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New York Genome Center Launches Major Initiative with the Feinstein Institute for Medical Research to Sequence Whole Genomes of Alzheimer's Patients

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New York, February 16, 2012 (Marco Island, FL) – New York Genome Center (NYGC), in collaboration with Illumina, today announced at the Advances in Genome Biology and Technology (AGBT) annual meeting the initiation of a large-scale whole genome sequencing project with The Feinstein Institute for Medical Research (<http://www.feinsteininstitute.org>), part of the North Shore-LIJ Health System, an Institutional Founding Member of NYGC. This represents the first of many large-scale human genome sequencing projects that will be initiated by NYGC, leveraging its unique, strategic collaboration with Illumina.

The overarching goal of this project is to understand the genetic basis of susceptibility to Alzheimer's disease, of which very little is currently known. Knowledge of genetic susceptibility will help to assess an individual's lifetime risk of developing the disease, and better define the molecular pathways responsible for neuronal degeneration. Understanding the molecular basis of neuronal degeneration will allow scientists to develop effective strategies for early detection and targeted treatment.

Whole genome sequencing efforts will begin with 130 Alzheimer's patient samples, for whom there is detailed clinical data and brain pathology available. Over a four-year period, up to 1,000 genomes of patients with Alzheimer's disease will be sequenced and compared to the genomes of a control group of elderly individuals. All data resulting from this project will be made freely available to the scientific community.

"This exciting endeavor is a great example of the collaborative potential of New York Genome Center, working alongside our Institutional Founding Members and a technology leader like Illumina," said Nancy J. Kelley, JD, MPP, Founding Executive Director of the New York Genome Center. "The Feinstein Institute's commitment to sharing the data resulting from these efforts with the greater research community could significantly accelerate the speed of translational research in Alzheimer's disease, with a profound impact on patient care and clinical outcomes, which is in line with the vision of NYGC."

The genome sequencing, bioinformatics and data storage services being made available to NYGC will enable the Feinstein Institute and other NYGC member institutions to complete large scale genomic research projects, utilizing the latest technology and most advanced analytical expertise. Together, NYGC and Illumina are committed to transforming the current research model into a fully integrated partnership of leading academic centers and market leaders in pharma sequencing technology.

"This project is a massive undertaking that involves sequencing 30 billion bases per person for 1,000 patient samples and then comparing these sequences to normal individuals," said Peter Davies, PhD (<http://www.feinsteininstitute.org/Feinstein/Laboratory+of+Alzheimer+Disease+Research+>), scientific director of the Feinstein Institute's Litwin-Zucker Center for Research on Alzheimer's Disease. "NYGC provides us with the sequencing expertise and data analysis capability that are required for such a large scale endeavor."

This project is being funded through a grant by private philanthropists Frank and Mildred Feinberg of Locust Valley, NY, and their family, in memory of Mrs. Feinberg's mother, Esther Corman, who succumbed to Alzheimer's disease. Dr. Davies, who has been involved in research on Alzheimer's disease for more than 35

years, will direct the Feinberg Initiative to sequence the genomes of 1,000 Alzheimer's disease patients over the next four years.

"The launch of this initiative with NYGC and The Feinstein Institute will enable a deeper understanding of the clinical application of genetics, along the path of improving human health," said Jay Flatley, Illumina's President and CEO. "We're confident that Illumina's collaboration with NYGC will play a major role in enabling Feinstein's success in achieving its goals toward understanding the genetic basis of susceptibility for Alzheimer's disease."

As part of the novel collaboration between NYGC and Illumina, NYGC will provide Illumina with access to its Institutional Founding Members, who represent hundreds of academic and medical experts and multiple disease focuses. Illumina will provide NYGC with early access to key new products, its long track record of innovation and its industry leading expertise.

"This next phase in our collaboration with the New York Genome Center is an opportunity to create new bioinformatic channels and solutions, while integrating research into translational medicine," said Matt Posard, Senior Vice President and General Manager of Illumina's Translational and Consumer Genomics Business.

Founded in August, 2010, NYGC is a public-private coalition of universities, medical centers, technology partners, pharmaceutical companies and private philanthropists that are engaged in a cooperative effort to transform medical research and clinical care. The NYGC model drives adoption of personalized medicine through its Institutional Founding Members that collectively treat millions of patients each year; drives therapeutic and diagnostic product development by connecting technology collaborators and the pharmaceutical industry directly to researchers and clinicians at the front lines of discovery; and accelerates the entire translational process by linking all the stakeholders in information-enabled common projects.

NYGC intends to become one of the largest genomic facilities in North America, establishing an unprecedented, first of its kind, large scale collaborative venture in genomic medicine. NYGC's Institutional Founding Members include Cold Spring Harbor Laboratory, Columbia University, Cornell University/Weill Cornell Medical College, The Jackson Laboratory, Memorial Sloan-Kettering Cancer Center, Mount Sinai Medical Center, New York-Presbyterian Hospital, New York University/NYU School of Medicine, North Shore-LIJ Health System, The Rockefeller University, and Stony Brook University. The Hospital for Special Surgery is an Associate Founding Member.

About the New York Genome Center

New York Genome Center (NYGC) is an independent, non-profit organization – leveraging the collaborative resources of leading academic medical centers, research universities, and commercial organizations. Our vision is to transform medical research and clinical care in New York through the creation of one of the largest genomics and bioinformatics facilities in North America.

The unprecedented sharing of data and resources among these premier institutions will be on a scale not yet realized, and will dramatically increase the quality and speed of research outcomes to advance clinical care. This collaboration will help forward the advances leading to a new era of personalized medicine, accelerate the development of new diagnostics and treatments for human diseases, and provide an engine for life science commercialization in the region.

New York Genome Center Online:

Website: www.nygenome.org (<http://www.nygenome.org>)

Facebook: <http://www.facebook.com/nygenome> (<http://www.facebook.com/nygenome>)

Twitter: @nygenome

About Illumina

Illumina (<http://www.illumina.com>) is a leading developer, manufacturer, and marketer of life science tools and integrated systems for the analysis of genetic variation and function. We provide innovative sequencing and array-based solutions for genotyping, copy number variation analysis, methylation studies, gene expression

profiling, and low-multiplex analysis of DNA, RNA and protein. We also provide tools and services that are fueling advances in consumer genomics and diagnostics. Our technology and products accelerate genetic analysis research and its application, paving the way for molecular medicine and ultimately transforming healthcare.

About Peter Davies, Ph.D., and The Feinstein Institute for Medical Research

Peter Davies, PhD (<http://www.feinsteininstitute.org/Feinstein/Laboratory+of+Alzheimer+Disease+Research+>), has been involved in research on Alzheimer's disease for more than 35 years. He is currently Scientific Director of the Litwin-Zucker Center for Research on Alzheimer's Disease at The Feinstein Institute for Medical Research, North Shore-LIJ. He also holds the Judith and Burton P. Resnick Chair in Alzheimer's Disease Research at Albert Einstein College of Medicine.

Headquartered in Manhasset, NY, The Feinstein Institute for Medical Research (<http://www.feinsteininstitute.org>) is home to international scientific leaders in Parkinson's disease, Alzheimer's disease, psychiatric disorders, rheumatoid arthritis, lupus, sepsis, inflammatory bowel disease, diabetes, human genetics, leukemia, lymphoma, neuroimmunology, and medicinal chemistry. The Feinstein Institute, part of the North Shore-LIJ Health System, ranks in the top 6th percentile of all National Institutes of Health grants awarded to research centers. For more information: www.FeinsteinInstitute.org (<http://www.FeinsteinInstitute.org>)

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