NEWS RELEASE

INOVIO and QIAGEN expand collaboration to develop next generation sequencing (NGS) companion diagnostic for INOVIO's VGX-3100 for advanced cervical dysplasia

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- Liquid biopsy-based precision test guides patient selection and offers potential for cost-effective, non-invasive alternative to surgical removal of cervical lesions
- QIAGEN's bioinformatic expertise raises predictive biomarker power in INOVIO's patient selection
- First-in-class next generation sequencing (NGS) assay designed for use on Illumina NextSeq™ 550Dx

PLYMOUTH MEETING, Pa. and GERMANTOWN, Md. and HILDEN, Germany, Feb. 24, 2021 /PRNewswire/ -- QIAGEN (NYSE: QGEN; Frankfurt Prime Standard: QIA) and INOVIO Pharmaceuticals (NASDAQ: INO) today announced an extension of their partnership with a new master collaboration agreement to develop liquid biopsy-based companion* diagnostic products based on next-generation sequencing (NGS) technology to complement INOVIO's therapies. (*Complementary when referring to the US regulatory pathway.)

The initial project in this expanded collaboration focuses on the co-development of a diagnostic test that identifies women who are most likely to benefit from clinical use of VGX-3100, INOVIO's immunotherapy to treat advanced cervical dysplasia associated with the human papillomavirus (HPV). QIAGEN's bioinformatic expertise will further increase the predictive power of INOVIO's preliminary biomarker signature – and the assay will now be developed for use on the Illumina NextSeq™ 550Dx platform, the first development based on a partnership QIAGEN and Illumina signed in October 2019.

VGX-3100 is INOVIO's late-stage DNA immunotherapy candidate. It is currently in two Phase 3 trials (REVEAL 1 and REVEAL 2), with the potential to become the first non-surgical treatment for advanced pre-cancerous cervical lesions associated with the virus (HPV-16 and HPV-18).

"As we advance our DNA medicines platform, we are always looking for ways to drive innovation with our own

technology or that of a creative and accomplished partner. QIAGEN is contributing an extensive track record of developing and commercializing novel diagnostic tests," said Dr. J. Joseph Kim, INOVIO's President and CEO. "INOVIO is developing VGX-3100 as a non-surgical treatment for cervical pre-cancer and pre-treatment biomarkers we have discovered could be a targeted way to identify patients most likely to respond to treatment. The goal is to increase the absolute efficacy of the immunotherapy."

QIAGEN and INOVIO in 2019 announced a collaboration to develop a companion diagnostic to guide clinical decision-making for the use of INOVIO's DNA-based immunotherapy to treat cervical dysplasia caused by HPV. The new master collaboration agreement covers the development of companion diagnostics for INOVIO's HPV therapies for a range of sample types and technologies such as PCR and NGS. QIAGEN pioneered HPV testing with the gold-standard digene Hybrid Capture 2 High-Risk HPV DNA Test, which became a driving force in HPV screening as a standard of care in cervical cancer prevention.

"We are pleased to support INOVIO by developing companion diagnostics to identify patients who would benefit from VGX-3100. Our experience in developing liquid biopsy-based diagnostic solutions for precision medicine in immuno-oncology will help INOVIO address a larger unmet medical need," said Jean-Pascal Viola, Senior Vice President, Head of the Molecular Diagnostics Business Area and Corporate Business Development at QIAGEN. "We bring to this partnership our proven leadership in PCR companion diagnostics, as well as long-standing experience in developing innovative and custom NGS panels for our customers. Our recognized bioinformatic capabilities will help improve the efficacy of biomarker signatures. Our team is looking forward to applying our expertise for HPV-related cervical pre-cancer identification with INOVIO."

HPV is the most common viral infection of the reproductive tract and the fourth most common cancer among women. The World Health Organization (WHO) reported an estimated 570,000 new cases of cervical cancer and 311,000 deaths in 2018. Almost 300 million women globally are estimated to be infected with HPV, and about 30 million additional cases have progressed to the precancerous stage. At least 70% of cervical cancers are estimated to be the result of the high-risk HPV 16 and HPV 18 – genotypes that VGX-3100 instructs a suitable patient's immune system to reduce or fully eliminate.

QIAGEN is a pioneer in precision medicine and the global leader in collaborating with pharmaceutical and biotechnology companies to develop companion diagnostics that can detect clinically relevant genetic abnormalities to provide insights that guide clinical decision-making about diseases like cancer. The company offers an unmatched depth and breadth of technologies from polymerase chain reaction (PCR) to next-generation sequencing (NGS) for companion diagnostic development. The ability to tailor a CDx to partners' needs, proven IVD development expertise, and a global commercialization track record allow QIAGEN to develop novel and innovative NGS products and other diagnostic solutions.

About VGX-3100

VGX-3100 is INOVIO's DNA medicine in clinical trials for the treatment of three HPV-16/18 related disease states – anal dysplasia, vulvar dysplasia, and cervical dysplasia. The cervical dysplasia program is in late Phase 3 clinical trials (REVEAL 1 and REVEAL 2). VGX-3100 is designed to utilize the patient's own immune system to clear HPV-16/18-associated high-grade precancerous lesions with the aim of reducing the risk of cancer.

