NEWS RELEASE

Immediate Release

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Inovio Pharmaceuticals Reports 2017 Second Quarter Financial Results

PLYMOUTH MEETING, PA – August 8, 2017 – Inovio Pharmaceuticals, Inc. (NASDAQ: INO) today reported financial results for the quarter ended June 30, 2017.

Total revenue was $20.4 million for the three months ended June 30, 2017, compared to $6.2 million for the same period in 2016. Total operating expenses were $30.0 million for the current year quarter compared to $24.4 million for the prior year quarter.

The net loss attributable to common stockholders for the quarter ended June 30, 2017 was $9.5 million, or $0.13 per share, compared to $18.7 million, or $0.26 per share, for the quarter ended June 30, 2016. The decrease in net loss for the quarter resulted primarily from higher revenue recognized related to Inovio's license and collaboration agreement with MedImmune entered into in 2015.

Revenue

The increase in revenue was primarily due to $13.8 million of the previously deferred revenue from the total up-front payment received in September 2015 from MedImmune being recognized during the three months ended June 30, 2017. This revenue recognition occurred upon MedImmune's definitive selection of a new cancer product candidate to be tested in clinical trials against an undisclosed cancer target from our on-going research collaboration. The successful advancement of this new product candidate by MedImmune could also trigger future milestone payments and sales-based royalties payable to Inovio.

Operating Expenses

Research and development expenses for the second quarter of 2017 were $23.9 million compared to $19.6 million for the second quarter of 2016. The increase in R&D expenses was related to increased investment in all of Inovio's product development programs, including its recently commenced phase 3 trial for VGX-3100. General and administrative expenses were $6.2 million for the second quarter of 2017 versus $5.8 million for the second quarter of 2016. The increase in G&A expenses primarily related to an increase in non-cash stock based compensation.

Capital Resources

As of June 30, 2017, cash and cash equivalents and short-term investments were $92.0 million compared with $104.8 million as of December 31, 2016. At quarter end the company had 77.6 million shares outstanding and 87.2 million shares outstanding on a fully diluted basis. During the three months ended June 30, 2017, Inovio sold 2,917,725 shares of common stock under its ATM common stock sales agreement for net proceeds of $24.1 million, with an average sale price of $8.41 per share.

On July 25, 2017, the company closed an underwritten public offering of 12,500,000 shares of common stock at a public offering price of $6.00 per share, for gross proceeds of $75.0 million. The

net proceeds, after deducting the underwriters' discounts and commissions and other estimated offering expenses payable by Inovio, were approximately $70.2 million. Inovio has granted the underwriters an option until August 18, 2017 to purchase up to 1,875,000 additional shares of its common stock on the same terms and conditions.

Inovio's balance sheet and statement of operations are provided below. The Form 10-Q providing the complete 2017 second quarter financial report can be found at: http://ir.inovio.com/secfilings.

Corporate Update

Clinical Developments

VGX-3100: Cervical Pre-Cancer (Phase 3)

- In June, Inovio commenced its phase 3 clinical program to evaluate the efficacy of Inovio's DNA-based immunotherapy, VGX-3100, to treat cervical dysplasia caused by human papillomavirus (HPV). Initiating Inovio's first phase 3 program marks a significant milestone for the company, for the next generation of DNA-based immunotherapies, and for women's health. In the phase 3 trial, Inovio will assess the efficacy of VGX-3100 in regressing cervical HSIL (high-grade squamous intraepithelial lesions; also called CIN2 or CIN3), a direct precursor to cervical cancer, and in eliminating the HPV infection that causes these lesions. The pivotal data from this program, if positive, could support the licensure of VGX-3100 as the first immunotherapy for this disease. HPV is the most common sexually transmitted infection, with over 14 million new infections annually.
- Inovio satisfied the FDA's request for information relating to its CELLECTRA® 5PSP delivery device, resulting in the FDA removing a previously imposed clinical hold on this program. During the hold period, Inovio prepared investigational sites for the phase 3 study, resulting in the company opening 27 sites in just over the first month since the hold was removed. Inovio is on track to open at least 50 sites by the end of the year.

