



Boston Children's Hospital Is Using Bionano's Saphyr To Study Children With Severe COVID-19 Disease

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The genomes of at least 20 patients with Multisystem Inflammatory Syndrome in Children and unaffected controls to be analyzed on Saphyr at Boston Children's Hospital

SAN DIEGO, Oct. 05, 2020 (GLOBE NEWSWIRE) -- Bionano Genomics, Inc. (Nasdaq: BNGO) announced today that a team led by Drs. Catherine Brownstein, Director of the Molecular Genetics Core Facility, and Alan Beggs, Director of the Manton Center for Orphan Disease Research of Boston Children's Hospital at Harvard Medical School is using Bionano's Saphyr platform to analyze the genomes of children who developed the severe Multisystem Inflammatory Syndrome in Children (MIS-C) together with a comparison group of children who had COVID-19 without developing MIS-C. MIS-C is a rare post-COVID-19 syndrome in children characterized by inflammation of essential organs including the heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal organs. It is not known why some children get sick with MIS-C and most don't. The team at Boston Children's Hospital is using Saphyr to study the genomes of affected children and controls with the hope of identifying genomic variants that predispose to or protect against the disease, which could guide the treatment decisions made and help steer the development or use of therapeutics and/or vaccines.

The Boston Children's team has joined the COVID-19 Host Genome Structural Variation Consortium, which aims to identify structural differences in the genomes of patients affected by or protected against COVID-19. As a co-investigators of the consortium, the Boston Children's team will share their findings in these pediatric samples with the consortium to further determine if the potential variants that play a role in MIS-C also influence the disease severity in adult patients. The samples are currently being recruited from patients who are treated at Boston Children's Hospital, and analyzed on the Saphyr system operated by the Molecular Genetics Core Facility of Boston Children's Hospital.

"The unique power of the Saphyr system is its ability to identify otherwise undetectable structural variations in the human genome that might influence the expression of genes important for the development of MIS-C and other aspects of COVID-19 severity," said Dr. Brownstein.

Erik Holmlin, PhD, CEO of Bionano Genomics commented: "As the COVID-19 pandemic maintains its deadly grip on the planet, the question of why it affects certain people so severely while others are asymptomatic remains unanswered. This question matters even more in children, where many escape symptoms altogether but some develop the debilitating and sometimes deadly inflammatory MIS-C response. The expansion of the COVID-19 Host Genome Structural Variation Consortium to include pediatric MIS-C cases widens the scope of the study, which could lead to a better understanding of the disease, and will greatly increase its potential for discovery. We remain thrilled to contribute to the scientific and medical community's understanding of how the SARS-CoV-2 virus infects the body and how variation in our genomes influence that process. We are hopeful that these insights may contribute to the development of novel, targeted, antiviral therapies or vaccines, and to better treatment decisions for children and adults affected by COVID-19 alike."

About Bionano Genomics

Bionano is a genome analysis company providing tools and services based on its Saphyr system to scientists and clinicians conducting genetic research and patient testing, and providing diagnostic testing for those with autism spectrum disorder (ASD) and other neurodevelopmental disabilities through its Lineagen business. Bionano's Saphyr system is a platform for ultra-sensitive and ultra-specific structural variation detection that enables researchers and clinicians to accelerate the search for new diagnostics and therapeutic targets and to streamline the study of changes in chromosomes, which is known as cytogenetics. The Saphyr system is comprised of an instrument, chip consumables, reagents and a suite of data analysis tools, and genome analysis services to provide access to data generated by the Saphyr system for researchers who prefer not to adopt the Saphyr system in their labs. Lineagen has been providing genetic testing services to families and their healthcare providers for over nine years and has performed over 65,000 tests for those with neurodevelopmental concerns. For more information, visit www.bionanogenomics.com or www.lineagen.com.

About Boston Children's Hospital

[Boston Children's Hospital](http://BostonChildrensHospital.com) is ranked the [#1 children's hospital](#) in the nation by U.S. News & World Report and is the primary pediatric teaching affiliate of Harvard Medical School. Home to the world's largest research enterprise based at a pediatric medical center, its discoveries have benefited both children and adults since 1869. Today, 3,000 researchers and scientific staff, including 8 members of the National Academy of Sciences, 21 members of the National Academy of Medicine and 12 Howard Hughes Medical Investigators comprise Boston Children's research community. Founded as a 20-bed hospital for children, Boston Children's is now a 415-bed comprehensive center for pediatric and adolescent health care. For more, visit our [Discoveries](#) blog and follow us on social media [@BostonChildrens](#), [@BCH_Innovation](#), [Facebook](#) and [YouTube](#).

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "may," "will," "expect," "plan," "anticipate," "estimate," "intend" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) convey uncertainty of future events or outcomes and are intended to identify these forward-looking statements. Forward-looking statements include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things: the planned scope of research by Boston Children's Hospital and the consortium, including with respect to their use of Saphyr; potential discoveries regarding COVID-19 through the use of Saphyr; and Saphyr's ability to contribute to research, influence treatment or aid the development of vaccinations and other therapies related to COVID-19, including an improved understanding of MIS-C and other aspects of COVID-19 severity in children or adults. Each of these forward-looking statements involves risks and uncertainties. Actual results or developments may differ materially from those projected or implied in these forward-looking statements. Factors that may cause such a difference include the risks and uncertainties associated with: the impact of the COVID-19 pandemic on our business and the global economy; general market conditions; changes in the competitive landscape and the introduction of competitive products; changes in our strategic and commercial plans; our ability to obtain sufficient financing to fund our strategic plans and commercialization efforts; the ability of medical and research institutions to obtain funding to support adoption or continued use of our technologies; the loss of key members of management and our commercial team; and the risks and uncertainties associated with our business and financial condition in general, including the risks and uncertainties described in our filings with the Securities and Exchange Commission, including, without limitation, our Annual Report on Form 10-K for the year ended December 31, 2019 and in other filings subsequently

made by us with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made and are based on management's assumptions and estimates as of such date. We do not undertake any obligation to publicly update any forward-looking statements, whether as a result of the receipt of new information, the occurrence of future events or otherwise.

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