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Le New York Genome Center et IBM Watson Group annoncent leur collaboration pour faire avancer la médecine génomique

IBM a été choisi comme 1er partenaire technologique de l'un des plus importants instituts de recherche génomique ; ce projet a pour objectif d'appliquer des solutions d'analytique avancées à certains traitements génomiques pour les patients atteints de cancer du cerveau

Paris, France - 19 mars 2014: IBM et les chercheurs du New York Genome Center, l'un des centres de recherche les plus importants, annoncent leur collaboration pour faire avancer la médecine génomique grâce aux systèmes cognitifs d'IBM Watson.

IBM et le New York Genome Center testeront, pour la première fois, un prototype de Watson unique spécialement conçu pour la recherche génomique afin d'aider les oncologues à proposer des soins plus personnalisés aux patients atteints de cancer. IBM s'est associé à plusieurs organismes de santé pour transformer et aider la pratique de la médecine grâce à des solutions intégrant IBM Watson.

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The New York Genome Center and IBM Watson Group announce collaboration to advance genomic medicine

*IBM Selected as First Technology Partner for Leading Genomic Research Institution;
Project aims to Apply Advanced Analytics to Genomic Treatment Options for Brain Cancer Patients*

NEW YORK, NY (March 19, 2014) – The New York Genome Center (NYGC) and IBM (NYSE: [IBM](#)) today announced an initiative to accelerate a new era of genomic medicine with the use of IBM's [Watson cognitive](#) system. IBM and NYGC will test a unique Watson prototype designed specifically for genomic research as a tool to help oncologists deliver more personalized care to cancer patients.

NYGC and its medical partner institutions plan to initially evaluate Watson's ability to help oncologists develop more personalized care to patients with glioblastoma, an aggressive and malignant brain cancer that kills more than 13,000 people in the U.S. each year. Despite groundbreaking discoveries into the genetic drivers of cancers like glioblastoma, few patients benefit from personalized treatment that is tailored to their individual cancer mutations. Clinicians lack the tools and time required to bring DNA-based treatment options to their patients and to do so, they must correlate data from genome sequencing to reams of medical journals, new studies and clinical records -- at a time when medical information is doubling every five years.

This joint NYGC Watson initiative aims to speed up this complex process, identifying patterns in genome

sequencing and medical data to unlock insights that will help clinicians bring the promise of genomic medicine to their patients. The combination of NYGC's genomic and clinical expertise coupled with the power of IBM's Watson system will enable further development and refinement of the Watson tool with the shared goal of helping medical professionals develop personalized cancer care.

The new [cloud](#)-based Watson system will be designed to analyze genetic data along with comprehensive biomedical literature and drug databases. Watson can continually 'learn' as it encounters new patient scenarios, and as more information becomes available through new medical research, journal articles and clinical studies. Given the depth and speed of Watson's ability to review massive databases, the goal of the collaboration is to increase the number of patients who have access to care options tailored to their disease's DNA.

"Since the human genome was first mapped more than a decade ago, we've made tremendous progress in understanding the genetic drivers of disease. The real challenge before us is how to make sense of massive quantities of genetic data and translate that information into better treatments for patients," said Robert Darnell, M.D., Ph.D., CEO, President and Scientific Director of the New York Genome Center. "Applying the cognitive computing power of Watson is going to revolutionize genomics and accelerate the opportunity to improve outcomes for patients with deadly diseases by providing personalized treatment."

First Watson Application in Genomic Research

Watson will complement rapid genome sequencing and is expected to dramatically reduce the time it takes to correlate an individual's genetic mutations with reams of medical literature, study findings, and therapeutic indications that may be relevant. The intention is to provide comprehensive information to enable clinicians to consider a variety of treatment options that the clinician can tailor to their patient's genetic mutations. It will also help NYGC scientists understand the data detailing gene sequence variations between normal and cancerous biopsies of brain tumors.

"As genomic research progresses and information becomes more available, we aim to make the process of analysis much more practical and accessible through cloud-based, cognitive innovations like Watson," said Dr. John E. Kelly III, Senior Vice President and Director of IBM Research. "With this knowledge, doctors will be able to attack cancer and other devastating diseases with treatments that are tailored to the patient's and disease's own DNA profiles. If successful, this will be a major transformation that will help improve the lives of millions of patients around the world."