VGX-3100: Vulvar Pre-Cancer (Phase 2)

- In April, Inovio commenced a randomized, open-label phase 2 trial to evaluate the efficacy of VGX-3100 in 36 women with high-grade HPV-related pre-cancerous lesions of the vulva, or vulvar intraepithelial neoplasia, a disease with a high unmet medical need. This is a new therapeutic indication for VGX-3100. The primary endpoint of the study is histologic clearance of high-grade lesions and virologic clearance of the HPV virus in vulvar tissue samples. The study will also evaluate safety and tolerability.

MEDI0457: HPV-Related Head & Neck Cancer (Phase 1/2)

- In May, Inovio announced that MedImmune, AstraZeneca's global biologics research and development arm, commenced a new clinical trial investigating the combination of MEDI0457 (formerly INO-3112) in-licensed from Inovio, an immunotherapy designed to generate antigen-specific killer T cell responses targeting HPV-associated tumors, and durvalumab, MedImmune's PD-L1 checkpoint inhibitor. The combination trial will enroll patients with metastatic HPV-associated squamous cell carcinoma of the head & neck (SCCHN) with persistent or recurrent disease after chemotherapy treatment. This study marks a significant moment for Inovio as it transitions into a late-stage biotechnology company. MedImmune is investigating the possibility of elevating the response rate of checkpoint inhibitors by using durvalumab in combination with a DNA plasmid vaccine originally licensed from Inovio, which has shown the ability to generate killer T cells.
- Combining the company's first phase 3 program with the previously announced phase 2 clinical trial of VGX-3100 for treating HPV-related vulvar neoplasia, and the MEDI0457 checkpoint inhibitor-based combination study with MedImmune/AstraZeneca targeting HPV-associated, metastatic head and neck cancers, Inovio is well positioned to comprehensively treat HPV-associated diseases across the continuum of HPV infection through to cancer in both women and men.

Infectious Disease Studies

- Inovio reported that its HIV vaccine, PENNVAX®-GP, produced amongst the highest overall levels of immune response rates (cellular and humoral) ever observed in a human study by an HIV vaccine. The vaccine candidate, PENNVAX-GP, consists of a combination of four HIV antigens designed to cover multiple global HIV strains and generate both an antibody (humoral) immune response as well as a T cell (cellular) immune response to both potentially prevent and treat HIV. These significant results are consistent with Inovio's recent data reported from its Ebola, Zika and MERS clinical trials in terms of achieving nearly 100% vaccine response rates with favorable safety profiles. Furthermore, Inovio's newer and more tolerable intradermal vaccine delivery device showed that Inovio can elicit very high immune responses at a much lower dose.
- Inovio and its academic and industry collaborators received a multi-year $6.95 million grant in March from the NIH's National Institute of Allergy and Infectious Diseases to develop a single or combination therapy using Inovio's PENNVAX-GP, with the goal of attaining long-term HIV remission in the absence of antiviral drugs. Development of Inovio's PENNVAX-GP immunotherapy, which widely targets multiple major clades of HIV — providing global coverage — has been funded through a $25 million NIAID contract awarded to Inovio and its collaborators. In addition, Inovio and its collaborators were awarded a five-year $16 million Integrated Preclinical/Clinical AIDS Vaccine Development (IPCAVD) grant in 2015 from NIAID. PENNVAX-GP is currently being studied in a phase 1 clinical trial (HVTN-098) to evaluate its safety and immunogenicity in 94 healthy volunteers as a preventive vaccine (see above). The newly funded study will assess the impact of this vaccine approach in a therapeutic setting.
- In preliminary results from the expanded stage of Inovio's phase 1 clinical trial, EBOV-001, 95% (170 of 179) of evaluable subjects generated an Ebola-specific antibody immune response, with the mean antibody titer comparable or superior to those reported from viral vector-based Ebola vaccines, along with a more safety profile than those vaccines. This study was funded by a $45 million contract from DARPA.

