Standard BioTools proteomics profiling reveals unique biomarkers and insights into nonalcoholic steatohepatitis (NASH)

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Researchers used Standard BioTools' high-content SomaScan® Platform and SomaSignal™ tests for MASH/NASH to identify 69 blood biomarkers that correlate with clinical measures of liver disease

SOUTH SAN FRANCISCO, Calif., Sept. 18, 2024 (GLOBE NEWSWIRE) -- Standard BioTools Inc. (Nasdaq:LAB) today announced a **recent paper published in Nature Scientific Reports**, by researchers at Pfizer Research and Development, that detailed their use of the high-plex SomaScan® Assay, leveraging an industry-leading 7,000-protein biomarker panel to analyze blood serum samples from patients in a Phase 2a clinical trial for nonalcoholic fatty liver disease (NAFLD) and NASH.

Nonalcoholic Fatty Liver Disease, or NAFLD, and nonalcoholic steatohepatitis (NASH) are becoming a global population health concern. Because diagnosing these diseases involves invasive liver biopsies, which can be challenging and expensive, many patients go untested and untreated. These diseases are complex in their impact on the liver, creating lipid accumulations, stiffness in the liver tissue, ballooning of the liver and chronic inflammation.

In collaboration with major pharmaceutical companies and leading academic centers, SomaLogic (now Standard BioTools) previously developed serum proteomic SomaSignal™ tests which correlate more faithfully with each component of the liver biopsy than any other noninvasive biomarkers. Because these tests run on the full SomaScan® Platform, covering thousands of protein measurements, the study's researchers were able to infer liver biopsy effects and identify additional mechanistic pharmacodynamic protein biomarkers to characterize their drug mechanism and measure response in clinical trials.

"NASH and NAFLD are a significant challenge in terms of diagnosis and treatment, and the prevalence of metabolic and obesity-related diseases around the world has created a strong sense of urgency to learn more about them and find better ways of treating them," said Standard BioTools Chief Medical Officer Stephen A. Williams, MD, PhD. "The SomaScan Assay gives us a view of the biological mechanisms of this disease with a simple blood draw from patients, and SomaSignal tests were shown in this study to be valuable in showing disease regression in patients."

The study focused on inhibiting the protein ACC1 using clesacostat, a drug that acts as an acetyl-CoA carboxylase inhibitor. Using the SomaScan Assay, researchers found 69 blood analytes that strongly correlated with clinical measures of liver inflammation and steatosis. They also discovered the expression of these analytes was significantly higher in NASH patients compared to their NAFLD counterparts.

Additionally, in 231 patients in the pre-treatment phase, Standard BioTools' SomaSignal tests were used to measure 37 different analytes that correlate with NASH and NAFLD. The tests helped researchers stratify patients by disease severity, establish a pre-treatment baseline, and monitor the effects of the drug. The 37 analytes were identified by screening thousands of patient samples using the SomaScan Assay. These analytes were shown to have critical differences in NASH and NAFLD patients and were validated against standard clinical measurements.

During the 16-week trial, the SomaScan assay and SomaSignal tests were run on serum samples from study participants subjected to a once-per-day dose of clesacostat. The SomaSignal test scores aligned with improvements in liver fat content (steatosis) as measured by proton density fat fraction, or MRI-PDFF. Twenty-seven analytes were found to be significantly reversed upon drug treatment, demonstrating the utility of SomaSignal tests for classification of NASH and the ACC inhibition treatment-induced effects on steatosis.

"The SomaScan Platform has been extensively and systematically validated, providing a strong foundation for this important research," said Michael Egholm, PhD, President and Chief Executive Officer of Standard BioTools. "These researchers also used the powerful SomaSignal tests to better diagnose NASH and NAFLD patients and to study their responses to treatment."

Standard BioTools now offers the new SomaScan 11K Assay, as well as the industry leading single cell proteomics and spatial proteomics solutions (CyTOF® and Hyperion™ platforms), as a comprehensive pharma services offering to customers who are working to identify biomarkers of predictive response, mechanism of action and patient stratification in their studies.

About Standard BioTools Inc.

Standard BioTools Inc. (Nasdaq:LAB), the parent company of SomaLogic Inc. and previously known as Fluidigm Corporation, is driven by a bold purpose – Unleashing tools to accelerate breakthroughs in human health. Standard BioTools has an established portfolio of essential, standardized next-generation technologies that help biomedical researchers develop medicines faster and better. As a leading solutions provider, the company provides reliable and repeatable insights in health and disease using its proprietary mass cytometry and microfluidics technologies, which help transform scientific discoveries into better patient outcomes. Standard BioTools works with leading academic, government, pharmaceutical, biotechnology, plant and animal research and clinical laboratories worldwide, focusing on the most pressing needs in translational and clinical research, including oncology, immunology and immunotherapy. Learn more at standardbio.com or connect with us on X, Facebook®, LinkedIn and

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Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, among others, statements regarding future financial and business performance; expectations, operational and strategic plans; the merger of the Company and SomaLogic; deployment of capital; market and growth opportunity and potential; and the potential to realize the expected benefits following the merger of the Company and SomaLogic. Forward-looking statements are subject to numerous risks and uncertainties that could cause actual results to differ materially from currently anticipated results, including, but not limited to, the outcome of any legal proceedings related to the merger; risks that the anticipated benefits of the merger or other commercial opportunities may otherwise not be fully realized or may take longer to realize than expected; risks that we may not realize expected cost savings from our restructuring, including the anticipated decrease in operational expenses, at the levels we expect; possible restructuring and transition-related disruption, including through the loss of customers, suppliers, and employees and adverse impacts on our development activities and results of operation; restructuring activities, including our subleasing plans, customer and employee relations, management distraction, and reduced operating performance; risks that internal and external costs required for ongoing and planned activities may be higher than expected, which may cause us to use cash more quickly than we expect or change or curtail some of our plans, or both; risks that our expectations as to expenses, cash usage, and cash needs may prove not to be correct for other reasons such as changes in plans or actual events being different than our assumptions; changes in Standard BioTools' business or external market conditions; challenges inherent in developing, manufacturing, launching, marketing, and selling new products; interruptions or delays in the supply of components or materials for, or manufacturing of, Standard BioTools products; reliance on sales of capital equipment for a significant proportion of revenues in each quarter; seasonal variations in customer operations; unanticipated increases in costs or expenses; uncertainties in contractual relationships; reductions in research and development spending or changes in budget priorities by customers; uncertainties relating to Standard BioTools' research and development activities, and distribution plans and capabilities; potential product performance and quality issues; risks associated with international operations; intellectual property risks; and competition. For information regarding other related risks, see the "Risk Factors" section of Standard BioTools' most recent quarterly report on Form 10-Q filed with the U.S. Securities and Exchange Commission (the "SEC") on November 7, 2023, on its most recent annual report on Form 10-K filed with the SEC on March 14, 2023, and in Standard BioTools' other filings with the SEC, as well as the "Risk Factors" section of SomaLogic's most recent quarterly report on Form 10-Q filed with the SEC on November 8, 2023, on its most recent annual report on Form 10-K filed with the SEC on March 28, 2023, and in SomaLogic's other filings with the SEC. These forward-looking statements speak only as of the date hereof. Standard BioTools disclaims any obligation to update these forward-looking statements except as may be required by law.

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