NIH Sponsored Study at Stanford University School of Medicine to Utilize Fluidigm Mass Cytometry Technology and Maxpar Direct Immune Profiling Assay to Evaluate Immune Responses in Pediatric Patients with COVID-19

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Researchers Seek Insight into Development and Progression of Multisystem Inflammatory Syndrome in Children

Study Exemplifies Increasing Use of CyTOF Technology in Clinical Research

SOUTH SAN FRANCISCO, Calif., Feb. 09, 2021 (GLOBE NEWSWIRE) -- Fluidigm Corporation (Nasdaq:FLDM), an innovative biotechnology tools provider with a vision to improve life through comprehensive health insight, today announced that Fluidigm® mass cytometry technology and the Maxpar® Direct™ Immune Profiling Assay™ will be used in a longitudinal study of approximately 250 pediatric patients infected with SARS-CoV-2, the virus that causes COVID-19.

The study on immune system activity in SARS-CoV-2 positive children, Pediatric Research Immune Network on SARS-CoV-2 and MIS-C (PRISM) (NCT04588363), will compare data from those with asymptomatic infections, mild COVID-19 and multisystem inflammatory syndrome (MIS-C). A goal of the PRISM study is to characterize the immunologic pathways associated with different disease presentations and outcomes.

“In the U.S. alone, more than 1,650 children have been diagnosed with MIS-C, which typically begins several weeks after SARS-CoV-2 exposure. MIS-C is a potentially life-threatening condition marked by severe inflammation of one or more bodily organs,” said Sheri M. Krams, PhD, Professor of Surgery and Senior Associate Dean for Graduate Education and Postdoctoral Affairs at Stanford University School of Medicine.

Krams is a lead researcher on the study, along with Olivia M. Martinez, PhD, Professor of Surgery at Stanford Medicine.

“Little is known about the immunologic mechanisms and characteristics associated with different forms of MIS-C and COVID-19 in children,” Krams said. “The study aims to fill gaps in understanding the clinical spectrum of COVID-19 in children and young adults, the long-term outcomes of SARS-CoV-2 infection in these populations and the underlying immunologic basis of MIS-C. This knowledge could be extremely valuable in preventing, managing and developing effective therapies for this dangerous consequence of SARS-CoV-2 infection.”

The study is expected to enroll about 250 SARS-CoV-2 infected patients under age 21 from diverse racial and ethnic backgrounds. Blood samples will be collected at 20 clinical sites and will be sent to Stanford for evaluation using the Fluidigm Maxpar Direct Immune Profiling Assay on the company’s Helios™ CyTOF® system.

The study will utilize Fluidigm’s unique Cell-ID™ 20-Plex Pd Barcoding Kit to allow up to 20 tests to be performed in a single run. Fluidigm’s automated Maxpar Pathsetter™ and debarcoding software will be used to analyze the data generated with the assay.

Blood samples will be collected from each patient four times over the course of a year in order to evaluate changes in immune system activity and correlate this activity with each patient’s COVID-19 status and clinical experience.

“We are gratified that our suite of mass cytometry and Maxpar technologies is helping to advance our understanding of COVID-19 and will provide researchers and clinicians with information that can help improve management, treatment and outcomes for patients with the disease,” said Chris Linthwaite, President and CEO of Fluidigm. “MIS-C is a dangerous and unpredictable consequence of COVID-19 in some children, and we hope that the insights gleaned from Stanford’s analyses will help prevent MIS-C or improve patient outcomes.

“Data from this study will join a growing body of peer-reviewed research based on mass cytometry and Maxpar technologies. That research includes a recent study that identified a distinct phenotype in patients with severe COVID-19, as well as an ongoing NIH sponsored study titled Immunophenotyping Assessment in a COVID-19 Cohort (IMPACC), which is exploring how certain immunological responses correspond to, or may even predict, the clinical severity of COVID-19 and may inform recommendations for COVID-19 care.”

Two other National Clinical Trials are also employing the Maxpar assay:

- COvid-19 Advanced Genetic and Immunologic Sampling (COntAGIouS), NCT04327570, has the goal of identifying factors that result in hypersusceptibility to SARS-CoV-2 infection.
- Antidepressant Trial with P2X7 Antagonist JNJ-54175446 (ATP), NCT04116606, is designed to assess changes in peripheral blood immune cell populations at baseline and after treatment.

About Fluidigm
Fluidigm (Nasdaq:FLDM) focuses on the most pressing needs in translational and clinical research, including cancer, immunology, and immunotherapy. Using proprietary CyTOF and microfluidics technologies, we develop, manufacture, and market multi-omic solutions to drive meaningful insights in health and disease, identify biomarkers to inform decisions, and accelerate the development of more effective therapies. Our customers are leading academic, government, pharmaceutical, biotechnology, plant and animal research, and clinical laboratories worldwide. Together with them, we strive to increase the quality of life for all. For more information, visit fluidigm.com.

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Forward-Looking Statements for Fluidigm

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, among others, statements regarding the use of Fluidigm mass cytometry technology and products for a COVID-19 related study and the design and goals of that study. 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 risks relating to the potential adverse effects of the coronavirus pandemic on our business and operating results; the possible loss of key employees, customers, or suppliers; uncertainties in contractual relationships; risks relating to company research and development and distribution plans and capabilities; interruptions or delays in the supply of components or materials for, or manufacturing of, Fluidigm products; potential product performance and quality issues; intellectual property risks; competition; and reductions in research and development spending or changes in budget priorities by customers. Information on these and additional risks and uncertainties and other information affecting Fluidigm business and operating results is contained in Fluidigm's Annual Report on Form 10-K for the year ended December 31, 2019, and in its other filings with the Securities and Exchange Commission. These forward-looking statements speak only as of the date hereof. Fluidigm disclaims any obligation to update these forward-looking statements except as may be required by law.

Available Information

We use our website (fluidigm.com), investor site (investors.fluidigm.com), corporate Twitter account (@fluidigm), Facebook page (facebook.com/Fluidigm), and LinkedIn page (linkedin.com/company/fluidigm-corporation) as channels of distribution of information about our products, our planned financial and other announcements, our attendance at upcoming investor and industry conferences, and other matters. Such information may be deemed material information, and we may use these channels to comply with our disclosure obligations under Regulation FD. Therefore, investors should monitor our website and our social media accounts in addition to following our press releases, SEC filings, public conference calls, and webcasts.

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