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NanoString and the NSABP Foundation Enter into Agreement to Study Immunophenotypes in Colorectal Cancer

Collaboration will use PanCancer IO360 Assay Which Incorporates the Tumor Inflammation Signature (TIS) and mismatch repair genes (MMR) for assessment of MSI-H phenotype

SEATTLE and PITTSBURGH, Oct. 26, 2017 (GLOBE NEWSWIRE) -- NanoString Technologies, Inc. (NASDAQ:NSTG), a provider of life science tools for translational research and molecular diagnostic products, and the NSABP Foundation, Inc. (NSABP), an academic research organization supported by the National Cancer Institute (NCI) and industry funding, today announced that they have entered into a research agreement to jointly characterize the immunophenotypes of colorectal cancer samples using the PanCancer IO 360™ Gene Expression Panel, a highly-multiplexed gene expression panel designed to identify targetable pathways of tumor and immune biology.

Under this collaborative agreement, NanoString and the NSABP will use the NanoString nCounter® Analysis System to study colorectal cancer tumor samples from the NSABP biobank. The NSABP's MPR-1 Patient Registry and Biospecimen Profiling Repository is a bank of over 2,500 tumor tissue specimens collected from patients with metastatic colorectal cancer. The comprehensive characterization of the tumor-immune microenvironment in the NSABP samples has the potential to identify novel biomarkers for different mechanisms of immune evasion in colorectal tumors.

The PanCancer IO 360 Panel assays key pathways from the tumor, the microenvironment and the immune system and includes more than 20 signatures that are potentially associated with therapeutic response to novel therapeutic agents with "matched" mechanisms of action. These signatures include defective DNA mismatch repair (dMMR) - the genetic abnormality causing high microsatellite instability (MSI-H), which is particularly relevant in this tumor type and is associated with high response to PD-1/PD-L1 blockade. Interrogation of colorectal tumor samples from the NSABP repository with the PanCancer IO 360 Panel will test the concordance between dMMR status as assessed by the NanoString PanCancer IO 360 Panel and the standard immunohistochemistry (IHC) approach.

The collaborators will use the PanCancer IO 360 Panel to explore biological pathways of immune resistance including NanoString's Tumor Inflammation Signature (TIS), recently described by Ayers, et al. (<https://www.jci.org/articles/view/91190>), which measures the presence or absence of a peripherally suppressed adaptive immune response within the tumor. For example, TIS was found to be predictive of response to pembrolizumab, and pembrolizumab's mechanism of action is believed to unleash a pre-existent adaptive immune response by inactivating the inhibitory activity of this receptor. NanoString and NSABP hypothesize that the Tumor Inflammation Signature (TIS) could identify a larger population of tumors potentially responsive to PD-1 blockade than MSI/dMMR status alone, because the TIS directly measures downstream tumor inflammation that can result from multiple different mechanisms (in addition to high mutation load).

"Anti-PD-1 and anti-PD-L1 antibodies have demonstrated significantly durable efficacy in patients with metastatic MSI-H colorectal cancer. Unfortunately, this subset of patients represents only about 5% of stage IV CRC patients, leaving the vast majority of this population in great need of effective treatments," said Alessandra Cesano, chief medical officer at NanoString. "The combination of NanoString's powerful technology and the NSABP's expertise and extensive research biobank of colorectal tumor samples holds great promise for the discovery of new targets that will help us to fight this devastating disease."

"It is critical to find better ways of identifying colorectal cancer patients who will benefit from current immunotherapeutic approaches as well as improving our understanding of the mechanisms of resistance at the molecular level," said Dr. Samuel Jacobs, Director of Medical Affairs for the NSABP. "It is our hope that this collaboration with NanoString will deepen our understanding of the mechanisms of tumor immune evasion in order to guide the successful development of novel immunotherapeutic approaches and combinations."

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.

About the NSABP

The NSABP, headquartered in Pittsburgh, PA, is a not-for-profit, Academic Research Organization, which includes a network of 10,000 professionals located in the U.S., Canada, Puerto Rico, Ireland, Korea and Australia. For more than 50 years, the NSABP has successfully conducted large-scale, randomized clinical trials in colorectal and breast cancer that have altered and improved the standard of care for men and women with these diseases. To learn more about the NSABP, please visit <http://foundation.nsabp.org>.

Forward-Looking Statements - NanoString

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 outcomes of the research collaboration between NanoString and NSABP, including the ability of the PanCancer IO 360 Gene Expression Panel and the Tissue Inflammation Signature to identify novel biomarkers of the different mechanisms of immune evasion in colorectal tumors and to identify tumors potentially responsive to PD-1 and PD-L1 blockade, and the use of the outcomes of this research collaboration to guide the successful development of novel immunotherapeutic approaches and combinations. 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.

For more information, please visit <http://www.nanostring.com>.

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Contacts:

Doug Farrell

Vice President, Investor Relations & Corporate Communications

dfarrell@nanostring.com

Phone: 206-602-1768

Lori Garvey

NSABP Operations Center

(412) 330-4621

Lori.garvey@nsabp.org

 Primary Logo

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