Dear Investor,

Thank you for requesting information about Inovio Pharmaceuticals, Inc. (NYSE MKT: INO). We appreciate your time to learn more about the promise of DNA vaccines and immunotherapies and Inovio's vital role in advancing this field. Inovio is a team on a mission to build a great immunotherapy company.

Inovio's vision is to expand the significant medical benefits of the 20th century's vaccines by creating synthetic DNA vaccines and immunotherapies to not only prevent challenging diseases but treat cancers and infectious diseases such as HIV and hepatitis. We do this by stimulating the body's own immune system to generate robust T cell immune responses unique to the targeted diseases.

We have achieved best-in-class T-cell responses compared to alternative technologies. We reported such data from our cervical dysplasia phase I study, which also indicated that the T-cells we generated were able to kill targeted diseased cells. Currently in phase II, this study targets high grade cervical intraepithelial neoplasias (CIN), pre-cancers caused by HPV types 16 and 18. We will report phase II efficacy and immune response data from this trial in mid-2014.

While this first study is focused on cervical pre-cancers, this DNA immunotherapy is intended to fight all pre-cancers and cancers caused by HPV types 16 & 18, including cervical, head and neck, and other anogenital cancers – we view these as each being billion-dollar-plus markets. This year we are initiating new studies in which we will add to this immunotherapy a DNA-based immune activator called IL-12. Based on results achieved in a previous study, we expect the addition of IL-12 to further increase CD8 T cell levels above the level we saw with our DNA product alone. We expect to start clinical trials for head and neck and cervical cancer in the first half of 2014.

Inovio has also reported best-in-class T-cell responses from a human study of a DNA vaccine for HIV, in which our vaccine achieved a seven-fold increase (7% to 52%) in response rate of CD8 T cells when delivered with electroporation. This type of data has never been previously reported by anyone else. We are also analyzing final data from this phase I study of PENNVAX®-B in 12 patients chronically infected with HIV with the intent to prepare a paper for submission to a peer-reviewed scientific publication. Knowledge from this HIV program has been incorporated into the design of our multi-clade, globally oriented PENNVAX-GP vaccine, which is now our lead preventive and therapeutic vaccine. We will initiate a phase I trial for PENNVAX-GP in the second half of 2014.

The characteristics of our T cells are one of the important attributes of our technology that attracted multiple large pharmaceutical companies to the table to discuss partnerships with Inovio and led to Roche concluding a deal with us. In September of 2013, Inovio and Roche, a global leader in innovative cancer drugs, concluded a deal to develop and commercialize Inovio's prostate cancer (INO-5150) and hepatitis B (INO-1800) immunotherapies. This transaction rewards the confidence we have always held in our synthetic DNA vaccine and electroporation delivery platform. This agreement provided Inovio with an up-front payment of $10 million and will result in additional payments upon reaching certain development and commercial milestones potentially up to $412.5 million. Roche is paying all preclinical and clinical development costs and would pay a royalty on sales of a successfully commercialized product(s). Roche may also pay other development milestone payments if it pursues other indications with INO-5150 or INO-1800. By this summer we expect to jointly initiate with Roche a first clinical trial of the therapeutic prostate cancer DNA vaccine. The beginning of this trial will result in a milestone payment from Roche.

Roche's stated aim is to find first-in-class and best-in-class therapies that may become next generation treatments for patients with different types of cancer. Roche's commitment at this stage of our development emphasizes the degree of strategic weight that this large, global pharmaceutical company is

applying to Inovio's technology, which can be used alone or in combination with other therapies, including checkpoint inhibitors.

Inovio is advancing on many fronts. Inovio initiated a phase I trial in collaboration with VGX International to test Inovio's hepatitis C immunotherapy in Korea. We expect to initiate additional studies in the U.S. in 2014 and report phase I data from this study in 2015. In the next quarters, Inovio plans to start phase I and phase I/IIa clinical trials for immunotherapies designed to treat prostate cancer; breast, lung and pancreatic cancers displaying the antigen hTERT; other HPV-caused cancers; as well as HIV and hepatitis B, most of these studies being funded by third parties.

We also continue to work toward additional partnerships with other large pharmaceutical companies.

We are excited about Inovio's results and potential on its path to revolutionize vaccines. Please let me know if you have questions.

Best regards,

Bernie Hertel
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Inovio Key Highlights

- Potentially game-changing phase II efficacy and immune response data from lead program mid-2014
- Exclusive worldwide partnership with Roche to develop and commercialize Inovio's prostate cancer (INO-5150) and hepatitis B (INO-1800) immunotherapy products
- Potential additional partnerships with large pharmaceutical companies
- Almost $60M in non-dilutive third party R&D grants and expenditures since 2009
- Operating capital through 4Q 2017
- Synthetic DNA vaccines with proprietary delivery technology targeting diseases with multi-billion-dollar markets; designed to extend the powerful capabilities but overcome limitations of conventional vaccines and alternative immunotherapies
- Best-in-class T-cell immune responses displaying killing effect against target cells – designed to fight cancers, HIV, hepatitis and other diseases requiring treatment
- Novel synthetic consensus vaccines are designed to break tolerance of the immune system to self-made cancer cells or achieve universal protection against a broader spectrum of constantly changing viruses such as influenza, in contrast to today's "one bug, one drug" paradigm
- Favorable safety profile with no serious adverse events in over 500 subjects to date
- Dominant global patent position, with over 400 patents protecting our electroporation delivery technology and novel SynCon® DNA vaccines
- Management team and advisors are leaders in the world of vaccines and DNA vaccines
- Recognized in 2014 with Vaccine Industry Excellence Awards for Best Therapeutic Vaccine (for HPV-associated diseases), Best Early Stage Biotech Company at World Vaccine Congress and Best Vaccine Licensing Deal.

Inovio (NYSE MKT: INO) is revolutionizing vaccines. With key potential investment catalysts ahead, we invite you to learn more about our company, talk to us, and share our story.

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This communication contains certain forward-looking statements relating to our business, including our plans to develop electroporation-based drug and gene delivery technologies and DNA vaccines and 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 (including, but not limited to, the fact that pre-clinical and clinical results referenced in this release may not be indicative of results achievable in other trials or for other indications, that the studies or trials may not be successful or achieve the results desired, that pre-clinical studies and clinical trials may not commence or be completed in the time periods anticipated, that results from one study may not necessarily be reflected or supported by the results of other similar studies and that results from an animal study may not be indicative of results achievable in human studies), 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, 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, evaluation of potential opportunities, 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, 2013, and other regulatory filings from time to time. There can be no assurance that any product in Inovio's pipeline will be successfully developed or manufactured, that final results of clinical studies 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.