatosis (RRP)

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- Retrospective trial showed Overall Response Rate (ORR) improved to 86% at the end of the second 12-month period (Year 2) compared to 72% observed at the end of the initial 12-month Phase 1/2 trial (Year 1); the Complete Response (CR) rate improved to 50% for Year 2 from 28% for Year 1
- Mean number of surgeries patients needed to control their RRP continued to drop from 4.1 surgeries per year prior to receiving INO-3107 to 1.7 for Year 1 to 0.9 for Year 2
- Partial data into the third 12-month period (Year 3 - median follow up 2.8 years following initial treatment) continued the trend of improvement and a reduced number of surgeries

PLYMOUTH MEETING, Pa., Aug. 11, 2025 /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 peer-reviewed data from a retrospective study investigating the long-term clinical and safety response of patients treated with INO-3107 were published online in The Laryngoscope under the title "**DNA Immunotherapy (INO-3107) Results in Long-term Surgery Reduction in Recurrent Respiratory Papillomatosis (RRP)**." The data demonstrate that a majority of patients experienced continued improvement, as measured by the number of surgical procedures needed after treatment with INO-3107, beyond the initial 12-month study period of the previously published Phase 1/2 trial.

"The most important takeaway from this data is that the majority of patients experienced a reduction in surgeries following initial treatment with INO-3107, and almost all of those patients maintained or improved their response 2 years after initial treatment," said Dr. Aaron Friedman, Associate Professor of Clinical Otolaryngology, Head and Neck Surgery, University of Cincinnati Medical Center, and a principal investigator on the trial. "With this continued improvement in clinical effect, we believe INO-3107 has the potential to change the trajectory of a patient's disease and set a new standard of care for the RRP community."

"Understanding how much every single surgery matters to patients, it is compelling to see the vast majority of patients experienced significant benefit from treatment with INO-3107, resulting in a reduction in the number of surgeries required to control their disease — a benefit that continued and often improved over time," said Dr. Jacqueline Shea, INOVIO's President and Chief Executive Officer. "The sustained reduction in surgery following treatment with INO-3107 demonstrated here is central to our belief that INO-3107 could become the preferred product on the market, if approved"

A Phase 1/2 open-label trial of INO-3107 (RRP-001) in 32 patients, previously published in **Nature Communications**, demonstrated a statistically significant reduction in the number of surgeries needed to control their RRP when comparing the 12 months following the initiation of treatment with INO-3107 versus the 12 months prior to beginning treatment with INO-3107. The retrospective trial published today in The Laryngoscope (RRP-02) collected data on 28 of the original 32 patients in RRP-001 to assess the longer-term treatment effect of INO-3107. The median follow-up period for both RRP-001 and RRP-002 combined was 2.8 years from treatment initiation. The efficacy assessment was defined by the number of RRP surgical interventions reported. The safety evaluation included reported serious adverse events (SAEs).

Key Results of the Retrospective Trial with INO-3107

- INO-3107 demonstrated continued clinical effect against RRP that improved over time:
    - Patients experiencing a 50-100% reduction in surgeries (ORR) increased from 72% at the end of the initial 12-month Phase 1/2 trial (Year 1) to 86% at the end of the second 12-month period (Year 2)
    - Patients experiencing a CR (0 surgeries per year) increased from 28% for Year 1 to 50% for Year 2
    - Mean number of surgeries was reduced from 4.1 in the pre-treatment period (the 52 weeks prior to beginning treatment with INO-3107) to 1.7 for Year 1 to 0.9 for Year 2
    - Partial data into the third 12-month period (Year 3 - median follow up 2.8 years following initial treatment) continued the trend of improvement and a reduced number of surgeries
- INO-3107 was well tolerated, with no serious adverse events or long-term safety concerns identified

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. INOVIO's market research to date with patients and healthcare professionals indicates that a reduction of even one surgery matters, because every surgery poses a significant risk of causing permanent damage to the vocal cords and comes

with potential costs to the patient, including adverse impacts to both quality of life and finances. 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 of RRP in adults each year.

About INO-3107

INO-3107 is an investigational DNA medicine designed to elicit an antigen-specific T cell response against both HPV-6 and HPV-11 proteins. These targeted T cells seek out and kill HPV-6 and HPV-11 infected cells, with the aim of potentially preventing or slowing the growth of new papillomas. In a Phase 1/2 trial of 32 participants (RRP-001), 72% of patients saw a 50-to-100% reduction in the number of surgeries after starting treatment with INO-3107 at the end of the first year. A retrospective study involving 28 of the original trial participants (RRP-002) showed this number increasing to 86% at the end of the second 12-month period with no additional dosing. Half of those patients required no surgeries at all. Patients in RRP-001 had a median of 4 surgeries (range: 2-8) in the year prior to dosing. At the outset of the trial (Day 0), patients had a clinically warranted procedure to have papillomas surgically removed, but any surgery performed after Day 0 was counted against the efficacy endpoint. Treatment with INO-3107 generated a strong immune response in the trial, inducing activated CD4 T cells and activated CD8 T cells with lytic potential. T cell responses were also observed at Week 52, indicating a persistent cellular memory response. INO-3107 was well tolerated, with trial participants experiencing mostly low-grade (Grade 1) treatment-emergent adverse effects such as injection site pain and fatigue. Like other DNA medicines, INO-3107 has shown the ability to generate antigen-specific T cells that is not affected by anti-vector immunity impacting immunogenicity, either before administration or after the first dose, unlike other T cell generating platforms such as viral vectors. This feature of DNA medicines is anticipated to allow INO-3107 to maintain T cell response and overall efficacy, which could make it an important therapeutic option for a majority of RRP patients.

The FDA has granted INO-3107 both Orphan Drug and Breakthrough Therapy designations and has advised INOVIO that it can submit a biologics license application under the FDA's accelerated approval program using data from INOVIO's completed Phase 1/2 trial. The European Commission granted INO-3107 Orphan Drug designation. In addition, INOVIO has CE-marked its CELLECTRA® delivery device in the EU, which allows INOVIO to commercialize the device in the EU and other geographies that recognize CE-marking. The United Kingdom awarded INO-3107 the Innovation Passport. This designation serves as the entry point to the Innovative Licensing and Access Pathway (ILAP), which aims to accelerate time to market and facilitate patient access to medicines.

About INOVIO's DNA Medicines Platform

INOVIO's DNA medicines platform has two innovative components: precisely designed DNA plasmids, delivered by INOVIO's proprietary investigational medical device, CELLECTRA. INOVIO uses proprietary technology to design its DNA plasmids, which are small circular DNA molecules that work like software the body's cells can download to produce specific proteins to target and fight disease. INOVIO's proprietary CELLECTRA delivery devices are designed

to optimally deliver its DNA medicines to the body's cells without requiring chemical adjuvants or lipid nanoparticles and without the risk of the anti-vector response historically seen with viral vector platforms.

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 technology optimizes the design and delivery of innovative DNA medicines that teach the body to manufacture its own disease-fighting tools. For more information, visit **www.inovio.com**.

Forward-Looking Statements

This press release contains certain forward-looking statements relating to our business, including the potential clinical benefit of INO-3107 and potential market acceptance if INO-3107 is approved 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, 2024, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, 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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