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NanoString's Hyb & Seq™ Enables Liquid Biopsy by the Direct Capture and Sequencing of Cell-Free DNA

Simple Workflow Allows Target Capture and Sequencing Initiation in About One Hour

SEATTLE, Sept. 18, 2017 (GLOBE NEWSWIRE) -- NanoString Technologies, Inc. (NASDAQ:NSTG), a provider of life science tools for translational research and molecular diagnostic products, today announced that the company has demonstrated the capability of its Hyb & Seq technology to perform liquid biopsy measurement. The proof-of-principle work was presented at the Advances in Genome Biology and Technology (AGBT) Precision Health meeting held in Scottsdale, Arizona, September 14-16, 2017.

The sequencing of circulating cell-free DNA (cfDNA) from blood is a promising non-invasive tool for clinical oncology. Hyb & Seq offers numerous advantages over current NGS methods by leveraging a targeted single molecule sequencing workflow to directly capture and analyze cfDNA without amplification or library construction. The well-characterized extraction process ensures high yield of cfDNA with minimal contamination from cellular genomic DNA. Hyb & Seq technology enables accurate sequencing without the need for complex and time consuming library preparation, enzymes or amplification, allowing the efficient capture of cfDNA to be completed in approximately 60 minutes.

"Our work demonstrates that Hyb & Seq is capable of performing precise measurement of cell-free DNA, which could enable rapid and accurate liquid biopsies," said Joe Beechem, senior vice president of R&D of NanoString Technologies. "Having already established the rapid, simple sequencing of FFPE samples, we are now well-positioned to address the two most important sample types in oncology, underscoring the tremendous commercial potential for Hyb & Seq."

The company presented two posters at the AGBT Precision Health meeting, the first of which is titled "Eliminating sample and NGS library preparation bias and bottlenecks for liquid biopsy applications with Hyb & Seq technology" describing the workflow for isolating cfDNA from plasma, and the performance of capturing and detecting it with Hyb & Seq. The Hyb & Seq liquid biopsy isolation protocol provided cfDNA of a quantity and quality comparable to commercially available kits. Reference cfDNA extracted from synthetic plasma was used to assess the reproducibility of cfDNA sample preparation and sequence detection using a prototype Hyb & Seq system. When processing a 100+ target panel from synthetic reference plasma, the Hyb & Seq liquid biopsy process delivered highly reproducible (R2 = 0.93) detection.

A second poster titled "Direct, simultaneous sequencing of DNA and RNA in less than 60 minutes from FFPE samples using Hyb & Seq Technology" demonstrated recent improvements in performance and workflow when processing formalin-fixed, paraffin-embedded tissue samples. Direct RNA sequencing by Hyb & Seq showed strong correlation (R2 = 0.99) with results from the nCounter® Analysis System. In addition, a streamlined sample preparation workflow was demonstrated, reducing hands-on time from 15 minutes to 10 minutes.

About Hyb & Seq Technology
Hyb & Seq is a novel single molecule sequencing technology being developed by NanoString. The platform enables a workflow that is simpler and faster than current sequencing methods because it does not require library preparation, enzymes or amplification. Hyb & Seq technology's simplicity, flexibility, and accuracy offer the potential for an ideal sample-to-answer solution for clinical sequencing. In proof-of-concept experiments, the Hyb & Seq chemistry has demonstrated:

- A low intrinsic error rate and the ability to provide high consensus accuracy at low coverage by non-destructively sequencing the same native molecule multiple times
- Simultaneous capture and sequencing of DNA and RNA molecules in a single experiment
- Both short and long read capabilities, with demonstrated read lengths up to 33kb and no theoretical upper limit
- Total processing time from FFPE sample to start of sequencing of under 60 minutes, and hands-on time of less than 15 minutes

Hyb & Seq technology is currently for research use only and is not for use in diagnostic procedures.

About NanoString Technologies, Inc.

NanoString Technologies provides life science tools for translational research and molecular diagnostic products. The

company's nCounter Analysis System has been employed in life sciences research since it was first introduced in 2008 and has been cited in more than 1,700 peer-reviewed publications. The nCounter Analysis System offers a cost-effective way to easily profile the expression of hundreds of genes, proteins, miRNAs, or copy number variations, simultaneously with high sensitivity and precision, facilitating a wide variety of basic research and translational medicine applications, including biomarker discovery and validation. The company's technology is also being used in diagnostics. The Prosigna® Breast Cancer Prognostic Gene Signature Assay together with the nCounter Dx Analysis System is FDA 510(k) cleared for use as a prognostic indicator for distant recurrence of breast cancer. In addition, the company is collaborating with multiple biopharmaceutical companies in the development of companion diagnostic tests for various cancer therapies, helping to realize the promise of precision oncology.

For more information, please visit www.nanostring.com.

Forward-Looking Statements
This news release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. These forward-looking statements include statements regarding the development of Hyb & Seq chemistry and related products, and expected product capabilities and performance of Hyb & Seq, such as liquid biopsy measurement and the commercial opportunity for such products. Such statements are based on current assumptions that involve risks and uncertainties that could cause actual outcomes and results to differ materially. These risks and uncertainties, many of which are beyond our control, include market acceptance of our products; delays or denials of regulatory approvals or clearances for products; the impact of competition; the impact of expanded sales, marketing, product development on operating expenses; delays or other unforeseen problems with respect to manufacturing and product development; adverse conditions in the general domestic and global economic markets; as well as the other risks set forth in the company's filings with the Securities and Exchange Commission. These forward-looking statements speak only as of the date hereof. NanoString Technologies disclaims any obligation to update these forward-looking statements.

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