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NY Genome Center Announces Permanent Home

Georgia Kral | July 24, 2012 10:00 AM



The New York Genome Center is moving into a permanent facility on Sixth Avenue, in Lower Manhattan, within two blocks of Canal Street. Photo courtesy of the New York Genome Center.

The New York Genome Center, a collaboration of 11 academic and medical institutions, is moving into a permanent location at 101 Sixth Ave., in Lower Manhattan, officials announced today. When operational, the center will be the largest DNA sequencing and analytics facility in North America and in five years, will employ approximately 550 people, said Executive Founding Director Nancy Kelley.

The center will be researching the potential of DNA sequencing and analysis — which has been shown to be beneficial in understanding how an individual will respond to a certain drug treatment. Personalized medicine, as it's called, uses DNA to more specifically pinpoint the treatment needs of a patient with a disease such as cancer or Alzheimer's, among others.

The human genome was first successfully mapped about 10 years ago. And while Kelley has said New York City missed out on the "genomic decade," when the potential of sequencing was first realized, she said that the city is in a good place now to emerge as a leader in the field.

"The bad news is New York lost out on the genomic decade and the good news is they lost out on the genomic decade," she said. "So much has happened in the development of new tools to interpret the data and the ability to store and transmit the data."

Kelley said the cost of sequencing has plummeted.

"It took 10 years and \$3 billion to sequence the first, now it's 10 days and \$5,000," she said, adding that some say by the end of the year it could take one day and cost \$1,000 to sequence a human genome.

The New York Genome Center has been operating a pilot project out of the bridge lab at Manhattan's Rockefeller University for a few months. By moving to its new location, the center will increase in size from approximately 3,000 square feet to about 160,000 square feet and from 10-15 sequencing machines to 21 in the first year alone.



At the New York Genome Center, shown here in a rendering, machines analyze a blood or tissue sample to decode a person's DNA sequence. Image courtesy of the New York Genome Center.

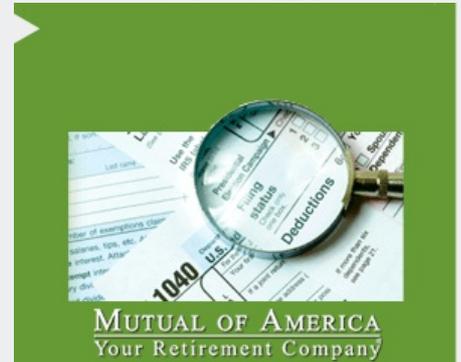
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sequencing machines to 31 in the first year alone.

The facility is set to open in April 2013, said Kelley, adding that there will be at least 100 machines by year five, if the same machine is still being used.

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The New York Times



In this video produced by The New York Times, a leukemia doctor who has leukemia is treated based upon his own DNA sequencing.

In addition to Rockefeller University, the genome center's collaborating institutions include Columbia University, Cornell University/Weill Cornell Medical College, Memorial Sloan-Kettering Cancer Center, Mount Sinai Medical Center, New York-Presbyterian Hospital and New York University/NYU School of Medicine. The center was one of the contenders for opening a campus on Roosevelt Island, which would have come with a free land deal from the city. [Cornell University and Israel's Technion University](#) were chosen to develop a tech campus there, but the city's Economic Development Corporation was involved with helping the genome center find a suitable location. According to Kelley, the building had to meet multiple requirements.

"We required the right zoning for this activity. There are few places that allow wet laboratory space," she said, referring to □□ laboratories where chemicals, drugs or other materials are handled in liquid solutions. Kelley also said the building is zoned for office space and manufacturing as well.

The genome center also requires a structurally sound building, built strong enough to withstand the center's likely need to "build a building within a building."

"The floor loads needed to be adequate," she said.

The genome center is not reliant on public funding. According to officials, the center has over \$115 million in funding from philanthropic sources, public and quasi-public sources and institutional investment. The genome center was awarded a \$3 million grant by the [Alfred P. Sloan Foundation](#), which will also be used towards the \$20 million in matching funds donated by the [Simmons Foundation](#).

While DNA sequencing is expensive, and often not covered by insurance, Kelley says some genetic tests are covered, and she expects more will be, as research into new diagnostics and drug treatments for patients expands.

"There is a broad range of research going on," she said, listing Parkinson's, multiple sclerosis, diabetes and cancer as examples of diseases DNA sequencing might benefit. "It spans the gamut."

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