Corporate Developments

- In May, Inovio and Regeneron entered into an immuno-oncology clinical study agreement for glioblastoma (GBM) combination therapy. The planned Phase 1b/2a clinical trial will combine Regeneron's PD-1 inhibitor REGN2810 and Inovio's T cell activator INO-5401 and immune activator INO-9012 for the potential treatment of brain cancer. INO-5401 includes Inovio's SynCon® antigens for WT1, hTERT and PSMA and has the potential to be a powerful cancer immunotherapy in combination with checkpoint inhibitors. The National Cancer Institute previously highlighted WT1, hTERT and PSMA among a list of attractive cancer antigens, designating them as high priorities for cancer immunotherapy development, and placing WT1 at the top of the antigen list. The hTERT antigen is expressed in 85% of cancers; the WT1 and PSMA antigens are also widely prevalent in many cancers. The open-label trial, which is expected to begin later this year, is designed to evaluate the safety and efficacy of the combination therapy in approximately 50 patients. GBM is the most aggressive form of brain cancer, and its prognosis is extremely poor, despite a limited number of new therapies approved over the last ten years. Under the terms of the agreement, the trial will be solely conducted and funded by Inovio, based upon a mutually agreed upon study design, and Regeneron will supply REGN2810. Inovio and Regeneron will jointly conduct immunological analyses in support of the study. Regeneron, in collaboration with Sanofi, is developing REGN2810 both alone and in combination with other therapies for the treatment of various cancers.
- In June, Inovio entered into a collaboration agreement with Genentech to commence a clinical trial to evaluate the combination of Inovio's T cell immunotherapy INO-5401 and Genentech's PD-L1 checkpoint inhibitor atezolizumab in patients with advanced bladder cancer. The phase 1b/2 immuno-oncology trial will evaluate Genentech's atezolizumab (TECENTRIQ®) in combination with Inovio's INO-5401, a T cell activating immunotherapy encoding multiple antigens, and INO-9012, an immune activator encoding IL-12. The planned clinical trial is anticipated to start later this year, and is designed to evaluate the safety, immune response and clinical efficacy of the combination therapy in approximately 80

patients with advanced bladder cancer. Combining INO-5401/INO-9012 with atezolizumab may provide a synergistic therapeutic effect as a result of generating higher levels of activated T cells and simultaneously inhibiting PD-L1.

- In July, Inovio completed an underwritten public offering of common stock, raising net proceeds of $70.2 million after underwriters' discounts and commissions and estimated offering expenses. Inovio expects that with the net proceeds of the offering it will be able to advance its ongoing REVEAL 1 and 2 phase 3 trials and four phase 2 immuno-oncology trials and to fund other pipeline advancements. The financing also added new institutional investors to Inovio's shareholder base.

  The recent financing transaction will also support the following expected near-term events:

  - VGX-3100 phase 3 (cervical pre-cancer) trial – initiated
  - MEDI0457 phase 1/2 combination (head & neck cancer) study – initiated
  - INO-5401 Glioblastoma multiforme (brain cancer) phase 1/2 combination study with Regeneron -- initiate 2H 2017
  - INO-5401 Bladder cancer phase 1/2 combination study with Genentech -- initiate 2H 2017
  - INO-5150 Prostate cancer study (phase 1) report data – 3Q 2017
  - INO-1800 Hepatitis B therapy study (phase 1) report data -- 4Q 2017
  - INO-1400 (hTERT) report interim immune response and safety data -- 4Q2017
  - Vaccine clinical study publications (Zika, Ebola and MERS) – 4Q 2017

  As previously announced in February, Inovio entered into a collaboration and license agreement with ApolloBio Corporation. If the agreement receives the requisite approvals from ApolloBio's stock exchange, its board and its shareholders, the agreement will become effective, at which time Inovio expects to receive up to $50 million in payments from Apollo -- $15 million in an upfront cash payment for the license of VGX-3100 in greater China and up to $35 million in the form of an equity investment in Inovio's common stock.

