NEWS RELEASE

INOVIO Reports Fourth Quarter 2021 and Year-End Financial Results

3/1/2022

Provides update on INNOVATE Phase 3 and heterologous boost strategy for COVID-19 vaccine candidate, INO-4800
Completed enrollment of REVEAL2, our second global Phase 3 clinical trial of VGX-3100 for cervical pre-cancer
Completed enrollment of Phase 1/2 trial of INO-3107, INOVIO's orphan drug designation therapeutic candidate for the treatment of Recurrent Respiratory Papillomatosis
Investor call today at 4:30 PM ET

PLYMOUTH MEETING, Pa., March 1, 2022 /PRNewswire/ -- INOVIO (NASDAQ:INO), a biotechnology company focused on developing and commercializing DNA medicines to help protect people from infectious diseases and help treat people with cancer and HPV-associated diseases, today reported financial results for the quarter and year ended December 31, 2021. INOVIO's management will host a live conference call and webcast at 4:30 p.m. Eastern Time today to discuss financial results and provide a general business update. The live webcast and replay may be accessed by visiting INOVIO's website at **http://ir.inovio.com/events-and-presentations/default.aspx**.

Dr. J. Joseph Kim, President and CEO of INOVIO, said, "COVID-19 represents a continued and persistent threat to the health of our global community. The highly transmissible Omicron variant underscores the ongoing challenge to improve access to both primary vaccines and boosters. In in vitro testing we observed that INO-4800 maintained robust T cell responses against the Omicron variant, even though we saw significantly decreased levels of both neutralizing and binding antibodies against Omicron, consistent with the vaccines of other developers. Based on these preserved T cell responses, INOVIO plans to seek approval to amend the primary endpoint of the INNOVATE Phase 3 trial to prevention of severe disease. INOVIO is also evaluating the feasibility of conducting an additional heterologous boost trial for INO-4800, which, if undertaken, would complement the booster trial underway with INOVIO's partner Advaccine in China."

"In parallel with our COVID-19 efforts, we are also pleased with the clinical progress to date across our DNA medicines platform, including our therapeutic programs in HPV-associated diseases. In the fourth quarter, we completed enrollment of REVEAL2, our second global Phase 3 clinical trial of VGX-3100 for cervical pre-cancer. In

addition, we recently completed enrollment in our Phase 1/2 clinical trial for INO-3107, our DNA immunotherapy for the rare disease recurrent respiratory papillomatosis (RRP), which received orphan drug designation from the U.S. FDA. We have also completed enrollment in a Phase 1b trial for Lassa fever, a Phase 1b trial for an Ebola vaccine booster, as well as the first part of our Phase 2 trial for Middle East Respiratory Syndrome (MERS), showcasing the depth and breadth of our DNA medicines pipeline to support global public health efforts against potential pandemic threats," said Dr. Kim.

INOVIO 4Q21 and Year-End 2021 Highlights:

- INO-4800 was observed to provide full maintenance of T cell responses, but significantly decreased levels of antibodies against the Omicron variant in line with results observed with other COVID-19 vaccines.
- INOVIO plans to seek regulatory approval to amend the primary endpoint of the INNOVATE Phase 3 trial from prevention of virologically confirmed COVID-19 disease to prevention of severe disease due to COVID-19. INOVIO has paused enrollment in INNOVATE in preparation for this potential change.
- The Company is evaluating the feasibility of pursuing an INOVIO-sponsored heterologous boost non-inferiority clinical trial with INO-4800 compared to viral vector and inactivated COVID-19 vaccines.
- INOVIO's partner Advaccine completed enrollment of its 200-participant homologous and 267-participant heterologous boost trial with INO-4800 in China.
- INO-4800 was selected by the World Health Organization (WHO) for inclusion in a global Phase 3 trial for COVID-19 (Solidarity Trial Vaccines).
- REVEAL2, the second of two Phase 3 trials for VGX-3100 for cervical high-grade squamous intraepithelial lesions (HSIL), completed enrollment, with top-line efficacy and safety data anticipated in the second half of 2022.
- INOVIO completed enrollment of its Phase 1/2 trial of INO-3107 for RRP.
- Enrollment completed for the Phase 1b heterologous booster clinical trial of INO-4201 as a potential Ebola booster vaccine in collaboration with GuardRX and Geneva University Hospitals, an effort funded by the Defense Advanced Research Projects Agency (DARPA).

