Bionano Announces Prototype for its Next Single Molecule Imaging System for OGM

December 29, 2021

SAN DIEGO, Dec. 29, 2021 (GLOBE NEWSWIRE) -- Bionano Genomics, Inc. (BNGO), pioneer of optical genome mapping (OGM) solutions on the Saphyr® system and provider of the leading software solutions for visualization, interpretation and reporting of genomic data, today announced that it has completed the first prototype for its next single molecule imaging system for OGM. The prototype is being used to integrate and test the key engineering designs of a new instrument and consumable intended to meet the needs of high volume users. The commercial system based on this prototype is expected to be released in the first half of 2023.

We believe OGM provides the most comprehensive, reliable and cost-effective solution for detecting structural variations (SVs). OGM is a workflow comprised of four proprietary stages: (i) ultra-high molecular weight DNA isolation; (ii) sequence-specific DNA labeling; (iii) single molecule linearization & imaging; and (iv) data processing and analysis. The third stage creates the molecule images and sequence motif patterns that are used to reveal SVs. This stage also sets the limit on the number of samples that can be processed per day. The throughput of the current Saphyr system is designed for the volumes encountered by academic medical centers doing standard clinical research in genomics, but large reference laboratories and contract research organizations (CROs) with higher volumes require an instrument with higher throughput capabilities.

Compared to the Saphyr system, which images DNA at a rate of approximately 205 Gbp per hour, the new system is expected to image nearly 820 Gbp per hour. The new instrument is designed to be configurable into an array of up to four instruments processing samples in parallel approximately six months after initial release. Other anticipated features of the new system include a new consumable design, higher capacity carousel for staging samples to be imaged and updated optical components all in a space-efficient benchtop footprint.

The new imaging system will also incorporate features designed to make high throughput workflows more flexible, allowing for data collection to start without needing to wait for multiple samples being available, enabling high-coverage cancer experiments to be run next to lower coverage constitutional experiments and the ability to prioritize samples to be run ahead of all others. This flexibility is expected to surpass that of peer sequencing systems, where getting this flexibility often means waiting for enough samples to fill a flow cell or paying a significant per sample premium to have a sample consume more of a consumable.

Erik Holmlin, PhD, president and CEO of Bionano said, “I want to congratulate our team for finishing this prototype on schedule. With expected integration of OGM into NxClinical in 2022, the leading software solution for visualization, interpretation and reporting of single nucleotide variants and copy number variants from next-generation sequencing and microarrays, we believe this new system and consumable will be the next major additions to our list of products for the growing community of OGM users. I am impressed with the innovation our team has brought to the project and I am eagerly awaiting their progress in 2022.”

Mark Oldakowski, Chief Operating Officer of Bionano said, “Guided by our intimate knowledge of our customers’ needs, the progress this team has made has been spectacular. Next year, I look forward to sharing additional amazing advancements for this new imaging system we hope will delight our customers.”

Prototype photos of the next single molecule imaging system for OGM will be made available on Bionano’s social media channels on December 31, 2021.

About Bionano Genomics

Bionano 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,” “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, [timing for anticipated launch of the commercial system;] [whether Saphyr will remain available for purchase after the new system is released;] the anticipated performance of the new system and its anticipated features, as well as anticipated performance of the new system relative to competitor sequencing systems; and timing of advancements in the new system. 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, technologies or improvements in existing technologies; a reduction in large reference laboratories and CROs seeking to bring OGM in-house; delays in the advancement and development of the prototype into a commercially available system; 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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Source: Bionano Genomics