

NEW SYSTEM HELPS LAUNCH LIFE SCIENCES LABORATORY

Molecular Health is at the cutting edge of the rapidly growing field of personalized medicine that is revolutionizing health care. They have built a technology platform captures and indexes all known genomic data and organizes that data by human genetic markers. This platform makes it possible to analyze an individual's specific genotype, compare it to the burgeoning volume of known genetic information, and create a highly personalized health care plan.



The Challenge

Although based in the European Union, Molecular Health decided to build its first commercial laboratory in the U.S. To do so, they needed a laboratory information management system that could not only operate their new commercial laboratory, but also deeply integrate with their existing technology platform and efficiently process the extremely high volume of data involved in genetic testing. As each genome contains millions of pieces of DNA code, the degree to which personalized medicine systems involve Big Data cannot be overstated.

The new system would play a pivotal role in the launch of the Molecular Health's commercial operations. As in all life sciences laboratories, if the laboratory system does not function properly, the laboratory as a whole cannot function properly. In addition, if a medical laboratory produces reports that are used to diagnose and treat patients, it is essential that the system operate flawlessly, as mistakes can have life-or-death consequences. For Molecular Health, this meant their new system had to seamlessly integrate with their existing technology platform in their European operations, manage the process of precisely analyzing each patient's genotype, and produce a clear and thorough report that will allow physicians to craft a healthcare plan based on their patient's genetic profile.

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The Technossus Solution



As is often the case when a life sciences company is starting a new lab, Molecular Health turned to Technossus to develop their LIMS.

With their strong reputation in the life sciences industry, deep experience in the development of LIMSs, and their own proprietary LIMS product, Technossus is well-equipped to help their clients keep pace with the scientific and technological advances in this field.

The Technossus team was able to rapidly create the new system by building on the capabilities of their powerful LIMS product, called the Helix system. By utilizing developers on three continents, Technossus was able to maintain a 24 hour development cycle. Molecular Health did not yet have a laboratory staff for their new U.S. laboratory, so Technossus coordinated closely with the European business team and laboratory managers to ensure they were meeting the project requirements.

The new system that Technossus created met the strict U.S. regulatory requirements, included all of the workflow management and reporting capabilities that Molecular Health requested, and incorporated sophisticated security features to ensure the safety of the patient data.

The Result

The system was completed in record time, allowing Molecular Health to launch their commercial operations in the U.S. on schedule. For each patient, the new laboratory system can produce a highly readable report that can help physicians identify genetic predisposition for certain diseases, anticipate which therapies will be most successful, identify which drugs might cause adverse reactions, and tailor their recommended therapies, prescriptions, and lifestyle changes to the patient based on their individual genetic profile.

\$503B

Estimated personalized medicine market size

100k

Annual death in the U.S. from adverse drug reactions

42%

Drugs currently under development that could be personalized medicines