Preclinical Developments

- **Nature Communications** published a paper entitled "DNA Vaccination Protects Mice Against Zika Virus-Induced Damage to the Testes," reporting the results of a preclinical study in which Inovio's Zika vaccine prevented the persistence of virus and damage in the male reproductive tract. This published data suggests another avenue of potential protection against the Zika virus. While detrimental effects on sperm and fertility have not yet been reported in Zika-infected human males, persistence of Zika in semen and sperm and sexual transmission by males has been documented. This new preclinical data suggests that our Zika vaccine may represent an opportunity to limit the potential for sexual transmission of the virus. In addition to our ongoing ZIKA-001 and 002 clinical studies, we are planning for a larger phase 2 study in our efforts to bring our Zika vaccine to patients.
- **Npj Vaccines** published a paper entitled "DNA Inoculation of Synthetic Cross-Reactive Antibodies Protects Against Lethal Influenza A and B Infections," co-authored by Inovio scientists and collaborators from the Wistar Institute and MedImmune. The paper reported the results of a preclinical study in which Inovio's DNA-based monoclonal antibody product candidate for the treatment of influenza produced broadly cross-reactive antibodies that provided complete protection from a lethal challenge with multiple viruses of both influenza A and B types. Following previously reported similar data from Inovio's dMAb® candidates for HIV, dengue, and Chikungunya, this study further validates the potential for Inovio's dMAb technology platform to be able to use encoded DNA plasmids for *in vivo* production of monoclonal antibodies and to induce protective immune responses. The goal for this platform is to rapidly generate therapeutic monoclonal antibodies directly in the recipients. Such benefits are complementary to Inovio's antigen-generating platform in terms of immune mechanism and short response times, and advantages that overcome conventional monoclonal antibodies' long development lead times and complex manufacturing processes and costs.

About Inovio Pharmaceuticals, Inc.

Inovio is taking immunotherapy to the next level in the fight against cancer and infectious diseases. We are the only immunotherapy company that has reported generating T cells in vivo in high quantity that are fully functional and whose killing capacity correlates with relevant clinical outcomes with a favorable safety profile. With an expanding portfolio of immune therapies, the company is advancing a growing preclinical and clinical stage product pipeline. Partners and collaborators include MedImmune, Regeneron, Genentech, The Wistar Institute, University of Pennsylvania, DARPA, GeneOne Life Science, Plumbline Life Sciences, ApolloBio Corporation, Drexel University, NIH, HIV Vaccines Trial Network, National Cancer Institute, U.S. Military HIV Research Program, and Laval University. 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 electroporation-based drug and gene delivery technologies and DNA vaccines, 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, and the sufficiency of our capital resources. 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 and product development programs, 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 vaccines, our ability to support our pipeline of SynCon® active immunotherapy and vaccine 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 the company or its collaborators, including alternatives that may be more efficacious or cost effective than any therapy or treatment that the company and its collaborators hope to develop, issues involving product liability, issues involving patents and whether they or licenses to them will provide the company 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 the company can finance or devote other significant resources that may be necessary to prosecute, protect or defend them, the level of corporate expenditures, assessments of the company's 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, 2016, our Form 10-Q for the period ended June 30, 2017, and other regulatory filings we make from time to time. There can be no assurance that any product candidate in Inovio's pipeline will be successfully developed, manufactured or commercialized, that final results of clinical trials will be supportive of regulatory approvals required to market licensed 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 Inovio undertakes no obligation to update or revise these statements, except as may be required by law.

Inovio Pharmaceuticals, Inc.

