NEWS RELEASE

Inovio Sharpens Focus On HPV-Related Diseases And Fast-to-Market Product Candidates

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Company Cuts Selected Early-Stage R&D Programs, Burn-Rate by 25%, and Staff by 28%

Management to Host Conference Call on July 17 at 8:00 AM EDT

PLYMOUTH MEETING, Pa., July 16, 2019 /PRNewswire/ -- Inovio Pharmaceuticals, Inc. (NASDAQ: INO) announced today that it has sharpened its corporate strategy to focus on the commercial development of its late-stage HPV assets and reallocate capital to develop fast-to-market product candidates. The company has cut selected early-stage R&D programs and discontinued further development of its Phase 1/2 study in advanced bladder cancer, while reducing its annual burn rate by 25% and its workforce by 28%.

Dr. J. Joseph Kim, Inovio's President & CEO, said, "From a position of strength with a healthy balance sheet and a 200-person team, Inovio sharpened its focus to create a more efficient organization with greater financial flexibility and a longer runway. With a refined strategy, Inovio will continue to advance our later-stage HPV programs while devoting more resources to develop fast-to-market product candidates such as GBM, RRP and dBTEs. We continue to expect near-term value drivers in the second half of this year that include interim data from Phase 2 studies targeting HPV-related vulvar and anal dysplasia and from our Phase 2 GBM study. We also anticipate the potential for significant new partnerships as our technology continues to attract attention from U.S. and international markets."

Realignment enables Inovio to focus on:

- First, commercializing the lead asset VGX-3100, a novel DNA-based immunotherapy to treat cervical dysplasia caused by human papillomavirus (HPV), a virus that accounts for almost 200,000 new cases of high-grade cervical dysplasia each year in the U.S. alone. The company recently completed enrollment of its pivotal Phase 3 registration trial, REVEAL 1, and commenced enrollment for REVEAL 2.

- Second, re-deploying resources to rapidly advance INO-3107 (previously called INO-3106) to treat RRP (recurrent respiratory papillomatosis). RRP is a rare, orphan disease caused by HPV 6 and 11 infections, for which the company recently

demonstrated clinical efficacy in a pilot study. Inovio plans to initiate the next clinical trial of INO-3107 within 12 months.

- Third, partnership with AstraZeneca to advance MEDI0457 in combination with AstraZeneca's checkpoint inhibitor in HPV-related cancers, including the ongoing Phase 2 study for treatment of head and neck cancer. AstraZeneca estimates completion of the head and neck cancer study by next August.

- Fourth, INO-5401 development efforts on treating GBM (glioblastoma multiforme), while discontinuing its Phase 1/2 study of INO-5401 in advanced bladder cancer. Although the bladder trial has yet to provide evaluable data, the decision to discontinue the study was made because of the recognition that several new therapeutic alternatives have been approved, or are likely to be approved, for study patients since the trial's design and inception, and because of the high expense of the trial. In contrast, Inovio completed enrollment of the INO-5401 GBM study three months ahead of schedule earlier this year, clearly indicating unmet medical need and market potential. Inovio continues to expect interim progression-free survival and safety data for GBM before year-end 2019 and overall survival data in 2020. If positive clinical benefits are observed at these time points, INO-5401 for GBM treatment could represent a fast-to-market candidate.

- Finally, accelerating the clinical development of its transformative dBTE (DNA-encoded bi-specific T cell engagers) which generated potent cancer-killing activities in a preclinical study and which build on recent advances of its innovative and high-value dMAb™ (DNA-encoded monoclonal antibody) technology.

Inovio's important partner-funded programs are unaffected by the realignment including: MEDI0457 in HPV-related cancers with AstraZeneca; our Lassa and MERS vaccine programs with CEPI; the Bill & Melinda Gates Foundation-funded Zika dMAb clinical development program; and Inovio's commercial intra-dermal 3PSP delivery device development funded by Medical CBRN Defense Consortium (MCDC).

Conference Call / Webcast Information

Inovio's management will host a live conference call and webcast on July 17th at 8:00 a.m. Eastern Time to discuss the corporate update. The live webcast and a replay may be accessed by visiting the Company's website at **http://ir.inovio.com/investors/events/default.aspx**. Telephone replay will be available approximately one hour after the call at 877-344-7529 (US toll free) or 412-317-0088 (international toll) using replay access code 10133434.

About Inovio Pharmaceuticals Inc.

Inovio is an innovative clinical stage biotechnology company focused on the discovery, development, and commercialization of its synthetic DNA technology targeted against cancers and infectious diseases. Inovio's proprietary technology platform applies antigen sequencing and delivery to enable in vivo protein expression, which can activate potent immune responses to targeted diseases. The technology has been demonstrated to consistently activate robust and fully functional T cell and antibody responses against targeted

cancers and pathogens. Inovio's most advanced clinical program, VGX-3100, is in Phase 3 development for the treatment of HPV-related cervical pre-cancer. Also in development are Phase 2 immuno-oncology programs targeting HPV-related cancers and glioblastoma, as well as externally funded platform development programs in Zika, MERS, Lassa and HIV. Partners and collaborators include AstraZeneca, Regeneron, Roche/Genentech, ApolloBio Corporation, GeneOne Life Science, The Bill & Melinda Gates Foundation, Coalition for Epidemic Preparedness Innovations (CEPI), Defense Advanced Research Projects Agency, National Institutes of Health, National Institute of Allergy and Infectious Diseases, National Cancer Institute, HIV Vaccines Trial Network, Walter Reed Army Institute of Research, Medical CBRN Defense Consortium (MCDC), The Wistar Institute, and the University of Pennsylvania. For more information, visit **www.inovio.com**.

This press release contains certain forward-looking statements relating to our business, including our plans to develop DNA-based immunotherapies, 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 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 immunotherapies, 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 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, 2018, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 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.

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