



NanoString Showcases Groundbreaking New Platforms at 2018 Advances in Genome Biology and Technology (AGBT) Conference

February 12, 2018

Digital Spatial Profiling Demonstrates Profiling of Proteins and 1,000+ mRNAs Across Multiple Regions from FFPE Tissue Sections using Next Generation Sequencing Readout

First Customer Data Using Hyb & Seq Single Molecule Sequencing Demonstrates Potential Utility in Oncology and Infectious Disease

SEATTLE, Feb. 12, 2018 (GLOBE NEWSWIRE) -- NanoString Technologies, Inc. (NASDAQ:NSTG), a provider of life science tools for translational research and molecular diagnostic products, today announced important updates on two major pipeline programs. Both the Digital Spatial Profiling technology and the novel library-free Hyb & Seq™ sequencing chemistry leverage NanoString's optical barcoding technology to open new market opportunities in biologic research and diagnostics. These technologies were showcased in one oral presentation and four posters at the Advances in Genome Biology and Technology (AGBT) conference in Orlando, Florida, representing the most significant display of new technology advancements in company history.

"Over the last year we've made tremendous progress in advancing our pipeline of new technology platforms, and we're proud of what our innovative teams have accomplished," said Brad Gray, president and CEO of NanoString. "We expect these programs to begin contributing to our revenue growth following the launch of our Digital Spatial Profiling instruments under Early Access later this year."

Digital Spatial Profiling

NanoString's Digital Spatial Profiling (DSP) technology enables the precise quantification of protein and gene expression spatially for regions of interest across the landscape of a heterogeneous tissue sample. Regions of interest can be any shape and size, down to the single cell level. Combining both multiplexed nucleic acid and protein on the same platform gives researchers the ability to spatially measure RNA when suitable antibodies do not exist. The platform includes imaging and fluidic components to prepare samples while retaining spatial context. Previously, NanoString and its collaborators highlighted the performance of DSP in ten abstracts presented at major scientific meetings, which demonstrated the ability of DSP to spatially profile approximately 50 proteins and 30 mRNAs in Formalin Fixed Paraffin Embedded (FFPE) tissue biopsies using current nCounter® instruments.

In two new studies presented at AGBT, NanoString demonstrates for the first time the performance of DSP when read out using Next Generation Sequencing (NGS).

"By opening the DSP platform for readout on either nCounter system or NGS, we can offer almost every genomics lab in the world a clear and simple path to enter rapidly growing fields of spatial genomics and single cell biology," stated Joe Beechem, Ph.D., senior vice president of R&D for NanoString.

In a poster titled *Spatially Resolved, Highly Multiplexed RNA and Protein Expression using NGS Readout of Digital Spatial Profiling Microscopy*, slide-mounted FFPE lymphoid tissue samples were processed on NanoString's DSP instrument, and were read out using Illumina's miSeq® platform, simultaneously profiling 30 proteins and 20 mRNAs in each of 96 regions spanning the biopsy.

In a separate poster titled *Spatially resolved in situ transcriptome analysis of FFPE tissues enabled by coupling Digital Spatial Profiling with an NGS readout*, slide-mounted FFPE tumor biopsies processed on the DSP instrument were read out using NanoString's Hyb & Seq platform, simultaneously profiling more than 1,000 unique transcripts in small regions of a FFPE biopsy, allowing researchers to map how the activation states of critical pathways differ across the morphology of the tumor.

NanoString is currently accepting applications to a Technology Access Program for its DSP technology at TAP@Nanostring.com. The DSP instrument system currently under development is expected to be available for Early Access late in 2018.

The DSP instrument is currently intended for research use only and is not for use in diagnostic procedures.

Hyb & Seq

NanoString's proprietary Hyb & Seq chemistry is designed to enable a workflow that is simpler and faster than current sequencing methods due to the absence of library preparation, enzymes and amplification. Hyb & Seq's simple workflow and compatibility with a variety of sample types offer the potential for an ideal sample-to-answer solution for clinical sequencing. This unique chemistry also provides both short and long read capability simultaneously, as well as the ability to sequence both DNA and RNA in parallel. Previously, NanoString highlighted the performance of Hyb & Seq at major scientific meetings, and demonstrated a low intrinsic error rate, the ability to provide high consensus accuracy at low coverage, and a simple workflow with total processing time from FFPE tissue or blood samples to the start of sequencing of under 60 minutes, with total hands-on time of less than 15 minutes.

