



First Quarter 2025 **Financial Results**

May 2025

Agenda

Introduction

Jennie Willson, Director, Communications

CEO Perspective & Corporate Progress

Jacqueline Shea, PhD, President & Chief Executive Officer

INO-3107 Update

Michael Sumner, MBBS, MBA, Chief Medical Officer

Steve Egge, MBA, Chief Commercial Officer

Financial Results

Peter Kies, Chief Financial Officer



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Recent Progress on 2025 Strategic Priorities

Submit BLA for INO-3107

- On track to begin rolling submission of BLA in mid-2025
 - Initiated device design verification (DV) testing required for IND update and BLA submission
 - Aim to complete submission in the 2H25, receive acceptance from FDA by EOY; plan to request priority review

Advance Commercialization Preparations

- Ongoing market research with physicians, patients and payors
- Refining go to market plans

Advance Pipeline

- Announced promising interim results from ongoing proof-of-concept Phase 1 trial with next gen DMAb technology

Lead Candidate: INO-3107 for Recurrent Respiratory Papillomatosis (RRP)

Potentially transformational therapy under
accelerated approval pathway



Continued Progress Toward BLA Goal

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- | | |
|---|--|
|  Regulatory & Device Progress | Manufactured new arrays and initiated DV testing <ul style="list-style-type: none">• On track to begin rolling submission of BLA in mid-2025 |
| <hr/> | |
|  Confirmatory Trial Preparations | Targeting 20+ sites at major US medical centers <ul style="list-style-type: none">• Randomized, placebo-controlled; 100 patients; suitable for global registration |
| <hr/> | |
|  Immunology, Clinical & Durability Data | Presented clinical and safety data at scientific conferences & published in peer-reviewed journal <ul style="list-style-type: none">• Reduction in surgeries for majority of RRP patients• Well tolerated with minimal adverse events• Targeted immune response resulted in significant clinical benefit Year 2 and 3 Durability data announced <ul style="list-style-type: none">• Clinical outcomes continued to improve over time in year 2 and into year 3 |

Targeted Outreach at Key Scientific Conferences

MARCH /APRIL

- **Eurogin** — MARCH 16
- **National HPV Conference** — APRIL 15
 - First ever HPV conference to be held in US
 - Highlighted impact of HPV as cause of significant morbidity and mortality for thousands of people
- **World Vaccine Congress** — APRIL 21 & 23
- **Festival of Biologics** — APRIL 23

MAY

- **European Laryngological Society Annual Congress** — MAY 9
- **American Society of Gene and Cell Therapy (ASGCT)** — MAY 13
- **American Broncho-Esophagological Association Combined Otolaryngology Spring Meeting (ABEA/COSM)** — MAY 13
 - Largest US national meeting for otolaryngologists (physicians who treat majority of RRP patients)

KEY TAKEAWAY: Significant Reduction in Surgeries for Majority of Patients, Continued Improvement Over Time

RRP-001 PHASE 1/2 OPEN-LABEL STUDY

- Statistically significant reduction in surgeries for RRP patients
 - 72% ORR at Week 52
- Well tolerated with minimal adverse events
 - 41% (13/32) reported treatment-related AEs grade 2 or lower
 - Most common AE's: transient injection site pain (31%) and fatigue (9%)
 - No discontinuations
- Targeted immune response resulted in significant clinical benefit
 - MOA: INO-3107 elicits antigen specific cytotoxic T cell response that clears HPV infected cells to control/eliminate disease
- Published in *Nature Communications* – FEB 2025

RRP-002 DURABILITY EXTENSION / FOLLOW-UP

- Reduction in surgeries continued to improve after year 1
 - ORR improved to 86% by Week 104 for second twelve-month period with 50% CR
- Over 75% fewer surgeries 2 years after initial treatment regimen
 - Average surgeries in year pre-treatment: 4.1
 - Average surgeries in year 2 post treatment: 0.9
- Submitted manuscript to peer-reviewed publication in April 2025

Next Steps

Regulatory

- Complete DV testing first half of 2025
- Begin rolling submission of BLA mid-2025 with goal of completing the submission in 2H25 and receiving FDA acceptance for filing of submission by end of year; plan to request priority review
- Submit revised IND for confirmatory trial (device update)
- Longer-term therapy: Trial design to FDA after BLA submission is complete for potential supplemental BLA

Medical Affairs

- Deployment of medical science liaisons (MSLs) to begin in 2Q25

RRP Represents a Significant Market Opportunity

Disease-modifying therapeutic option

14,000 patients in the U.S., 1.8 per 100,000 new cases annually; similar estimates in Europe

