Bionano Genomics Hosts Day 2 of 2022 Symposium with New Research Demonstrating How OGM Detects Known and Novel Variants in Hematologic Malignancies

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SAN DIEGO, Jan. 11, 2022 (GLOBE NEWSWIRE) -- Bionano Genomics, Inc. (BNGO), pioneer of optical genome mapping (OGM) solutions on the Saphyr® system and provider of N_XClinical™, the leading software solutions for visualization, interpretation and reporting of genomic data, hosted the second day of 2022 Symposium, the Company's premiere event showcasing OGM research applications across key clinical areas of constitutional genetic disease, hematologic malignancies, solid tumors and OGM combined with next-generation sequencing (NGS).

Ten presentations from leading researchers across North America and Europe showcased the utility of OGM for hematologic malignancies at 2022 Symposium. Ten experts from across North America and Europe shared their latest research using OGM to characterize genetic aberrations in a wide variety of adult and pediatric leukemias and related hematologic malignancies. Their findings consistently demonstrated the sensitivity of OGM for structural variants typically identified by karyotyping and FISH. These researchers also shared examples of novel variants of potential clinical importance discovered with OGM that were undetected with other methods.

OGM revealed novel genetic aberrations in B-cell Chronic Lymphocytic Leukemia (B-CLL) and Acute Lymphoblastic Leukemias (ALL). B-CLL is the most common form of adult leukemia. Karyotyping and FISH panels for characterized genetic aberrations are typically used in the evaluation of B-CLL. Dr. Saurabh Gupta, from Quest Diagnostics, has focused his initial evaluation of OGM on this malignancy and shared the overall high concordance of OGM with traditional methods to detect known gene rearrangements in B-CLL. He also described cases in which OGM identified variants that were missed or not fully characterized by conventional methods but were of potential prognostic value. Dr. Anna Puiggros from Hospital del Mar in Barcelona, Spain presented her similar findings that OGM effectively detected genetic aberrations and several additional abnormalities in chronic lymphocytic leukemia (CLL) samples in an independent study.

OGM can be faster and more cost-effective than traditional techniques for analyzing ALL. ALLs are hematopoietic neoplasms of lymphoid precursors, characterized by the accumulation of malignant, immature lymphoid cells in the bone marrow and blood. The classic panel for these types of neoplasms includes karyotyping, FISH, and multiplex ligation-dependent probe amplification (MLPA). In two independent studies, Jonathan L. Lühmann, from Hannover Medical School, Germany, and Dr. Barbara Dewaele, from University Hospitals, Leuven, found that OGM reliably and cost-effectively identified genetic markers when compared to traditional panels for ALL. In addition to accurately identifying all translocations, the studies found that OGM detected additional potentially targetable new fusions and chromothripsis. Further, Dr. Adrian Dubuc presented a case study of a 37-year-old veteran who was diagnosed as Philadelphia-negative B-ALL. Based on a battery of cytogenetics tests, this patient was found to have a complex genetic profile. Using OGM alone, Dr. Dubuc and his team were able to confirm this same complex profile.

OGM detected more clinically relevant variants across a wide range of hematologic malignancies including acute myeloid leukemia (AML). Other presenters shared study results evaluating the OGM workflow for a variety of different hematologic malignancies. Dr. Kornelia Neveling is investigating whether OGM could replace traditional tests such as karyotyping and FISH and is conducting a clinical utility study for subjects with AML. She reported that interim analyses for this study support this potential application. Data from similar comparative analyses were presented by Bence Dvorak on plasma cell diseases, Dr. Elena Garcia Sanchez on pediatric leukemias, Dr. Brynn Levy for AML, and Dr. Adam Smith on multiple malignancy types. These independent studies suggest that OGM can detect known and novel genetic aberrations, facilitate interpretation and reporting, and reduce time from procuring the sample to reporting data.

"We continue to be impressed by the work of our colleagues and are grateful for their contributions to genetic discovery in cancer," remarked Alka Chaubey, PhD, FACMG, Chief Medical Officer of Bionano. "We are excited by the potential of OGM to identify new variants that may directly impact the lives of people living with leukemia and related conditions."

"As these presenters demonstrated today, we are just beginning to see how OGM can better characterize genetic variants in hematologic malignancies," commented Erik Holmlin, PhD, President and Chief Executive Officer of Bionano. "These presentations demonstrate that OGM is a scalable workflow that can reliably match traditional methods, which we believe may unlock new insights into cancer."

Don't miss Symposium, register now! Symposium registration is open to all and there is no charge for attending this event. Register today at https://www.labroots.com/ms/virtual-event/bngo2022.

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," "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 ability and utility of OGM to analyze genomes and reliably identify and characterize genetic variants, the ability for OGM to unlock insight into cancers or to affect the lives of people with cancer, and the potential for OGM to become part of the standard of care. 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 during the presentations 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 OGM or 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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