Fourth Quarter and Year-End Program Updates

Infectious Diseases

INO-4800: COVID-19

INO-4800 Omicron Assessment

INOVIO conducted an in vitro assessment of the cross-reactivity of INO-4800 vaccine-induced immune responses

against the Omicron variant of SARS-CoV-2. Testing demonstrated a maintenance of T cell responses, including CD8+ responses, but as seen with the vaccines of other developers, significantly decreased levels of both neutralizing and binding antibodies against Omicron.

INOVIO observed full maintenance of T cell responses against the Omicron variant in clinical samples from participants who had received INO-4800. The maintenance and preservation of T cell responses continue to remain a consistent observation for INO-4800 against the ancestral COVID-19 virus and across all variants of concern (VOCs) tested to date, including Omicron. The Company believes this is a critical observation as T cell responses are thought to play an important role1 in protection against severe disease2 and death and may be central to the durability of vaccine protection.

INO-4800 in INNOVATE Phase 3 Trial

In response to the dominance of the Omicron variant globally and the persistence of cross-reactive T cell responses generated by INO-4800, including CD8+, across all variants of concern to date, INOVIO plans to seek regulatory approval to amend the primary endpoint of INNOVATE from prevention of virologically confirmed COVID-19 disease to prevention of severe disease due to COVID-19. The Company believes INO-4800's ability to generate T cell responses could be critical in meeting the proposed amended primary endpoint.

In addition, to reflect the potential impact of the Omicron variant on INNOVATE, the Data Safety Monitoring Board (DSMB) recommended that INOVIO pause enrollment of new participants in the global Phase 3 clinical trial of INO-4800 in order to update the Informed Consent Form and Investigator Brochure. As a result of the DSMB's recommendation, as well as the company's plans to seek approval to amend the trial's primary endpoint, INOVIO has paused enrollment of new participants in INNOVATE. Interim efficacy data from INNOVATE will therefore not be available in the first half of 2022 as previously expected.

Heterologous and Homologous Boost Trials

INOVIO's partner Advaccine has completed enrollment of its 200-participant homologous and 267-participant heterologous boost trials in China. The trials are designed to evaluate safety, tolerability, and immunogenicity of INO-4800 as a homologous boost where INO-4800 was administered as the primary vaccine and as a heterologous boost in which inactivated vaccines were administered as the primary vaccine.

INOVIO is evaluating the feasibility of an additional ex-US heterologous boost (vaccination with a different vaccine from the primary series) trial with INO-4800 as a booster in a non-inferiority clinical trial compared to viral vector and inactivated COVID-19 vaccines. Currently licensed vaccines may not meet the global demand for boosters to address waning protection from these primary vaccinations, a need which some regulatory agencies are

considering with respect to evaluating clinical pathways for heterologous boost vaccines. Key features of INOVIO's DNA vaccine technology that make it a potentially favorable primary and booster candidate include generating T-cell responses against multiple variants of concern, lack of anti-vector immunity, tolerability of re-administration, and thermostability for transport, storage, and distribution.

Solidarity Trial Vaccines

INO-4800 is one of two COVID-19 vaccine candidates currently being tested in a large, international, randomized controlled Phase 3 clinical trial, called the Solidarity Trial Vaccines, being funded, sponsored, and conducted by the World Health Organization (WHO). INO-4800 was selected for inclusion in the Solidarity Trial Vaccines by the WHO's independent vaccine prioritization advisory group.

INO-4500: Lassa Fever

In October 2021 INOVIO announced that the Phase 1b clinical trial for INO-4500, its DNA vaccine candidate for Lassa fever, completed full enrollment of 220 participants. This Phase 1b trial (LSV-002 - NCT04093076), which is funded by Coalition for Epidemic Preparedness Innovations (CEPI) is ongoing at the Noguchi Memorial Institute for Medical Research in Accra, Ghana, and is the first vaccine clinical trial for Lassa fever conducted in West Africa, where the viral illness is endemic. The dosing regimen involved two intradermal vaccinations at 0 and 28 days with either 1.0 mg or 2.0 mg doses. In addition to providing insights on the INO-4500 safety and immunogenicity profile, this trial will inform dose selection for subsequent Phase 2 trials in West Africa.

INO-4700: Middle East Respiratory Syndrome (MERS)

INOVIO has dosed and completed enrollment for the first part (dose finding stage) of the Phase 2 trial (192 participants) of INO-4700 against Middle East Respiratory Syndrome (MERS), a disease in the coronavirus family for which there are no approved vaccines.

