

Fusion Genomics Turns to IBM Cloud to Help Support Advances Designed to Conquer Global Pandemics

Advancing RNA and DNA genome sequencing for infectious disease diagnostics

Vancouver, BC - 16 Nov 2017: IBM (NYSE: [IBM](#)) today announced that Vancouver-based company Fusion Genomics selected IBM's cloud capabilities to help advance Fusion's ability to detect pandemics before they happen. Fusion Genomics has developed disruptive DNA and RNA technology that it believes can positively identify infectious diseases and enhance the surveillance of emerging pathogens like MERS, SARS, avian flu, and swine flu.



According to Fusion, Fusion Genomics' technology when employed for pre-emergence surveillance can help proactively identify threats, like swine flu, by taking aerosol samples in high risk areas, then analyze the sample to determine if there is potential to affect humans. If there is a risk, Fusion Genomics can help groups like governments and hospitals make rapid and informed decisions for the health and safety of those that rely on them before an outbreak occurs.

Requiring a cloud platform tuned for machine learning workloads, which also provides secure infrastructure capable of hosting sensitive genomic data, Fusion Genomics determined that the IBM Cloud was the ideal solution. The global infrastructure footprint of the IBM Cloud helps Fusion Genomics create a more coordinated and efficient delivery system that can scale up or down as needed. In addition, IBM Cloud positioned the company to analyze genomic data in minutes.

The IBM Cloud enables Fusion Genomics' system to gather and process four core elements in unison:

- Beginning with testing, the sample genome is captured and DNA sequenced.
- Fusion Genomics' machine learning algorithms then analyze the genomic data to identify the presence of a pathogen, including any forms that could cause public harm.
- Once identified, physicians using Fusion Genomics' technology can provide appropriate therapeutics; thus, treatment can be determined while tracking the transmission dynamics of the pathogen.
- Since the system is delivered via the IBM Cloud, Fusion Genomics can easily run analytics and share information across boundaries.

"With a quickly growing global population, potential outbreaks of infectious diseases pose an increasingly

pressing threat to our public health", said Mohammad Qadir, CEO of Fusion Genomics. "We chose IBM over other cloud providers because of its ability to quickly scale up or down while ensuring that sensitive data is protected with one of the most secure clouds available. This accelerates our capacity to react to infectious diseases that can pose dangerous threats to both the economy and human life."

"Together with Fusion Genomics, IBM continues its commitment to drive innovation in Canada that is making a real difference in key industries," said Allen Lalonde, IBM Canada's senior innovation executive with the IBM Canada Research & Development Centre. "IBM Cloud is designed to help meet the evolving needs of all scopes of businesses and technology challenges and can deliver a security minded end-to-end system that provides an environment, data governance, auditability, and interfaces for health data standards and systems."

Organizations around the world are working with Fusion Genomics to access their DNA and RNA technology system built on IBM Cloud, including government agencies in both Canada and the European Union.

IBM Cloud offers a growing catalogue of services including AI, Internet of Things, analytics, blockchain, serverless and more. With nearly 60 cloud data centres in 19 countries worldwide, IBM is helping companies manage and gain insight from their data when and where they need.

For more information about IBM Cloud, please visit <https://www.ibm.com/cloud-computing/>.

About Fusion Genomics

Fusion Genomics in Vancouver BC, is developing Advanced Molecular Diagnostics tests for pathogens using their proprietary technologies in combination with Next Generation Sequencing.

Their ONETest™, in combination with FUSIONCloud™ their data analysis platform, is designed to identify accurately, rapidly and economically, the genetic signatures of all known pathogens. FUSION Genomics ONETest™ is currently being tested at various key opinion leaders in Canada and the European Union.

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