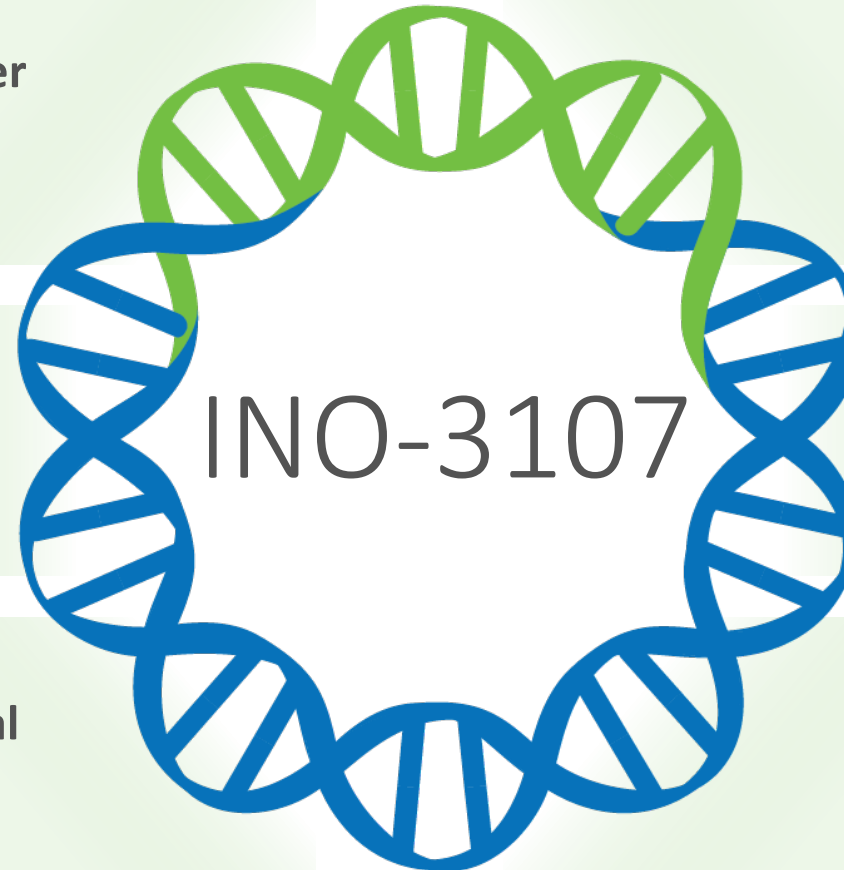
No regulatory-approved therapeutic currently available

HPV vaccination unlikely to have significant impact on RRP prevalence in near term

Surgical standard of care has potential to cause irreparable harm; does not impact underlying disease

Payor research supports potential for rare disease pricing*

Potential to develop continuation of therapy regimen - opportunity to maintain/extend outcomes



*Potential analog for INO-3107 is Ogsiveo®, a recently approved first-in-class product that treats desmoid tumors, which are also life-altering benign growths that had previously been treated by repetitive surgeries

Sources: Pingali C et al. National Vaccination Coverage Among Adolescents Aged 13–17 Years — National Immunization Survey-Teen, US, 2023. *MMWR* 2024;73:708–714. <http://dx.doi.org/10.15585/mmwr.mm7333a1>. Lewis RM et al. Estimated Prevalence and Incidence of Disease-Associated Human Papillomavirus Types Among 15- to 59-Year-Olds in the US. *Sex Transm Dis*. 2021 Apr 1;48(4):273–277. doi: 10.1097/OLQ.0000000000001356. PMID: 33492097; PMCID: PMC10037549. Shapiro GK. HPV Vaccination: An Underused Strategy for the Prevention of Cancer. *Current Oncology*. 2022; 29(5):3780–3792. <https://doi.org/10.3390/curroncol29050303>. Zhang Y, Fakhry C, D'Souza G. Projected Association of Human Papillomavirus Vaccination With Oropharynx Cancer Incidence in the US, 2020–2045. *JAMA Oncol*. 2021;7(10):e212907. doi:10.1001/jamaoncol.2021.2907. Cancer Trends Progress Report National Cancer Institute, March 2024, <https://progressreport.cancer.gov>.

Recent Market Research Supports Preferred Product Profile

HCP PERSPECTIVE

Efficacy

Improving response over time

- Patients that achieved a 50% to 100% reduction in surgeries (ORR): 72% in year 1; 86% in year 2*
- Complete response: 28% in year 1; 50% in year 2



The complete response rate of 50% is good... but a 50-100% reduction in surgeries in ~8 out of 10 patients, that's the most compelling. The vast majority see significant benefit from treatment."