The multi-center Phase 2 trial is a randomized, double-blinded, placebo-controlled trial designed to evaluate the safety, tolerability, and immunogenicity of INO-4700 in approximately 500 healthy adult participants. The trial, which is sponsored by INOVIO and fully funded by the CEPI, is being conducted at sites in Jordan, Lebanon, and Kenya, where MERS cases have been reported.

INO-4201: Ebola

Enrollment of 46 healthy participants has been completed as part of a randomized, placebo-controlled, Phase 1b clinical trial evaluating the safety, tolerability, and immunogenicity of INOVIO's Ebola vaccine candidate INO-4201.

The trial (NCT04906629) titled "Phase 1b, Placebo-controlled Randomized Clinical Trial to Evaluate the Safety, Tolerability and Immunogenicity of INO-4201 Followed by Electroporation as a Booster Vaccination in Healthy Volunteers Who Have Previously Received the VSV-ZEBOV Vaccine" will assess whether INO-4201 can be used as a booster in participants previously vaccinated with rVSV-ZEBOV (Ervebo®). Ervebo is a replication-competent, live, attenuated recombinant vesicular stomatitis virus (rVSV)-based vaccine approved by the U.S. FDA for the prevention of disease caused by Zaire ebolavirus in individuals 18 years of age and older as a single-dose administration.

HPV-Associated Diseases

VGX-3100: Cervical HSIL (REVEAL1 / REVEAL2)

INOVIO completed enrollment in REVEAL2, its second global Phase 3 clinical trial of VGX-3100 for cervical HSIL. Top-line efficacy and safety data are expected to be available in the second half of 2022.

INOVIO completed the 52-week safety follow-up of participants in REVEAL1 and showed that VGX-3100 remained well-tolerated through Week 88. In addition, participants treated with VGX-3100 who met the primary endpoint at Week 36 remained clear of HPV-16 and/or HPV-18 at Week 88.

Additionally, INOVIO is pleased with progress to date with partner QIAGEN on the co-development of a liquid biopsy-based diagnostic product based on next-generation sequencing (NGS) technology to guide clinical decision-making for the use of VGX-3100 in cervical HSIL. This biomarker, if validated, may have the potential to identify those women who are more likely to have a favorable treatment outcome, specifically the regression of cervical HSIL and clearance of virus. INOVIO anticipates having additional information on its biomarker development progress in 2022.

INO-3107: Recurrent Respiratory Papillomatosis (RRP)

Subsequent to year end, the company completed enrollment of 32 participants in its open-label, multicenter Phase 1/2 clinical trial with INO-3107 in participants with HPV 6 and/or 11-associated RRP. RRP is a rare disease (estimated at 15,000 active cases in the U.S.) that is characterized by the growth of tumors in the respiratory tract caused by the human papillomavirus. The first participant was dosed in November 2020. All 32 adult participants first underwent surgical removal of their papilloma(s) and then received four doses of INO-3107, one every three weeks. The trial is assessing safety, tolerability, immunogenicity, and efficacy of INO-3107. The company expects preliminary efficacy data from a portion of participants from this Phase 1/2 trial in the second half of this year.

INO-3107 previously received orphan drug indication from the U.S. FDA in July 2020.

Immuno-oncology

INO-5401: Newly Diagnosed Glioblastoma Multiforme (GBM)

In November 2021, Dr. David Reardon, Clinical Director of the Center for Neuro-Oncology at Dana-Farber Cancer Institute and the Coordinating Principal Investigator, presented updated data from the GBM-001 Phase 2 trial at the Society for Immunotherapy of Cancer pre-conference workshop. Overall survival at 24 months was 22% (7/32) for the MGMT unmethylated cohort and 55% (11/20) for the MGMT methylated cohort. The trial showed that INO-5401+INO-9012 with cemiplimab and radiation/TMZ have an acceptable safety profile, are immunogenic, and may improve survival in newly diagnosed GBM. We look forward to continuing our investigations into GBM and other cancers.

Manufacturing

In October 2021, INOVIO signed a non-binding MOU with Colombia's Ministry of Health and Social Protection reflecting the intent to advance efforts to combat the pandemic and endemic threat posed by COVID-19 and to better prepare for future public health emergencies. The MOU creates a framework for collaboration by which INOVIO and the government can explore knowledge sharing, technology licensing, and capacity building that support developing and producing vaccines and other biopharmaceuticals in Colombia. The potential results of these efforts include developing local manufacturing capabilities for INOVIO's DNA medicines and related products and technologies.