About INOVIO

INOVIO is a biotechnology company focused on rapidly bringing to market precisely designed DNA medicines to treat and protect people from infectious diseases, cancer, and diseases associated with HPV. INOVIO is the first and only company to have clinically demonstrated that a DNA medicine can be delivered directly into cells in the body via a proprietary smart device to produce a robust and tolerable immune response. Specifically, INOVIO's lead candidate VGX-3100, currently in Phase 3 trials for precancerous cervical dysplasia, destroyed and cleared high-risk HPV 16 and 18 in a Phase 2b clinical trial. High-risk HPV is responsible for 70% of cervical cancer, 91% of anal cancer, and 69% of vulvar cancer. Also in development are programs targeting HPV-related cancers and a rare HPV-related disease, recurrent respiratory papillomatosis (RRP); non-HPV-related cancers glioblastoma multiforme (GBM) and prostate cancer; as well as externally funded infectious disease DNA vaccine development programs in Zika, Lassa fever, Ebola, HIV, and coronaviruses associated with MERS and COVID-19 diseases. Partners and collaborators include Advaccine, ApolloBio Corporation, AstraZeneca, The Bill & Melinda Gates Foundation, Coalition for Epidemic Preparedness Innovations (CEPI), Defense Advanced Research Projects Agency (DARPA)/Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND)/Department of Defense (DoD), HIV Vaccines Trial Network, International Vaccine Institute (IVI), Kaneka Eurogentec, Medical CBRN Defense Consortium (MCDC), 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. INOVIO also is a proud recipient of 2020 Women on Boards "W" designation recognizing companies with more than 20% women on their board of directors. For more information, visit www.inovio.com.

About QIAGEN

QIAGEN N.V., a Netherlands-based holding company, is the leading global provider of Sample to Insight solutions that enable customers to gain valuable molecular insights from samples containing the building blocks of life. Our sample technologies isolate and process DNA, RNA and proteins from blood, tissue and other materials. Assay technologies make these biomolecules visible and ready for analysis. Bioinformatics software and knowledge bases

interpret data to report relevant, actionable insights. Automation solutions tie these together in seamless and cost-effective workflows. QIAGEN provides solutions to more than 500,000 customers around the world in Molecular Diagnostics (human healthcare), Applied Testing (primarily forensics), Pharma (pharma and biotech companies) and Academia (life sciences research). As of December 31, 2020, QIAGEN employed approximately 5,600 people in over 35 locations worldwide.

INOVIO Forward-Looking Statement

This press release contains certain forward-looking statements relating to our business, including our plans to develop, manufacture and commercialize DNA medicines, in particular our candidate VGX-3100 and a companion diagnostic in collaboration with QIAGEN, and our expectations regarding our research and development programs. Actual events or results may differ from the expectations set forth herein as a result of a number of factors, including uncertainties inherent in preclinical 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, 2019, our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 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.

QIAGEN Forward-Looking Statement

Certain statements contained in this press release may be considered forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, and Section 21E of the U.S. Securities Exchange Act of 1934, as amended. To the extent that any of the statements contained herein relating to QIAGEN's products, including those products used in the response to the COVID-19 pandemic, timing for launch and development, marketing and/or regulatory approvals, financial and operational outlook, growth and expansion, collaborations markets, strategy or operating results, including without limitation its expected adjusted net sales and adjusted diluted earnings results, are forward-looking, such statements are based on current expectations and assumptions that involve a number of uncertainties and risks. Such uncertainties and risks include, but are not limited to, risks associated with management of growth and international operations (including the effects of currency fluctuations, regulatory processes and dependence on logistics), variability of operating results and allocations between customer classes, the commercial development of markets for our products to customers in academia, pharma, applied testing and molecular diagnostics; changing relationships with customers, suppliers and strategic partners; competition; rapid or unexpected changes in technologies; fluctuations in demand for QIAGEN's products (including fluctuations due to general economic conditions, the level and timing of customers' funding, budgets and other factors); our ability to obtain regulatory approval of our products; difficulties in successfully adapting QIAGEN's products to integrated solutions and producing such products; the ability of QIAGEN to identify and develop new products and to differentiate and protect our products from competitors' products; market acceptance of QIAGEN's new products and the integration of acquired technologies and businesses; actions of governments, global or regional economic developments, weather or transportation delays, natural disasters, political or public health crises, including the breadth and duration of the COVID-19 pandemic and its impact on the demand for our products and other aspects of our business, or other force majeure events; as well as the possibility that expected benefits related to recent or pending acquisitions may not materialize as expected; and the other factors discussed under the heading "Risk Factors" contained in Item 3 of our most recent Annual Report on Form 20-F. For further information, please refer to the discussions in reports that QIAGEN has filed with, or furnished to, the U.S. Securities and Exchange Commission.

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