Bionano Genomics Announces Issuance of a U.S. Patent for Analysis of Small Nucleic Acid Fragments in Nanochannel Arrays

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SAN DIEGO, June 29, 2022 (GLOBE NEWSWIRE) -- Bionano Genomics, Inc. (Nasdaq: BNGO), today announced that the United States Patent and Trademark Office issued US Patent No.11,359,244 on June 14, 2022. The patent, titled “CHARACTERIZATION OF MOLECULES IN NANOFLUIDICS” claims methods for the analysis of small nucleic acid fragments in nanochannel arrays, which Bionano has traditionally used to analyze ultra-high molecular weight (UHMW) DNA for the identification of structural variants (SVs) as part of its Saphyr® system. The methods claim the use of certain nanochannel arrays to detect and quantitate genetic abnormalities, including a DNA translocation, amplification, transversion, inversion, aneuploidy, polyploidy, monosomy, trisomy, trisomy 21, trisomy 13, trisomy 14, trisomy 15, trisomy 16, trisomy 18, trisomy 22, triploidy, tetraploidy, and sex chromosome aneuploidy.

Nanochannel arrays have the potential to enable single molecule assays for circulating DNA found in blood and other fluid samples, which tend to be highly fragmented with average lengths between 150 – 200 base pairs. Bionano believes that the methods disclosed in the ‘244 patent may one day support the commercialization of assays directed to non-invasive prenatal testing (NIPT) in maternal fetal medicine or ctDNA in oncology.

The patent is part of Bionano’s intellectual property portfolio that includes multiple patents covering its core technology of confining and linearizing ultra-long DNA and other macromolecules in parallel nanochannel arrays, and the detection of feature-specific sequence or genomic labels on those molecules. Additionally, Bionano’s portfolio includes patents directed to methods of fabricating nanochannel devices, as well as other technologies for sample processing and analysis related workflows.

“At Bionano, we remain committed to expanding the utility of our nanochannel arrays and creating a robust patent portfolio that protects those applications. This patent is an exciting example of technology that may prove useful for creating new applications in important areas of medicine,” commented Erik Holmlin, PhD, president and chief executive officer of Bionano Genomics.

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, www.lineagen.com or 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,” “potential,” “believe,” 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 anticipated benefits and improvements resulting from the methods described in this patent, and the ability of the tools that we may develop to provide new insight into circulating nucleic acids for applications directed to NIPT in maternal fetal medicine or ctDNA in oncology. 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 technologies or improvements in existing technologies; 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, 2021 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:

Amy Conrad
Juniper Point
+1 (858) 366-3243
amy@juniper-point.com

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