

## GenomeQuest Rebrands as GQ Life Sciences, Refocuses on Patent Search Market

Nov 05, 2015 | Uduak Grace Thomas

NEW YORK (GenomeWeb) – Following its exit from the next-generation sequence data analysis market a few years ago, GenomeQuest recently changed its name to GQ Life Sciences and launched a new product called LifeQuest, which is a web-based repository of life science patents.

The new product adds to GQ Life Sciences' existing product, dubbed GenomeQuest, which is a database of some 300 million DNA, RNA, and protein sequences that have been collected, indexed, and curated from several hundred thousand patents recorded in public and proprietary databases worldwide. The company changed its name to create some separation from this particular product.

LifeQuest leverages the same search technology as its predecessor but is much broader, focusing on 15 million to 20 million patents in global databases that are related to the life sciences including patents focused on devices, drug targets, agricultural implements, and more, Richard Resnick, the company's CEO, told GenomeWeb.

The company offers separate subscriptions for LifeQuest and GenomeQuest products. For a single LifeQuest user and a group of up to three users, the company changes \$600 and \$1,500 per month respectively for basic access to the database. For a group of up to 10 users, the company charges \$2,500 for access to the database. Users in each of the aforementioned categories receive various sets of features for their respective price points that are detailed on the company's site. Larger groups interested in using LifeQuest are asked to contact the company for pricing details.

GQ Life Sciences does not disclose pricing details for access to the GenomeQuest database publicly, though Resnick did say that it costs much more than LifeQuest because of how much manual curation is required to provide the data.

Intellectual property databases aren't a new business venture for GQ Life Sciences. When the company, then called Gene-IT, first set up shop in 1999 — it changed its name to GenomeQuest in 2007 — it initially focused primarily on marketing access to a database of patented gene sequences — what is now the GenomeQuest database. But then sensing a growing opportunity in the NGS market, it set its sights on developing software for both research and clinical applications in that space.

In 2011, the company launched GQ-Dx, software for analyzing whole-genome NGS data in clinical contexts. The product included tools for variant detection and annotation, mapping and documenting variants against known inherited somatic mutations, and for integrating genomic data with other clinical systems such as electronic health records and therapy protocols to create comprehensive patient diagnostic records.

However, once it entered the market, GenomeQuest struggled to turn a profit as a pure-play software vendor, Resnick told GenomeWeb. Part of the problem is that the target market for bioinformatics firms — academics as well as pharma and biotech companies — generally already have experienced bioinformatics staff in house with the requisite expertise to implement and use open-source tools from institutions like the Broad to meet their NGS analysis. Furthermore, instrument vendors are acquiring software companies and offering software integrated with their instruments, further shrinking the pool of available customers for free-standing bioinformatics companies.

There are still some commercial opportunities in the sequencing arena, for example, for companies that couple their software with NGS-based tests, Resnick said. But for a strictly software company outside of the lab in NGS, "there's no way to win [and] there's really no exit," he said.

Back in 2012, GenomeQuest made the decision to exit the NGS market and to retire GQ-Dx after completing the contractual responsibilities it had with customers of that product, Resnick said. The list of GQ-Dx customers included Emory Genetics Laboratory, who tapped the software to support a suite of sequencing-based diagnostic tests for conditions such as autism, X-linked intellectual disability, muscular dystrophy, and congenital disorders of glycosylation; and the University of Iowa, who tapped the software to support tests for genetic hearing loss and genetic kidney disorder. In addition to these clients, the company also had an agreement with Harvard University's Beth Israel Deaconess Medical Center to develop whole-genome analysis applications for personalized healthcare. "We were doing real clinical diagnostics in the lab, but we weren't making any money, and it just seemed that we never would," Resnick said.

Although the company was pursuing targets in the whole-genome analysis market, GQ Life Sciences continued to market its patented sequence search database, and that business did significantly better than both the research and clinical arms of its NGS business, Resnick told GenomeWeb. In fact, revenues from that business unit financed the company's activities in the NGS market. Ultimately, it made the more sense to invest in the life science information business rather than continue to pursue NGS.

Initial users of the GenomeQuest sequence search database came from its existing client base, but now the company is starting to attract customers from outside its existing roster, Resnick said. For its part, LifeQuest only has a handful of customers, but it is growing, according to Resnick, and should have about a dozen users by the end of the year. The company plans to add additional public and proprietary data sources to LifeQuest in 2016 starting with peer-reviewed scientific literature associated with the patents from PubMed, Resnick said.

The primary target market for the company's products include the pharmaceutical and biotechnology industry as well as agrochemical, diagnostic, and food companies. In addition to checking the patentability of their ideas and to obtain competitive intelligence, these customers can also search GQ Life Sciences databases for prior art associated with their inventions, explore relevant scientific literature, and also to ensure that they are free to use patented technologies across the world. The databases are more comprehensive than existing freely available repositories that do not cover proprietary content, Resnick said. GQ Life Sciences also offers some value-added features with its databases such as the ability to receive email alerts when competing companies publish new IP and more, he said.

Compared to commercial offerings from firms like Thomson Reuters, Resnick believes that his company's sequence search database is more comprehensive than the competition. In terms of LifeQuest, Resnick believes that its focus specifically on life sciences-related patents sets it apart from a competing offering from Thomson Reuters, which is far more general. Furthermore, "We also have built our product on much more modern technology, and so it's [easy] to use, it's fast, it's much more Google-like ... and it tends to be more appealing to the more casual user," he said.

One customer is Archer Daniels Midland, a global food-processing and commodities-trading company that runs multiple facilities for procuring and processing grains such as corn, soybeans, and wheat, among other crops into products that are used in the food, beverage, animal feed, bioenergy, and other markets globally.

John Rayapati, manager, biotechnology research for ADM, told GenomeWeb the company uses GQ Life Sciences' databases to explore patents focused on methods of making fermentation microbes that are more efficient at converting agricultural raw materials to other products that can be used as food for humans, feed for animals, or bioenergy, and so on. By searching the databases, the company is able to determine whether it needs to invent an entirely new approach and or if there are existing technologies that it could license and use, he said.

ADM also uses the databases in its efforts to develop more natural methods of preventing disease and killing pests that affect food crops such as beans, Rayapati said. In this case, the company uses the databases to find out details about existing biopesticides and where these have been approved, commercial suppliers, and licensing agencies and requirements, he said. The GQ Life Sciences databases also inform ADM's efforts to design natural probiotic feed inoculants to replace antibiotics that are added to feed to help farm animals derive maximum benefit from their food, he said.