



A new study using the SomaScan® Platform makes the connection between genes and proteins and their impact on human disease

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BOULDER, Colo., Oct. 20, 2021 (GLOBE NEWSWIRE) -- In the largest proteogenomic study of its kind to date, an international research team led by scientists at the Berlin Institute of Health at Charité and the University of Cambridge used SomaLogic's (NASDAQ: SLGC) SomaScan® Platform to generate data on thousands of proteins in human blood. They then combined this information with genetic data to reveal a network of gene-protein connections that drive human diseases that span a variety of medical specialties and organ systems. [This study was recently published in Science.](#)

Proteins in the body are encoded by our genes and any malfunction in the approximately 20,000 proteins in the human body can cause disease. In fact, it's estimated that most disease is caused by protein malfunction and because of this, proteins are the most common target of drug therapies to treat disease. Until recently, the connection between genetic encoding of proteins and the impact of these proteins on diseases has been poorly understood because scientists were uncertain which genes are truly involved in these processes.

The study, which was led by Professor Claudia Langenberg at the Berlin Institute of Health at Charité and the Medical Research Council Epidemiology Unit at the University of Cambridge, was based on blood samples from more than 10,000 participants. This genome-proteome-wide association study measured 10.2 million genetic variants and 4,775 distinct proteins. Among the key findings of the study was the identification of 10,674 genetic variant-protein associations, or pQTLs, for 3,892 distinct proteins. By connecting disease-related genomic variations to specific encoded proteins that are affected by these variations, the team was able to identify 1,859 connections between protein-encoded genes and diseases.

The research team was surprised to find that single proteins can be connected to several diseases. For example, the team matched one protein, fibulin-3, to 37 seemingly unrelated conditions, including hypermobility, hernia, varicose veins and a lower risk of carpal tunnel syndrome. This may be attributed to fibulin-3's role in creating elastic fibers covering our organs and joints. This finding may help to explain why unrelated symptoms can occur at the same time in patients, and may lead to new drug targets for treating diseases and minimizing adverse effects.

"This study reveals a stunning discovery about the interconnectedness of many disease states," said SomaLogic Chief Medical Officer, Stephen Williams, M.D. "This research team was able to capitalize on SomaLogic's extensive protein menu. Most of the informative proteins are not measured by any other high throughput platform. This study harmonized that information with genomic data to give us a view into human disease that we've yet to see until now."

The research team developed a web application (<https://www.omicscience.org/apps/pgwas/>) to disseminate the results of the study and allow other researchers access to this new information on genes, proteins and the diseases in which they are involved.

SomaLogic's proprietary SomaScan Platform was designed to be a universal platform that can be applied across research and discovery, translational research and biopharmaceutical development, and clinical applications. SomaLogic can run approximately 7,000 protein measurements on a single 55 microliter plasma or serum sample. The company has run approximately 520,000 samples as of September 2021.

About SomaLogic

SomaLogic (Nasdaq: SLGC) seeks to deliver precise, meaningful, and actionable health-management information that empowers individuals worldwide to continuously optimize their personal health and wellness throughout their lives. This essential information, to be provided through a global network of partners and users, is derived from SomaLogic's personalized measurement of important changes in an individual's proteins over time. For more information, visit www.somalogic.com and follow [@somalogic](https://twitter.com/somalogic) on Twitter.

The SomaScan Platform is for Research Use Only (RUO) and has not been cleared or approved by the U.S. Food and Drug Administration for diagnostic or patient management purposes.

Forward Looking Statements Disclaimer

This press release contains certain forward-looking statements within the meaning of the federal securities laws. These forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Forward looking statements do not guarantee future performance and involve known and unknown risks, uncertainties and other factors. Many factors could cause actual future events to differ materially from the forward-looking statements in this press release, including factors which are beyond SomaLogic's control. You should carefully consider the risks and uncertainties described in the "Risk Factors" section of the company's registration statement. These filings identify and address important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and SomaLogic assumes no obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. SomaLogic does not give any assurance that the company will achieve its expectations.

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