– Laryngologist, manages ~50 RRP patients

Tolerability

Well tolerated

- 41% (13/32) reported treatment-related AEs grade 2 or lower
- Most common AEs: transient injection site pain (31%) and fatigue (9%)
- No discontinuations



The tolerability profile looks good- 31% with pain, fatigue 9%. This suggests patients can go back to work... this is important, especially when patients receive multiple doses over a relatively short timeframe."

– Laryngologist, manages ~15 RRP patients

Simplicity

Patient-centric treatment

- Office-based administration that leaves doctor in control
- CELLECTRA device easy to use by HCPs
- No requirement for scoping/surgeries during dosing window



Sending off my patients on a referral is not always the best thing. You're defeating yourself by handing off care. I prefer to treat patients in my clinic, so I can maintain control."

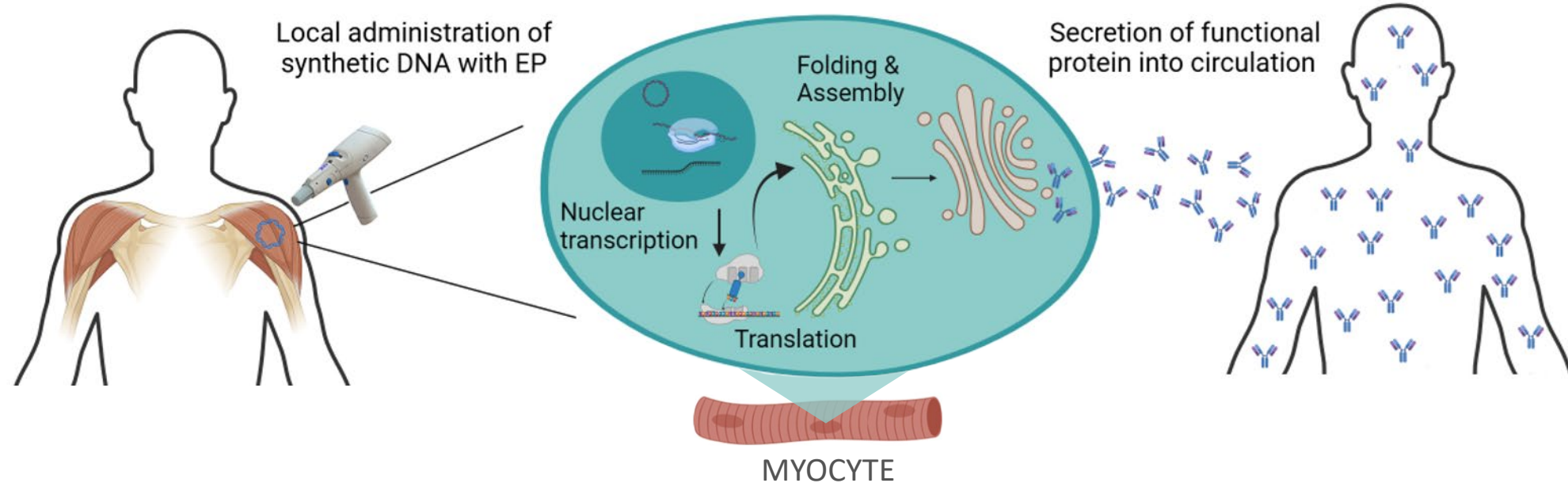
– Laryngologist, manages ~30 RRP patients

Next-Gen DNA Medicines Platform

- Initial interim clinical data announced March 2025
- Additional data to be presented at ASGCT in May



