



## **Bionano Genomics Announces Publication by International COVID-19 Host Genome Structural Variation Consortium Describing How OGM Identified Structural Variations as Predisposing Factors Associated with Severe COVID-19**

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SAN DIEGO, Jan. 20, 2022 (GLOBE NEWSWIRE) -- Bionano Genomics, Inc. (BNGO), pioneer of optical genome mapping (OGM) solutions on the Saphyr® system and provider of NxClinical™, the leading software solutions for visualization, interpretation and reporting of genomic data, today announced the publication of a study that described the use of OGM to identify rare human genomic structural variants (SVs) as predisposition factors associated with severe COVID-19, highlighting the potential role of SVs in the pathogenesis of COVID-19 severity.

"Research continues to unravel the genetic factors that predispose people to severe COVID-19, and it is no surprise that structural variants can play a role," commented Dr. Ravindra Kolhe, Associate Dean for Translational Research at Medical College of Georgia and Director of the Georgia Esoteric and Molecular Laboratory at Augusta University. "We are excited to have optical genome mapping as another important tool in the toolbox of genomic discovery in this pandemic."

The International COVID-19 Host Genome Structural Variation Consortium is a global open host genome structural variation consortium for the COVID-19 response. It is comprised of over 30 researchers from leading institutions who are using long-read molecule technologies, including OGM, to assess SVs in the human genome that could be contributing to COVID-19 susceptibility or progression.

In this peer-reviewed study, published in the journal *iScience*, researchers performed OGM on samples from 52 severely ill COVID-19 patients to investigate SVs as decisive predisposition factors associated with COVID-19. They identified 7 SVs in 9 patients (17% of patients tested) involving genes implicated in two key host-viral interaction pathways: innate immunity and inflammatory response, and viral replication and spread. The study authors reported that SVs in two genes, *STK26* and *DPP4*, are the most intriguing candidates in these biological pathways.

As the authors indicate, this is the first study to systematically assess the potential role of SVs in the pathogenesis of COVID-19 severity. These findings indicate that SVs can be a factor in COVID-19 severity and expand the research community's understanding of COVID-19 susceptibility and progression.

"We are excited by the work of the International COVID-19 Host Genome Structural Variation Consortium and their use of OGM as a research tool for exploring genetic factors in COVID-19 pathogenesis," commented Erik Holmlin, PhD, President and Chief Executive Officer of Bionano. "We expect that ongoing research on SVs will elevate our understanding of human health in this pandemic and see the potential for genetic variants to become additional factors in risk stratification for severe disease."

The pre-print version of the paper was published January 10, 2022 and is available online at: <https://www.sciencedirect.com/science/article/pii/S258900422200030X>.

### **About Bionano Genomics**

Bionano Genomics is a provider of genome analysis solutions that can enable researchers and clinicians to reveal answers to challenging questions in biology and medicine. The Company's mission is to transform the way the world sees the genome through OGM solutions, diagnostic services and software. The Company offers OGM solutions for applications across basic, translational and clinical research. Through its Lineagen business, the Company also provides diagnostic testing for patients with clinical presentations consistent with autism spectrum disorder and other neurodevelopmental disabilities. Through its BioDiscovery business, the Company also offers an industry-leading, platform-agnostic software solution, which integrates next-generation sequencing and microarray data designed to provide analysis, visualization, interpretation and reporting of copy number variants, single-nucleotide variants and absence of heterozygosity across the genome in one consolidated view. For more information, visit [www.bionanogenomics.com](http://www.bionanogenomics.com), [www.lineagen.com](http://www.lineagen.com) or [www.biodiscovery.com](http://www.biodiscovery.com).

### **Forward-Looking Statements of Bionano Genomics**

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 potential role of SVs in the pathogenesis of COVID-19 severity; the ability for OGM to continue to play a role in the evaluation of COVID-19; the potential for ongoing research on SVs to elevate our understanding of human health; and the potential for genetic variants to become additional factors in risk stratification for severe disease. 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, including the introduction of competitive technologies or improvements in existing technologies; failure of future study results to support those demonstrated in the study referenced in this press release; 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; 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, 2020 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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