BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Agilent Technologies enhances exome sequencing for clinical research

22 March 2017 | News | By BioSpectrum Bureau

Agilent Technologies enhances exome sequencing for clinical research

Agilent Technologies Inc. introduced a new target enrichment solution for next-generation DNA sequencing. Agilent SureSelect Clinical Research Exome V2 delivers more than 1,000 additional, disease relevant targets compared to the company's earlier version of the product. This is the newest addition to Agilent's NGS solution for human genetics which includes a range of exome and panel designs, library preparation reagents and unlimited custom options.

It is the only exome on the market today that delivers a curated, annotated list of included genes, as well as evidence for disease relevance.

Built on the proven performance of Agilent's industry-leading target enrichment technology, the SureSelect Clinical Research Exome V2 provides enhanced coverage of an additional 1,099 disease-associated genes, over 75,000 splice sites of noncoding exons, over 12,000 previously reported deep intronic variants, and over 800 variants in promoter regions. With its larger design, the SureSelect Clinical Research Exome V2 contains more pathogenic/likely pathogenic variants than other exomes in the market today. It also enables researchers to discover and identify new disease-associated targets.

These targets were identified through an exhaustive curation effort led by Emory University and the Children's Hospital of Philadelphia, both of whom were also collaborators for the first version of the product.

"The goal of the project was to create a highly curated gene resource and a technically optimized assay to provide a stepping stone for standardizing interpretation of genetic variations to fulfill the promise of genomic medicine," said Madhuri Hegde, adjunct professor of Human Genetics at Emory.

Avni Santani, who directs the Division of Genomic Diagnostics at the Children's Hospital of Philadelphia, said: "The enhanced exome with improved coverage over medically relevant genes will improve variant detection in these critical regions, thereby enabling more accurate and reliable analysis of data in clinical research."

"We are excited to be one of the first to work with the SureSelect Clinical Research Exome V2. With the most comprehensive

design available in the market today, our study has shown it to be an excellent tool for the efficient identification of pathogenic variants in rare disease." said Dr. Kirby Siemering, director of Science and Technology at the Australian Genome Research Facility. "We expect to move forward with the SureSelect Clinical Research Exome V2 within AGRF's clinical research programs."

"Since Agilent released the first commercial exome in 2009, we have been consistently innovating to deliver one of the best-in-class products that enable accurate identification of novel and disease-relevant genetic variants in constitutional samples," said Herman Verrelst, Agilent vice president and general manager of the company's Genomics Solutions Division and Clinical Applications Division. "To that end, we are excited to partner with Emory University and the Children's Hospital of Philadelphia again to offer an enhanced version of the SureSelect Clinical Research Exome, which provides unparalleled coverage of disease-associated gene targets."

This new product was designed to meet the needs of clinical research laboratories that are looking for an efficient and cost-effective exome that can reach deep into targets that matter most in their research.

When coupled with Agilent's SureSelectQXT workflow, the new exome enables researchers to create enriched libraries in just one day-with as little as 3.5 hours of hands-on time.