New York Genome Center Officially Launches in Manhattan

By Matt Jones

NEW YORK (GenomeWeb News) – The New York Genome Center officially launched at its new facility in downtown Manhattan today with a ribbon-cutting ceremony that featured statements by NYGC President and Scientific Director Robert Darnell and New York City Mayor Michael Bloomberg.

Nearly two years after the plan for the center was unveiled, NYGC has effectively completed the build-out of its seven-floor, 170,000-square-foot facility, and it is currently working to hire the bioinformatics, genome sequencing, and lab specialists who will fill the space.

The center is actually a consortium of 16 institutional members, mostly academic research institutions and hospitals from the New York region, as well as Jackson Laboratory, and each of the faculty members on its staff will hold joint appointments with both NYGC and their home institution.

The ceremony this morning kicked off a two-day scientific symposium at the center that will feature talks by luminaries in the genomics world, including National Cancer Institute Director Harold Varmus and Rockefeller University President Marc Tessier-Lavigne, among others.

The center so far has reeled in $140 million from its members, philanthropic organizations, and funding agencies, including the Simons Foundation, the Alfred P. Sloan Foundation, and Bloomberg Philanthropies, as well as the New York City Economic Development Corporation, the Partnership for New York City, and the Empire State Development Corporation.

Mayor Bloomberg, who noted that his administration provided $5 million in support to help build the NYGC, said he sees the center as part of an effort to help build up the city's bioeconomy and tech sector.

"New York already has a tremendously deep pool of individual and institutional talent in the life sciences. Our metropolitan area has the largest bioscience workforce in the country. … Many of the world's great pharmaceutical companies are headquartered here in our metropolitan area," he said.

He added that around $1.4 billion in National Institutes of Health funding is provided to researchers in the city every year, and the city's venture capital culture helps to make it "a hotbed of bringing new products and procedures from the laboratory to the market."

The NYGC will have a heavy emphasis on bioinformatics and genome sequencing, and it plans to pursue multidisciplinary projects that harness the facilities and capabilities of its members in research institutions and clinical medicine.

The facility includes one full floor specifically for bioinformatics, which will take up an estimated 30,000 square feet, a sequencing facility, multiple lab spaces with movable benches that could be converted for expanded informatics space, and an administrative floor, NYGC Deputy Scientific Director of Informatics, Toby Bloom, told *GenomeWeb Daily News* during a tour today.

Other floors have space for a clinical lab, an auditorium, multiple conference rooms, training space, terraces, freezer rooms, data storage, and a technology testing center. At an offsite facility near the Brooklyn Bridge, NYGC has server space providing up to a petabyte of data storage.

The sequencing space houses 16 Illumina HiSeq machines and a BioNano Genomics Irys DNA mapping instrument already in place, and the center has room apportioned for as many as 80 sequencers total, *GWDN* sister publication *In Sequence* reported in July.

Bloom said the center has already launched research programs involving whole-genome and whole-exome sequencing, RNA sequencing, and epigenetics.

She said the NYGC has applied with New York State for certification for its CLIA lab, and explained that the state approval would qualify the center for its CLIA certification.

Darnell said today that the center will focus on bioinformatics because genome sequencing projects are churning out a "geyser of information," so much so that biology and medical research is in peril of "drowning in data." As an example, he said the genome center can generate over a trillion base pairs of information per day.

He said NYGC's consortium of members, "every major academic and medical center in the city, and spreading beyond the city, have come together … to work together to find a solution to this information crisis."

Creating a center of multiple members that work together in a consortium with a range of different specialties was not a choice, but "a necessity," because large-scale medical research now involves different types of science and people offering distinct specialties.

"We are going to integrate our in-house genomics scientists here, and our informaticists, with those from around the city," Darnell said.

The center currently has around 16 bioinformaticians, but it is recruiting more and expects to eventually have around 100.

Darnell also noted that earlier this week the center received institutional review board approval to undertake the first clinical genomics project that NYGC will lead — a study focused on autoimmunity that will involve several of its members and other partners in academic centers and hospitals. He said the center also is expecting to receive approval in late October to undertake a clinical cancer study.

Darnell also said the center has recently hired its first academic scientist from an outside institution, Tuuli Lappalainen, currently a visiting instructor in Carlos Bustamente's lab at Stanford University.

"It's really no surprise to learn that the top genetic investigators from other cities are jumping at the chance to come to New York, and to work here so they can be part of the New York Genome Center," Bloomberg said. "Nor is it surprising to learn that millions of dollars more in research grants are already coming to our city because of the center's expansion."

Bloomberg also had a bit of wry advice for Darnell and Tom Maniatis, chair of NYGC's Scientific and Clinical Steering Committee: "Let me just say what I say to all my new employees: 'Don't screw it up.'"