Fourth Quarter and Full Year 2021 Financial Results

Total revenue was $839,000 and $1.8 million for the quarter and year-ended December 31, 2021, respectively, compared to $5.6 million and $7.4 million for the respective periods in 2020. Total operating expenses were $106.3 million and $303.0 million for the quarter and year-ended December 31, 2021, respectively, compared to $34.9 million and $131.5 million for the respective periods in 2020.

INOVIO's net loss for the quarter and year ended December 31, 2021 was $106.9 million, or $0.50 per basic and diluted share, and $303.7 million, or $1.45 per basic and diluted share, respectively, compared to net loss of $24.3 million, or $0.14 per basic and diluted share, and $166.4 million, or $1.07 per basic and diluted share, for the quarter and year ended December 31, 2020, respectively.

Operating Expenses

Research and development (R&D) expenses for the quarter and year-ended December 31, 2021, were $92.3 million

and $249.2 million, respectively, compared to $26.3 million and $94.2 million for the respective periods in 2020. The year-over-year increase in R&D expenses was primarily related to higher drug manufacturing, outside services and clinical trial expenses related to INO-4800, expenses related to the acquisition and installation of manufacturing equipment related to INO-4800, higher engineering services, expensed equipment and inventory related to our CELLECTRA® 3PSP device array automation project, and higher employee and contractor compensation, among other variances.

General and administrative (G&A) expenses were $14.0 million and $53.8 million, respectively, for the quarter and year ended December 31, 2021, versus $8.6 million and $37.2 million, respectively, for the same periods in 2020. The year-over-year increase in G&A expenses was primarily related to an increase in employee compensation, including non-cash stock-based compensation, due to an increase in employee headcount, among other variances.

Capital Resources

As of December 31, 2021, cash and cash equivalents and short-term investments were $401.3 million compared to $411.6 million as of December 31, 2020. As of December 31, 2021, the Company had 217.4 million common shares outstanding and 234.0 million common shares outstanding on a fully diluted basis, after giving effect to the exercise, vesting and conversion, as applicable, of its outstanding options, restricted stock units, convertible preferred stock, and convertible debt.

INOVIO's balance sheet and statement of operations are provided below. Additional information is included in INOVIO's annual report on Form 10-K for the year ended December 31, 2021, which can be accessed at: **http://ir.inovio.com/financials/default.aspx**.

Conference Call / Webcast Information

INOVIO's management will host a live conference call and webcast at 4:30 p.m. Eastern Time today to discuss INOVIO's financial results and provide a general business update. The live webcast and replay may be accessed by visiting INOVIO's website at **http://ir.inovio.com/events-and-presentations/default.aspx**.

References

Noh, J.Y., Jeong, H.W., Kim, J.H. et al. T cell-oriented strategies for controlling the COVID-19 pandemic. Nat Rev Immunol21, 687–688 (2021).
Rydyznski Moderbacher, C. et al. Antigen-specific adaptive immunity to SARS-CoV-2 in acute COVID-19 and associations with age and disease severity. Cell 183, 996–1012 (2020).

About INOVIO

INOVIO is a biotechnology company focused on developing and commercializing DNA medicines to help protect people from infectious diseases and help treat people with cancer and HPV-associated diseases. Our DNA medicines are delivered using our proprietary smart device to produce a robust and tolerable immune response against targeted pathogens and cancers. INOVIO is evaluating candidate VGX-3100 in two Phase 3 trials for precancerous high-grade cervical dysplasia caused by HPV-16 and/or HPV-18. INOVIO is also evaluating INO-4800, a DNA vaccine candidate against COVID-19, in a global Phase 3 trial.

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 DNA medicines, our expectations regarding our research and development programs, including the planned initiation and conduct of preclinical studies and clinical trials and the availability and timing of data from those studies and trials, and our ability to successfully manufacture and produce large quantities of our product candidates if they receive regulatory approval. 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 our 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 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 final 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.

Inovio Pharmaceuticals, Inc.