The Next Generation of DNA Medicine

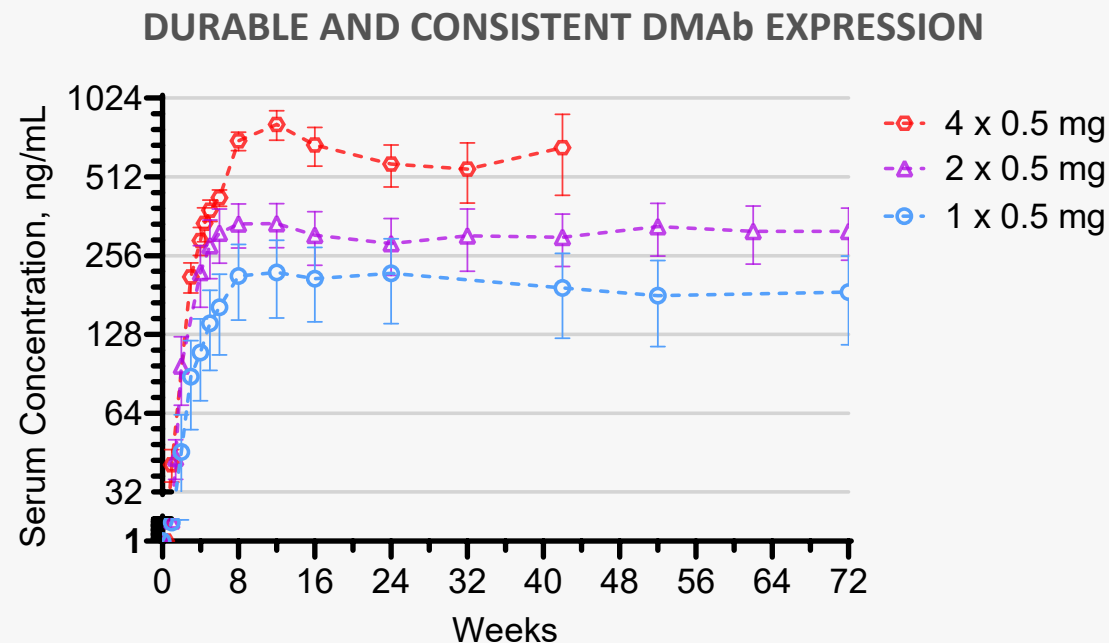


DMAb technology enables in vivo production of monoclonal antibodies (mAbs)

- DNA is administered via CELLECTRA device to enable local expression of the genes coding for the antibodies in the deltoid muscle.
- DMAbs are expressed and assembled in myocytes and secreted into the blood where they can circulate in the body.

Ongoing Phase 1 Trial: Key Takeaways From Interim Data

- **Long-lasting in vivo antibody production:** DMAb levels remained stable for 72 weeks in all participants reaching that timepoint
- **No anti-drug antibodies (ADA):** no immune rejection of the DMAbs detected across ~1,000 blood samples
- **Well-tolerated:** most common side effects were mild, temporary injection site reactions; no SAEs related to study drug
- **Effective target binding:** expressed DMAbs successfully bound to SARS-CoV-2 Spike protein receptor-binding domain, confirming functional activity through week 72



Quantifiable DMAb expression at all dose levels in all subjects tested

Potential to Address Challenges of Conventional mAbs

Challenges with mAbs¹

- Stability: susceptible to a variety of chemically- and temperature-induced structural changes
- Limited prophylactic use due to biologic half-life and complexities if mAb is not administered SC
- Even with half-life extension, repeated administration is required
- Production of recombinant mAbs in bioreactors is time intensive and costly
- Limited use in low resource settings

vs

INOVIO's DMAb technology

- **Rapid manufacturing**, low cost of production, and **temperature-stable storage** and distribution
- DNA is a non-live, non-integrating, non-replicating platform, with **ability to be redosed**
- Have exhibited **prolonged expression in preclinical models** with maintenance of serum levels >15µg/ml for over a year²
- **Shortened development time** compared to classic mAbs and re-administration due to lack of serological interference

1Q25 Financial Update



Making Progress on Strategic Goals While Reducing Costs

	Three Months Ended March 31, 2025 (unaudited)	Three Months Ended March 31, 2024 (unaudited)	% CHANGE
Operating expenses	\$25.1	\$31.5	(20%)
Net loss	(\$19.7)	(\$30.5)	(35%)
Net loss per share	(\$0.51)	(\$1.31)	(61%)

- \$68.4M in cash, cash equivalents and short-term investments as of March 31, 2025
- No debt
- Cash runway projected into 1Q 2026

Q&A

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Upcoming Key Catalysts

Submit BLA for INO-3107

- Request rolling review & begin submitting modules mid-2025
 - Goal: receive acceptance of file by FDA by YE25, will request priority review
- Submit revised IND for confirmatory trial
- Submit longer-term therapy trial design for sBLA to FDA after BLA submission
- Continue to present/publish clinical, immunology, and durability data

Commercialization Preparations

- Be ready to launch quickly and efficiently if approved
- Continue to build on market research
- Finalize planning for go-to-market strategy
- Complete plans for commercial organization

Progress Pipeline

DMAb

- Complete Phase 1 trial
- Present/publish data

INO-3112 for OPSCC

- Finalize protocol for Phase 3
- Complete manufacture of drug supply for trial

INO-5401 for GBM

- Finalize protocol for Phase 2
- Complete manufacture of drug supply for trial

Why each day—and each surgery—matters to RRP patients:

“ RRP patients will tell you that even one reduction in the number of disruptive, invasive surgeries they face would be life-changing.”

Kim McClellan
President, RRP Foundation



Contact:
investor.relations@inovio.com