CONSOLIDATED BALANCE SHEETS

	June 30, 2017	December 31, 2016
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 23,860,637	$ 19,136,472
Short-term investments	68,138,619	85,629,412
Accounts receivable	7,522,548	15,821,511
Accounts receivable from affiliated entity	1,189,300	748,355
Prepaid expenses and other current assets	4,914,764	1,749,059
Prepaid expenses and other current assets from affiliated entity	1,251,730	1,512,424
Total current assets	106,877,598	124,597,233
Fixed assets, net	15,017,992	9,025,446
Investment in affiliated entity - GeneOne	14,612,344	16,052,065
Investment in affiliated entity - PLS	3,339,802	3,777,510
Intangible assets, net	6,817,855	7,628,394
Goodwill	10,513,371	10,513,371
Other assets	1,674,251	2,113,147
Total assets	$ 158,853,213	$ 173,707,166
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 16,477,761	$ 19,597,787
Accounts payable and accrued expenses due to affiliated entity	847,421	1,072,579
Accrued clinical trial expenses	7,188,751	6,368,389
Common stock warrants	1,363,637	1,167,614
Deferred revenue	548,690	14,762,720
Deferred revenue from affiliated entity	274,194	407,292
Deferred rent	681,544	446,646
Total current liabilities	27,381,998	43,823,027
Deferred revenue, net of current portion	205,938	317,808
Deferred revenue from affiliated entity, net of current portion	—	86,694
Deferred rent, net of current portion	7,560,867	5,926,424
Deferred tax liabilities	174,793	174,793
Total liabilities	35,323,596	50,328,746
Inovio Pharmaceuticals, Inc. stockholders' equity:		
Preferred stock	—	—
Common stock	77,634	74,062
Additional paid-in capital	589,890,620	556,718,356
Accumulated deficit	(467,715,568)	(434,838,235)
Accumulated other comprehensive income	1,180,662	1,327,968
Total Inovio Pharmaceuticals, Inc. stockholders' equity	123,433,348	123,282,151
Non-controlling interest	96,269	96,269
Total stockholders' equity	123,529,617	123,378,420
Total liabilities and stockholders' equity	$ 158,853,213	$ 173,707,166

Inovio Pharmaceuticals, Inc.

CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	**2016**	**2017**	**2016**
Revenues:				
Revenue under collaborative research and development arrangements	$ 16,358,316	$ 1,889,988	$ 20,646,902	$ 3,686,845
Revenue under collaborative research and development arrangements with affiliated entity	176,879	499,720	410,209	636,720
Grants and miscellaneous revenue	2,797,647	3,814,083	8,037,880	9,990,381
Grants and miscellaneous revenue from affiliated entity	1,079,282	—	1,693,318	—
Total revenues	20,412,124	6,203,791	30,788,309	14,313,946
Operating expenses:				
Research and development	23,878,751	19,630,801	48,421,255	37,819,961
General and administrative	6,169,106	5,799,530	13,936,695	11,171,143
Gain on sale of assets	—	(1,000,000)	—	(1,000,000)
Total operating expenses	30,047,857	24,430,331	62,357,950	47,991,104
Loss from operations	(9,635,733)	(18,226,540)	(31,569,641)	(33,677,158)
Other income (expense):				
Interest and other income, net	300,021	341,131	640,362	674,201
Change in fair value of common stock warrants, net	(312,500)	(113,775)	(196,023)	(520,024)
Gain (loss) on investment in affiliated entity	169,096	(705,527)	(1,439,721)	6,775,450
Net loss attributable to Inovio Pharmaceuticals, Inc.	$ (9,479,116)	$ (18,704,711)	$ (32,565,023)	$ (26,747,531)
Loss per common share—basic and diluted:				
Net loss per share attributable to Inovio Pharmaceuticals, Inc. stockholders	$ (0.13)	$ (0.26)	$ (0.44)	$ (0.37)
Weighted average number of common shares outstanding—basic and diluted	75,409,702	72,957,159	74,783,791	72,591,986