Multi-Site Study of COVID-19 Patients Utilizing Fluidigm Mass Cytometry Technology and Maxpar Direct Immune Profiling Assay

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Tracking the Immune Response of Patients Hospitalized with COVID-19 in 10 Research Sites Across the United States

Study May Inform Recommendations for COVID-19 Care, New Strategies for Treatments

SOUTH SAN FRANCISCO, Calif., June 29, 2020 (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™ are being utilized in a prospective observational cohort surveillance study of up to 2,000 adult participants hospitalized with COVID-19.

Ten leading U.S. medical institutions are engaging in the study, sponsored by the National Institutes of Health (NIH) and entitled Immunophenotyping Assessment in a COVID-19 Cohort (IMPACC). The study could help inform recommendations for COVID-19 care and potentially identify new strategies and optimal timing for experimental treatments.

Investigators at the NIH National Institute of Allergy and Infectious Diseases, in collaboration with the Human Immunology Project Consortium and the Asthma and Allergic Diseases Clinical Research Consortium, are exploring how certain immunological responses correspond to, or may even predict, the clinical severity of COVID-19.

“Characterizing immune responses in COVID-19 patients is critical to better understand the immunological mechanisms underlying disease progression and severity and the development of protective immunity to better guide the development of effective therapeutics and vaccines,” said Adeeb Rahman, PhD, a core lab director for the study and Associate Professor and Director of Technology Development at the Icahn School of Medicine at Mount Sinai’s Human Immune Monitoring Center. “Mass cytometry has been our assay of choice for high-dimensional single-cell characterization across diverse disease conditions, and we chose the Maxpar Direct Immune Profiling Assay for this study because it provides a robust and standardized solution for comprehensive immune monitoring that is technically easy to execute and harmonize across multiple study sites.”

COVID-19 patients age 18 and older are enrolled in the study within 36 hours after admission to a hospital. Samples are collected from nasal swabs, blood and tracheal fluid at 10 time points from hospital admission to up to one year after discharge. When possible, researchers will also examine lower airway secretions collected from patients requiring a ventilator for breathing support.

“Mass cytometry has been integral in studying various aspects of immune responses to infectious disease,” said Ruth Montgomery, PhD, Professor of Internal Medicine at Yale School of Medicine, Director of the Yale CyTOF® Facility and a principal investigator for the IMPACC study. “We have unique expertise at Yale utilizing this technology to analyze the immune cells in lung aspirates. As part of this study, we will perform analysis of peripheral blood and DNA sequencing, but we will also focus on lung airway cells from COVID-19 patients enrolled at all 10 sites. These studies may help us better understand the pathogenic mechanisms underlying the severe pneumonia often seen with COVID-19.”

As IMPACC study patients recover, investigators will continue to evaluate their immune responses to identify factors that may relate to long-term protection against re-infection.

“There are many unanswered questions about the diversity of the COVID-19 patient journey, why some experience only mild symptoms while others face life-threatening complications,” said Chris Linthwaite, President and CEO of Fluidigm. “A deep and meaningful understanding of the immune system during the course of infection and in response to therapies is of critical importance in fighting this pandemic.

“Fluidigm is at the forefront of cutting-edge research into the complex immune response to this virus, and we are proud that our technology will potentially offer insights into those most at risk, interventions during infection, the aftermath of the disease and which vaccine candidates may be most effective. A unique advantage of mass cytometry in the context of the IMPACC study is its remarkable sample stability, enabling researchers to collect and process a sample at one location and analyze it at a different site.

“Fluidigm is battling this pandemic on multiple fronts, having filed for Emergency Use Authorization from the U.S. Food and Drug Administration for an extraction-free saliva-based test to detect the COVID-19 virus,” Linthwaite said. “We are gratified for inclusion of our technology in the IMPACC study, and we look forward to new discoveries that can potentially have an impact on patient lives.”

Institutions participating in the study are Brigham and Women's Hospital; University Hospitals Case Medical Center; University of California, Los Angeles Department of Medicine; University of California, San Francisco School of Medicine; Drexel University College of Medicine; Emory University School of Medicine; Icahn School of Medicine at Mount Sinai; Oregon Health & Science University; Stanford Medicine’s Sean N. Parker Center for Allergy & Asthma Research; and Yale School of Medicine.

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, and plant and animal research laboratories worldwide. Together with

them, we strive to increase the quality of life for all. For more information, visit fluidigm.com. Fluidigm, the Fluidigm logo, CyTOF, Direct, Immune Profiling Assay and Maxpar, are trademarks and/or registered trademarks of Fluidigm Corporation in the United States and/or other countries. All other trademarks are the sole property of their respective owners. Fluidigm products are provided for Research Use Only. Not for use in diagnostic procedures.

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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 plans and timelines for a prospective research study, the anticipated contributions of Fluidigm technology and products to the study, and the expected benefits of such research. 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 during 2020; our ability and/or the ability of the research institutions utilizing our products and technology to obtain Emergency Use Authorization (EUA) FDA and any other requisite approvals to use our products and technology for diagnostic testing purposes; challenges inherent in developing, manufacturing, launching, marketing, and selling new products; 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; and competition. 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.

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