Twist Bioscience Collaborates with Regeneron for Production of Genotyping by Sequencing Panel to Enable Diverse Genome-wide Screening

June 14, 2021

-- Population Genetics Sequencing Panel Incorporates Global Genetic Variations for Superior Study of Disease and Target Discovery --

SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)--Jun. 14, 2021-- Twist Bioscience Corporation (Nasdaq: TWST), a company enabling customers to succeed through its offering of high-quality synthetic DNA using its silicon platform, today announced it collaborated with Regeneron Genetics Center LLC (RGC), a wholly-owned subsidiary of Regeneron (Nasdaq: REGN), for the production of a custom next-generation sequencing (NGS) population genetics genotyping assay. Arising from a need to incorporate the genetic differences of global populations, this assay is designed to gain new insights into disease mechanisms, identify novel drug targets, and accelerate drug discovery and development. Twist will market the assay as the Twist Diversity SNP Panel, and will make the content available to researchers globally for their population genomics studies.

Genome-wide association studies using genotyping microarrays have long been a critical tool in understanding how genetic variation impacts disease. Recent reports highlight that the majority of genetic association studies completed with commercially available microarray platforms include genetic markers from people of European descent predominantly, with little global diversity. Underrepresentation of diverse populations in genomic analysis hinders the ability to fully understand disease cause and correlation and perpetuates inequality in patient care.

Addressing this gap, the Twist Diversity SNP panel is inclusive of approximately 1.4 million globally-representative genetic variations known as single-nucleotide polymorphisms (SNPs). Under its new agreement with the RGC, Twist will make this product broadly available to customers beginning today.

“Leveraging Twist’s custom NGS panel design capabilities, the RGC developed a first-of-its-kind, proprietary population genotyping assay that includes DNA probes that capture globally diverse genetic sequence variations,” said John Overton, Ph.D., vice president and RGC chief sequencing officer. “This targeted panel integrates into our existing fully automated exome processing workflow and provides base calls and imputed variants whose quality already exceeds the array-based approaches we were using. We began using this panel in late 2020 in the RGC and already we are seeing positive results in our integrated research to better understand the biology of human diseases.”

“While SNP microarray has been the gold standard of genetic study, we have more and more customers asking for a complete genotyping solution that allows flexibility for customized disease research and we believe this is the future of disease marker testing,” said Emily M. Leproust, Ph.D., CEO and co-founder of Twist Bioscience. “Collaborating with Regeneron to optimize the assay with content from multiple ethnicities enables increased characterization of diverse populations to improve understanding around disease and potentially therapeutic development as well. We’re pleased to bring the Twist Diversity SNP assay to the scientific community.”

The Diversity SNP assay also enables research centers to consolidate their data generation costs and physical footprints by leveraging next-generation sequencers for both genotyping and exome/custom panels rather than maintaining separate genotyping instrumentation and lab space. While microarrays provide information about the presence or absence of a genetic variant, the Diversity SNP panel produces dynamic, multi-faceted information across a broad spectrum of the population. In addition, the panel can be iterated quickly to build a customized assay incorporating real-time journal and database entries.

About the Twist Diversity SNP Panel

As the first release in Twist’s emerging Targeted Genotyping-By-Sequencing (GBS) portfolio, the Twist Diversity SNP panel leverages Twist’s best-in-class DNA synthesis platform to generate a global panel of more than 600,000 probes governing approximately 1.4 million SNPs. Used separately as a stand-alone genotyping panel or as an addition (spike-in) into Twist’s Human Comprehensive Exome panel, this assay gives researchers a new ethnicity-neutral gold standard to use in generating genotyping data to match with their sequencing and other genomic data. Compared to historical microarray platforms that offer fixed content updated occasionally, the Twist Diversity SNP panel allows scientists the freedom to choose between standardized catalogue content or - with Twist’s custom NGS probes capabilities - the ability to build upon this foundation with additional regions of interest, creating unique content for any focused disease research application. For higher throughput users, this approach also enables improved scale-up economics with no requirement for additional capital investment.

About Twist Bioscience Corporation

Twist Bioscience is a leading and rapidly growing synthetic biology and genomics company that has developed a disruptive DNA synthesis platform to industrialize the engineering of biology. The core of the platform is a proprietary technology that pioneers a new method of manufacturing synthetic DNA by “writing” DNA on a silicon chip. Twist is leveraging its unique technology to manufacture a broad range of synthetic DNA-based products, including synthetic genes, tools for next-generation sequencing (NGS) preparation, and antibody libraries for drug discovery and development. Twist is also pursuing longer-term opportunities in digital data storage in DNA and biologics drug discovery. Twist makes products for use across many industries including healthcare, industrial chemicals, agriculture and academic research.

Follow us on Twitter | Facebook | LinkedIn | YouTube

Legal Notice Regarding Forward-Looking Statements

This press release contains forward-looking statements. All statements other than statements of historical facts contained herein, including without limitation Twist's ability to make the Twist Diversity SNP panel broadly available to customers in Spring 2021, the Twist Diversity SNP panel's ability to help data centers consolidate their data generation costs and physical footprints, ability to be iterated quickly and role in future of disease marker testing, are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors that may cause Twist Bioscience's actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the risks and uncertainties of the ability to attract new customers and retain and grow sales from existing customers; risks and uncertainties of rapidly changing technologies and extensive competition in synthetic biology could make the products Twist Bioscience is developing obsolete or non-competitive; uncertainties of the retention of a significant customer; risks of third party claims alleging infringement of patents and proprietary rights or seeking to invalidate Twist Bioscience's patents or proprietary rights; and the risk that Twist Bioscience's proprietary rights may be insufficient to protect its technologies. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to Twist Bioscience's business in general, see Twist Bioscience's risk factors set forth in Twist Bioscience's Quarterly Report Form 10-Q filed with the Securities and Exchange Commission on February 9, 2021 and subsequent filings with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and Twist Bioscience specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

View source version on businesswire.com: https://www.businesswire.com/news/home/20210614005181/en/

Angela Bitting
SVP, Corporate Affairs
925-202-6211
abitting@twistbioscience.com

Source: Twist Bioscience Corporation