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## GenomeQuest Offers New Product for Pharma to Integrate Whole Genome Studies into Private Research

*Research Organizations Can Massively Expand Sample Sizes at Virtually No Cost and Accelerate Transition to Molecular-based Personalized Medicine.*

April 20, 2010, Boston, MA (PR Web) – At the start of today’s BIO-IT WORLD conference and speaking to a gathered audience of over 1000 attendees, [GenomeQuest’s](#) Ron Ranauro announced GQ-PMR – the world’s first genomic reference system for personalized medicine-based research.

With GQ-PMR, pharmaceutical companies can integrate raw data from public whole genome studies, such as the 1000 Genome Project, directly into their private research. The combination allows research organizations to massively expand sample sizes at virtually no cost and accelerates their transition to molecular-based personalized medicine.

Ranauro, CEO of the world leader in sequence data management (SDM), explained, “The raw data from whole genome studies represents a treasure trove for pharma research – imagine expanding your patient population at almost zero cost across your discovery portfolio. GQ-PMR allows them to immediately apply these industry investments to their research and realize this immense opportunity.” He adds, “And, given that we have solved the problem of comparing databases of whole genomes, researcher organizations are fully empowered to perform molecular-based research in personalized medicine.”

GQ-PMR consists of three major components: first, the aggregation, normalization, and hosting of the raw data; second, workflows which integrate this public data with private research data; and third, researchers also have the GenomeQuest comparison engine, interactive analysis tools, methods, and programmability to perform discovery across multiple whole-genomes.

Ranauro offered, “I am proud to say that GenomeQuest has taken a holistic approach to this solution and we are fully prepared for this moment. We have the underlying technology -- powered by our GQ-Engine, the raw data is fast emerging, our cloud services are proven and in place, we offer system-wide programmability, and we have a multi-genome pilot for the 1000 Genome study. All told, our vision is to scale to 1,000,000 genomes in this decade.”

Given that genomics is largely a statistical science, GQ-PMR and the activation of the variation information that lies within the public data at these scales will surely revolutionize research. Use-case examples include:

- Verify rare variation hypothesis
- Scan targets against rare variant populations



- Find new associations for common diseases
- Properly stratify clinical test populations
- Enable genome-based diagnostics

GenomeQuest also announced that it is opening the GQ-PMR charter program next quarter. Membership will be available to 6-8 pharmaceutical research organizations, sponsored by their top executive. The program offers

- Integration of raw data evidence from public studies into the organization
- Prioritize inclusion of studies, including 1000K Genomes Project,
- Public Genomes Project, Cancer Genome Atlas, and others as available
- Guide future development of variation workflows
- API access to system for bioinformatics team
- Share best practices with other members
- Optionally, use of SDM throughout organization

Because the GenomeQuest platform is proven at multiple, whole-genome scales, GQ-PMR substantially reduces the underlying technology and development risks for pharmaceutical research to transition to personalized medicine. Because all this capability can be delivered as a cloud service, it can come with no upfront or ongoing investment in related IT.

#### More on NIH Genetic Investments and the 1000 Genome Project

The U.S. National Institute of Health (NIH) is the world's largest supporter of genetic research. An October, 2008 report calculated its recent funding for genetic research at about \$5B per year. It was the major funding agent behind the renowned Human Genome Project, a project of about \$3B and completed in 2003.

Another seminal project funded by the NIH in collaboration with U.K.'s Wellcome Trust, the Chinese Academy of Sciences, and others is the 1000 Genome Project -- the first project to sequence the genomes of a large number of people and provide a comprehensive, free resource on human genetic variation. Launched in January, 2008, and receiving up to \$50M of estimated initial funding, this project has already produced the genomes of about 1000 unidentified people from about 20 populations around the world. The raw data, which includes the genetic variants that have frequencies of at least 1% in the populations, currently totals over 120B sequence reads.

Coincidentally, on the topic of the challenge of applying large sequence datasets, Vivien Bonazzi, Ph.D., program director for informatics and computational biology at the National Human Genome Research Institute (a division of the NIH), yesterday reported on the NIH website, "There is no question that data management and analysis has become the new bottleneck in genomic science." GenomeQuest and its GQ-PMR directly address that bottleneck and allow research groups to successfully manage and mine data at these volumes.

#### More on Personalized Medicine

In October, 2009, PricewaterhouseCoopers issued a report on personalized medicine, estimating that it will grow to nearly \$450B by 2015 and terming it a "disruptive innovation" for the life science market. For the public, personalized medicine will result in better, targeted prevention, diagnosis, and treatments together with lower healthcare costs. The report explained that a molecular-based research and clinical model would allow



pharmaceutical companies to reduce the time, cost, size, and failure rate of clinical trials; capitalize on premium pricing of proven effectiveness; and reduce drug recalls. It also listed collaboration on R&D information and avoiding redundant research as two imperatives for companies looking to lead in this area.

#### About GenomeQuest

GenomeQuest, the leader in sequence data management (SDM) helps genomic researchers and their organizations make great discoveries far faster. Over 160 leading life science companies use GenomeQuest for mission-critical work, including 17 of the top 20 pharmaceuticals.

Using GenomeQuest, organizations improve the performance of their discovery process and broadly prepare for next generation sequencing (NGS). Researchers perform discoveries, manage and share sequence data, and access the world's largest collection of reference databases from a web-browser and personalized dashboard. Bioinformatics managers customize discovery workflows and unify their sequence data environment using the open platform APIs. IT and business managers efficiently scale to broad utilization of next generation sequencing in their discovery operations using the GQ-Engine.

Learn more at [www.genomequest.com](http://www.genomequest.com).

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