The goal is to have the Watson genomics prototype assist clinicians in providing personalized genomic [analytics](#) information as part of a NYGC clinical research study. The solution has been under development for the past decade in IBM's Computational Biology Center at IBM Research.

New York State's Investment in Genomic Medicine

New York State is at the forefront of advancing medical science and commercialization. Governor Andrew M. Cuomo recently proposed \$105 million to fund a partnership between NYGC and the University at Buffalo's Center for Computational Research to advance genomics research. This investment to enhance the state's genomic medicine capabilities, together with NYGC's acquisition of Illumina's state-of-the-art HiSeq X Ten whole human genome sequencing system, will accelerate the availability of valuable genomic information in New York.

"New York State's investment in cutting-edge innovative industries is creating jobs and growing the economy in Western New York and across our state," said Governor Cuomo. "This collaboration between the New York

Genome Center and IBM will help make the region a new hub for the growing bio-tech industry.”

IBM is NYGC’s Founding Technology Member and will advance the organization’s goals of translating genomic research into clinical solutions for serious disease through the collaboration of medicine, science and technology. As biology increasingly becomes an information science, the promise of genomics is closer to reality with the help of data-driven analytics methods and more powerful computing systems. IBM and NYGC’s computational biology experts are renowned for accelerating life sciences discoveries using deep analytical approaches and next generation information technologies.

Learn more about this story at <http://ibm.co/1cXTb6u>.

To view a Flickr image gallery that illustrates today’s news please click [here](#).

For additional perspectives on this story, please watch this [video](#).

To join the social conversation on Twitter use the hashtag #NYGCWatson.

Journalists and bloggers can download broadcast video, b-roll and photos about the Watson and New York Genome Center collaboration at <http://bit.ly/1dcWIZF>.

The video is available in HD, standard definition broadcast and streaming quality.

About the New York Genome Center

The New York Genome Center (NYGC) is an independent, nonprofit at the forefront of transforming biomedical research and clinical care with the mission of saving lives. As a consortium of renowned academic, medical and industry leaders across the globe, NYGC focuses on translating genomic research into clinical solutions for serious disease. Our member organizations and partners are united in this unprecedented collaboration of technology, science, and medicine. We harness the power of innovation and discoveries to improve people’s lives - ethically, equitably, and urgently. Member institutions include: Albert Einstein College of Medicine, American Museum of Natural History, Cold Spring Harbor Laboratory, Columbia University, Cornell University/Weill Cornell Medical College, Hospital for Special Surgery, The Jackson Laboratory, Memorial Sloan-Kettering Cancer Center, Icahn School of Medicine at Mount Sinai, New York-Presbyterian Hospital, The New York Stem Cell Foundation, New York University, North Shore-LIJ, The Rockefeller University, Roswell Park Cancer Institute and Stony Brook University. For more information, visit: www.nygenome.org.

About IBM Watson

Named after IBM founder Thomas J. Watson, Watson was developed in IBM’s Research labs and is now being accelerated into market by the new Watson Group. Watson represents a new class of software, services and apps that think, improve by learning, and discover answers and insights to complex questions from massive amounts of [Big Data](#). Watson’s ability to answer complex questions posed in natural language with speed, accuracy and confidence is transforming decision-making across a variety of industries, including health care, financial services and retail. IBM has advanced Watson from a game-playing innovation into a commercial technology. Using natural language processing and analytics, Watson processes information akin to how people think, representing a major shift in an organization’s ability to quickly analyze, understand and respond to Big Data. Now delivered from the cloud and able to power new consumer and enterprise services and apps, Watson is 24 times faster, smarter with a 2,400 percent improvement in performance, and 90 percent smaller – IBM has

shrunk Watson from the size of a master bedroom to three stacked pizza boxes. IBM is investing \$1 billion to introduce a new class of cognitive computing services, software and apps, and investing \$100 million to spur innovation for software application providers to develop a new generation of Watson-powered solutions. Learn more about IBM Watson at www.ibmwatson.com. Learn more about IBM Research at www.research.ibm.com. Learn more about IBM healthcare at ibm.com/smarterhealthcare.
