

MedComp makes precision medicine accessible with knowledge sharing and automated workflows

Organization

MedComp Sciences
Zachary, LA

- Provides testing to enable genetically informed prescribing practices
- Empowers patients to realize the benefits of personalized medicine at a lower cost
- Helps reduce trial-and-error period in treatments for cancer, chronic pain and depression

Objectives

- Modernizing LIMS and adapting it to molecular testing
- Generating a variety of simple and complex reports
- Combining validated genetic information with clinical data

Sunquest solutions

- Automated workflow system with Sunquest Mitogen™ LIMS molecular diagnostics process management solution
- Report generation with validated variant information, clinical guidelines and decision tools provided by Sunquest Mitogen™ Genetics
- Ongoing updates to knowledge base with Sunquest's VariantWire®

MedComp Chief Scientific Officer Jason Walker, PhD, wanted to put the power of genetics into the hands of patients and physicians. The company's Personalized Wellness pharmacogenetics testing suite provides insight into how a person's genetic makeup might influence their response to different medications. With Sunquest Mitogen™, MedComp found the end-to-end laboratory information management system (LIMS) and genetic variant analysis solution they needed to make that happen.

Updating the laboratory workflow

"Our first challenge was finding a 21st-century LIMS," explained Walker. "We wanted a platform that was paperless, cutting-edge, alive and responsive. But with many platforms we looked at, attempting to adapt them to molecular testing was like fitting a square peg into a round hole."

MedComp also needed a molecular diagnostics laboratory system that met – or would exceed – tough criteria to best serve both patients and physicians:

- CAP-accredited and CLIA-certified, to ensure highest quality testing practices
- HIPAA-compliant to safeguard patient information
- Automated LIMS platform with the capacity and flexibility to handle complex and rapidly evolving molecular testing workflows
- Genetic data interpretation and management, with accurate and up-to-date information and easy-to-follow reporting
- Process tracking and resource management to support business and QA/QC workflows

"Genetics can provide new insights about ourselves and new tools that personalize our healthcare decisions. To accomplish this most effectively will require the specialized resources and expertise of our partners at Sunquest."

– Dr. Jason Walker, MedComp



“Sunquest Mitogen’s history caught my attention,” Walker said.

With its roots in pedigree data management, Sunquest Mitogen’s process definition language, process tracking database and quality compliance engine have supported initiatives in several major genetics laboratories. The Sunquest Mitogen platform was designed from the start to support molecular diagnostics.

In 2014, MedComp and Sunquest launched the laboratory’s new LIMS specifically designed for pharmacogenomics workflows.

“Our project development and system rollout were centered around Sunquest Mitogen’s well-developed ticketing and project management system, weekly check-ins, site visits and an extremely responsive development team,” said Walker.

The laboratory expertise among Sunquest’s engineering team helped cut the shortest path from setup to successful implementation. According to MedComp Scientific Director R. Paul Lang, PhD, “They know what has and hasn’t worked in the past. The finished product is something we are truly proud of at MedComp. It is an investment we have made in laboratory quality and in our future.”

A community approach improves the accuracy and confidence of their variant calls, which may lead to a better, more accurate diagnosis for the patient.

– Michael Simpson, General Manager, Precision Medicine, Sunquest

Supporting clinical decisions

To support its newest tests, the Next Generation Sequencing (NGS)-based BRCA1/2 Panel, MedComp brought genome interpretation software experts from Sunquest into the partnership. The Sunquest Mitogen Genetics software combines an extensive and evolving knowledge base with a report generation engine that delivers simple results as well as complex, layered reports with equal flexibility.

If a variant is detected, the report includes validated information on its clinical significance. In cases where the significance is not known (Variant of Unknown Significance, or VUS), the report indicates this clearly. If the variant is clinically significant and actionable, the report provides validated risk estimates and points to established treatment guidelines and decision-making resources for the provider and patient. Finally, unlike other vendors, Sunquest delivers updates to test result significance at no additional charge when the validated knowledge base changes.

Through these services, Lang said, Sunquest Mitogen provides that third leg to support the stool” – bringing validated genetic information that complements and extends clinical data – helping physicians and patients make more informed healthcare decisions.

Working with Sunquest, MedComp and the Sunquest Mitogen team launched an all-inclusive, automated workflow system that integrates sample acquisition and processing, NGS analysis, data collection, interpretation, report creation and delivery supported wholly through Sunquest Mitogen. “Policies, procedures and validations for our first test offering are in place and operational, and the test has gone live,” said Lang. “We plan to add testing for many more genes and expect that Sunquest Mitogen will accommodate expansion quickly and efficiently.”

