



The COVID-19 Host Genome Structural Variant Consortium Formed by Dr. Ravindra Kolhe at Augusta University Creates a Massive Expansion in the Scope of COVID-19 Susceptibility Research with Bionano Genome Imaging

July 24, 2020

- *Saphyr's extremely sensitive structural variation detection technology will be used to analyze samples from COVID patients from dozens of clinical sites throughout North America and Europe*
- *Initial target for recruitment is 1,000 patients*
- *The consortium includes more than 40 world-renowned scientists and institutions*

SAN DIEGO, July 24, 2020 (GLOBE NEWSWIRE) -- Bionano Genomics, Inc. (Nasdaq: BNGO) announced today that a recently formed international consortium of clinical and research sites is using its Saphyr genome imaging system to identify genomic variants that influence resistance or sensitivity to the SARS-CoV2 virus, or COVID-19 disease progression and drug response. The consortium is comparing the genome structures of those patients who show no or mild symptoms and those who show severe illness, while controlling for the known risk factors of age and chronic illness such as asthma, heart disease, diabetes, or other immune-compromising disease. The team plans to analyze at least 1,000 patient genomes with Saphyr.

The consortium was founded by Dr. Ravindra Kolhe, the Vice-Chair of Pathology and Section Chief of Molecular and Genetic Pathology at Augusta University and Dr. Alka Chaubey, Scientific Director for the Georgia Esoteric & Molecular Lab at Augusta University. Additionally, it consists of co-investigators from Baylor College of Medicine, Boston's Children's Hospital of Harvard University, Children's National Medical Center, Columbia University, George Mason University, MD Anderson Cancer Center, the National Cancer Institute, Oregon Health and Science University, Rockefeller University, San Francisco State University, Sanford Burnham Prebys, UC San Diego, UC Santa Cruz, and Virginia Commonwealth University, with many more in the process of joining.

A number of companies have committed to supporting this effort as part of a global Tech Against Covid initiative. Rescale, the High-Performance Computing cloud platform fully integrated with Saphyr, and Amazon, a leading provider of on-demand cloud computing, are donating compute time for the Bionano data analysis. Genoox, the platform for annotation and classification of genomic variants, is donating its compute resources to analyze available sequencing data combined with Bionano's structural variation calls for an integrated analysis of small and large genomic variants.

Initial unpublished findings from the first 30 patients that have been analyzed show that Saphyr detects large amounts of structural variation in many putatively relevant genes, demonstrating that point mutations alone are unlikely to explain disease differences between patients. Bionano's Saphyr system is expected to provide the crucial structural variation data needed for a full understanding of genome structure in patients.

Dr. Ravindra Kolhe, founder of the consortium commented: "We strongly believe that Bionano's Saphyr platform is uniquely capable of identifying variants that play an important role in regulating COVID-19 in patients, and may be able to explain some of the extreme variation in disease severity and progression that we see in patients. Other studies of the host genome are based on short-read sequencing or SNP-microarrays, and those technologies are unable to detect and account for the large amounts of structural variation that's present in clinically important regions of the genome. We are hopeful that our initial results will translate into discoveries that truly advance our understanding of this devastating disease, and will improve our ability to treat the sickest patients."

Erik Holmlin, PhD, CEO of Bionano Genomics commented: "The COVID-19 Host Genome Structural Variation Consortium is an important expansion of Bionano's efforts to help the scientific and medical community in the development of novel, targeted, antiviral therapies or vaccines. We believe that Bionano's genome imaging technology is the only technology capable of detecting the structural variants that could protect against or predispose patients to the viral infection and influence the severity of the disease. We are thrilled that our technology is being used in a global effort to help bring this pandemic to a halt."

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. 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. For more information, visit www.bionanogenomics.com.

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: planned scope of the consortium's research; preliminary findings regarding COVID-19 through the use of Saphyr; and Saphyr's ability to contribute to research and treatment of COVID-19, including discoveries that can advance an understanding of COVID-19 and improve the ability to treat patients. 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 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.

CONTACTS

Company Contact:

Erik Holmlin, CEO
Bionano Genomics, Inc.
+1 (858) 888-7610
eholmlin@bionanogenomics.com

Investor Relations Contact:

Ashley R. Robinson
LifeSci Advisors, LLC
+1 (617) 430-7577
arr@lifesciadvisors.com

Media Contact:

Kirsten Thomas
The Ruth Group
+1 (508) 280-6592
kthomas@theruthgroup.com



Source: Bionano Genomics