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2021	2020
ASSETS		
Current assets:		
Cash and cash equivalents	$71,143,778	$250,728,118
Short-term investments	330,170,940	160,914,935
Accounts receivable	5,466,850	18,559,967
Accounts receivable from affiliated entities	2,565,194	503,782
Prepaid expenses and other current assets	38,836,991	40,357,456
Prepaid expenses and other current assets from affiliated entities	261,192	106,432
Total current assets	448,444,945	471,170,690
Fixed assets, net	17,453,206	11,348,144
Investments in affiliated entity	3,906,796	4,460,366
Investment in Geneos	—	434,387

Intangible assets, net	2,626,355	3,146,770
Goodwill	10,513,371	10,513,371
Operating lease right-of-use assets	11,571,026	12,741,296
Other assets	1,425,794	25,957,448
Total assets	$495,941,493	$539,772,472
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$47,644,530	$21,203,808
Accounts payable and accrued expenses due to affiliated entities	548,032	642,969
Accrued clinical trial expenses	10,326,266	9,950,345
Deferred revenue	21,628	46,628
Operating lease liability	2,603,956	2,329,394
Grant funding liability	4,559,721	7,474,310
Grant funding liability from affiliated entities	37,500	58,500
Total current liabilities	65,741,633	41,705,954
Deferred revenue, net of current portion	64,361	79,214
Convertible senior notes	14,959,647	14,139,988
Convertible bonds	—	4,515,834
Operating lease liability, net of current portion	15,459,559	18,063,515
Deferred tax liabilities	32,046	32,046
Grant funding liability from affiliated entity, net of current portion	—	37,500
Other liabilities	14,826	57,663
Total liabilities	96,272,072	78,631,714
Commitments and contingencies		
Inovio Pharmaceuticals, Inc. stockholders' equity:		
Preferred stock—par value $0.001; Authorized shares: 10,000,000, issued and outstanding shares: 9 at December 31, 2021 and 2020	—	—
Common stock—par value $0.001; Authorized shares: 600,000,000 at December 31, 2021 and 2020, issued and outstanding: 217,382,887 at December 31, 2021 and 186,851,493 at December 31, 2020	217,382	186,851

Additional paid-in capital	1,609,589,797	1,367,406,869
Accumulated deficit	(1,209,855,522)	(906,196,812)
Accumulated other comprehensive income (loss)	(282,236)	(256,150)
Total Inovio Pharmaceuticals, Inc. stockholders' equity	399,669,421	461,140,758
Total liabilities and stockholders' equity	$495,941,493	$539,772,472

Inovio Pharmaceuticals, Inc.

CONSOLIDATED STATEMENTS OF OPERATIONS

	For the Year ended December 31,		
	2021	2020	2019
Revenues:			
Revenue under collaborative research and development arrangements	$902,260	$5,170,586	$3,636,945
Revenue under collaborative research and development arrangements from affiliated entities	245,310	1,453,730	235,649
Other revenue	627,188	786,904	237,536
Other revenue from affiliated entities	—	—	1,800
Total revenues	1,774,758	7,411,220	4,111,930
Operating expenses:			
Research and development	249,240,324	94,245,436	88,017,319
General and administrative	53,752,353	37,247,828	27,203,156
Total operating expenses	302,992,677	131,493,264	115,220,475
Loss from operations	(301,217,919)	(124,082,044)	(111,108,545)
Other income (expense):			
Interest income	3,363,080	3,311,846	2,605,981

Interest expense	(1,936,447)	(8,702,450)	(7,948,539)
Change in fair value of derivative liability	—	(75,670,977)	(1,763,652)
Gain (loss) on investment in affiliated entities	(553,570)	36,556,658	(3,090,557)
Net unrealized gain (loss) on available-for-sale equity securities	(3,222,838)	1,695,497	—
Other income (expense), net	343,371	(704,896)	496,200
Gain on deconsolidation of Geneos	—	4,121,075	—
Loss on extinguishment of convertible bonds	—	(8,177,043)	—
Gain on extinguishment of convertible senior notes	—	8,762,030	—
Net loss before income tax benefit	(303,224,323)	(162,890,304)	(120,809,112)
Income tax benefit	—	—	257,335
Share in net loss of Geneos	(434,387)	(4,584,610)	—
Net loss	(303,658,710)	(167,474,914)	(120,551,777)
Net loss attributable to non-controlling interest	—	1,063,757	1,192,558
Net loss attributable to Inovio Pharmaceuticals, Inc.	$(303,658,710)	$(166,411,157)	$(119,359,219)
Net loss per share attributable to Inovio Pharmaceuticals, Inc. stockholders			
Basic and diluted	$(1.45)	$(1.07)	$(1.21)
Weighted average number of common shares outstanding			
Basic and diluted	208,829,801	155,126,857	98,717,999

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