In two new studies presented at the AGBT, Hyb & Seq data will be presented for the first time by external collaborators. These studies demonstrate the potential utility of Hyb & Seq for clinical sequencing in the fields of infectious disease and oncology.

In an oral presentation titled *Simultaneous mutation detection, copy number measurement, and digital gene expression profiling of high-grade serous ovarian cancer FFPE samples using Hyb & Seq targeted sequencing technology*, collaborators from Cancer Research UK demonstrate the use of Hyb & Seq to characterize FFPE cancer samples with a sequencing accuracy that is comparable to that obtained from Illumina's miSeq platform.

In a lunch workshop, Dr. Chris Mason, Associate Professor at Weill Cornell Medicine, will present application data using the Hyb & Seq platform for detecting a diverse set of infectious organisms. This work will be further described in a poster titled *Rapid and accurate cross-kingdom human pathogen identification and detection using Hyb & Seq technology*, which illustrates how Hyb & Seq's unique ability to simultaneously and directly sequence DNA and RNA provides a universal workflow that can be used with bacteria, fungi and viruses, and has a potential to replace multiple tests for infectious disease surveillance and monitoring.

"Hyb & Seq is a new generation of sequencing chemistry offering high accuracy, flexibility, and simplicity that could enable a wide range of clinical applications in which rapid sample-to-answer capability is important," stated Joe Beechem, Ph.D., senior vice president of R&D for NanoString. "We have significantly advanced our Hyb & Seq program over the last year, and we look forward to engaging additional external collaborators to demonstrate the potential of the platform as we prepare to begin placing beta instruments in 2019."

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

Lunch Seminar

NanoString will be hosting a seminar entitled, "Spatial Genomics and the Next Frontier of NGS", on Tuesday February 13th from 12:00 – 1:00pm ET in the Floridian Ballroom of the Hilton Orlando Bonnet Creek hotel.

Integrated Interrogation of Oncogenic Signaling Pathways, Immunology, and Heterogeneity in Cancer

Michael A. Davies, MD, Ph.D. Associate Professor and Deputy Chairman, Department of Translational Molecular Pathology University of Texas MD Anderson Cancer Center

Rapid and Accurate Cross-kingdom Human Pathogen Identification and Detection using Hyb & Seq™ Technology

Christopher Mason, Ph.D. Institute for Computational Biomedicine Weill Cornell Medical College Department of Physiology and Biophysics

Program Moderator: Joseph M. Beechem, Ph.D., senior vice president of R&D, NanoString Technologies

Presentations and posters include:

Title: Spatially resolved in situ transcriptome analysis of FFPE tissues enabled by coupling Digital Spatial Profiling Microscopy with an NGS readout

Date/Time: Tuesday, Feb 13 2018, 1pm-2:30pm

Author: Joseph Beechem, NanoString

Poster #: 215

Title: Spatially resolved, highly multiplexed RNA and Protein expression using NGS readout of Digital Spatial Profiling Microscopy

Date/Time: Tuesday, Feb 13 2018, 1pm-2:30pm

Author: Margaret Hoang, NanoString

Poster #: 417

Title: Rapid and accurate cross-kingdom human pathogen identification and detection using Hyb & Seq technology

Date/Time: Tuesday, Feb 13 2018, 1pm-2:30pm

Author: Daniela Bezdán, Weill Cornell Medicine

Poster #: 217

Title: Simultaneous mutation detection, copy number measurement, and digital gene expression profiling of high-grade serous ovarian cancer FFPE samples using Hyb & Seq™ targeted sequencing technology

Date/Time: Tuesday, Feb 13, 8:30pm

Author: Anna Piskorz, Cancer Research UK, Cambridge Institute

Oral Presentation

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 1,830 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 collaborates with 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.

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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 performance and attributes of Digital Spatial Profiling and Hyb & Seq chemistry, including potential clinical utility, the commercial availability of such products and the expectations for those products to contribute to future revenue growth in our business. 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 or applications; delays or denials of reimbursement for diagnostic products; the impact of competition; delays or other unforeseen problems with respect to manufacturing, product development or clinical studies; adverse conditions in the general domestic and global economic markets; as well as the other risks set forth in our 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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Primary Logo

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