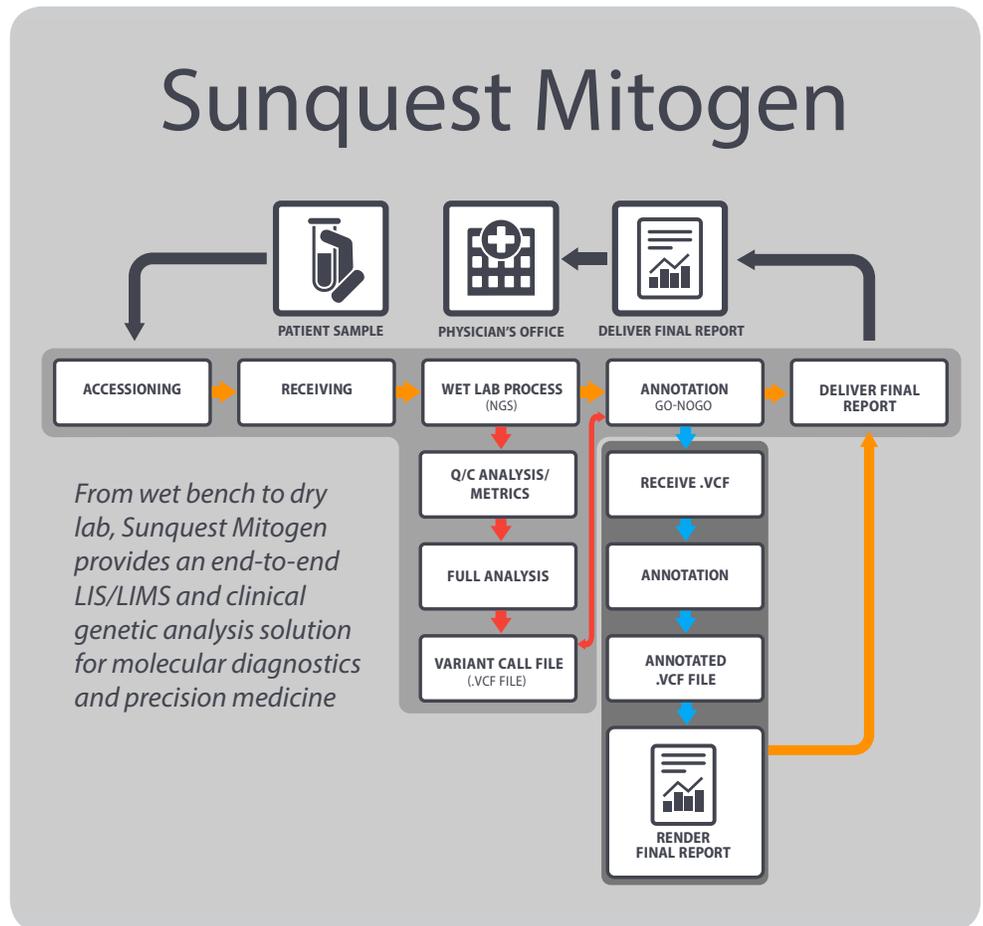
Expanding the knowledge base

To update its knowledge base as new information emerges, MedComp joined the Sunquest-powered VariantWire® initiative, which provides real-time sharing of structured genetic data among laboratories in the U.S. and Canada.

“VariantWire allows clinical laboratories to tap into the variant knowledge base of their peers,” said Michael Simpson, General Manager, Precision Medicine at Sunquest. “This community approach improves the accuracy and confidence of their variant calls, which may lead to a better, more accurate diagnosis for the patient.”

Dr. Walker and Dr. Lang are confident that Sunquest Mitogen positions MedComp to navigate skillfully through evolving test technology, knowledge advances and changes in the regulatory environment. They cite open communication channels, camaraderie and team-based problem solving as key to future success.

“There is enormous utility to be derived from knowledge of our genes, and MedComp wants to help broaden the application of genetic data – to bring genetic information into everyday use,” Walker said. “Genetics can provide new insights about ourselves and new tools that personalize our healthcare decisions. To accomplish this most effectively will require the specialized resources and expertise of our partners at Sunquest. Together we are helping to make precision medicine accessible and effective.”



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About Sunquest

Sunquest Information Systems Inc. provides diagnostic informatics solutions to more than 1,700 laboratories. Since 1979, Sunquest has helped laboratories and healthcare organizations across the world enhance efficiency, improve patient care, and optimize financial results. Sunquest's solutions enable world-class lab capabilities, including multi-site, multi-disciplinary support for complex anatomic, molecular and genetic testing, and engagement with physicians and patients outside the hospitals at the point-of-care. Headquartered in Tucson, AZ with offices in Boston, London, Dubai, Bangalore and Brisbane, Sunquest is a global leader in healthcare information technology.

Sunquest Information Systems has gained numerous industry acknowledgements, including #1 ranking by BlackBook Research, "Top Application" by Health Data Management, "Breakthrough Technology" by The Boston Globe, and top rankings in annual KLAS surveys.

Roper Technologies (NYSE ticker: ROP) acquired Sunquest in 2012 for approximately \$1.4 billion. Since 2014, Roper has acquired 5 additional companies and added them to the laboratory diagnostic informatics group, including: Data Innovations (acquired in 2015); Atlas Medical (2015); Clinisys (2016); GeneInsight (2016) and UNICconnect (2016).

Learn more at www.sunquestinfo.com/mitogen

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