New Publication Demonstrates First Use of NanoString's GeoMx Digital Spatial Profiler in Neuroscience

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Study Applies Digital Spatial Profiling and nCounter Gene Expression Panels to Illuminate Role of Immune System in Human Alzheimer's Disease

SEATTLE, Aug. 06, 2019 (GLOBE NEWSWIRE) -- NanoString Technologies, Inc. (NASDAQ:NSTG), a provider of life science tools for translational research and molecular diagnostic products, today announced the publication of a study in the journal *Acta Neuropathologica* that demonstrates the capability of the GeoMx™ Digital Spatial Profiler (DSP) to characterize the microenvironment surrounding beta-Amyloid plaques in the brains of Alzheimer's disease (AD) patients.

The importance of the immune response in AD has come to light through recent work in the field. As neuropathological changes, such as the deposition of beta-Amyloid plaques, accumulate, the brain's innate immune system is activated. A group of researchers lead by Stefan Prokop, M.D., Assistant Professor at University of Florida, recently published a study entitled "Impact of TREM2 risk variants on brain region-specific immune activation and plaque microenvironment in Alzheimer's disease patient brain samples." In this study, investigators used the GeoMx DSP as well as nCounter® gene expression panels to perform a comprehensive analysis of the immune response patterns in human AD brains.

GeoMx DSP was used to profile more than 40 proteins simultaneously in radial maps of the microenvironment surrounding beta-Amyloid-plaques in the brains of human AD patients, showing substantial differences between patients who carry AD-associated risk variants in the gene TREM2, and those who did not. In addition, the authors found that cell-type profiling using the nCounter Neuropathology and Neuroinflammation gene expression panels correlated well with conventional analyses, "demonstrating that the NanoString nCounter platform provides robust and reliable data from post mortem FFPE brain tissues."

"The combination of conventional analysis tools with gene expression analysis and spatially resolved multiplexed protein analysis is a game changer for the analysis of human FFPE tissue specimens," said Dr. Prokop. "Our data suggest that microglia respond to neuronal injury inflicted by pathological protein aggregates, rather than the aggregated protein itself."

"This study highlights the value of GeoMx Digital Spatial Profiling and nCounter gene expression panels to yield insights in neuroscience, which may have implications for interventional strategies in neurodegenerative diseases." said Brad Gray, NanoString's president and CEO.

The data for this publication was generated as part of a collaboration with NanoString Technologies, and samples were processed at NanoString using a prototype GeoMx Digital Spatial Profiler.

The GeoMx Digital Spatial Profiler enables researchers to rapidly and quantitatively characterize tissue morphology with a high-throughput, high-plex RNA and protein profiling system that preserves samples for future analyses. NanoString and its collaborators have presented DSP data in more than 25 abstracts at major scientific meetings, demonstrating the utility of DSP technology to address a wide range of biological questions in Formalin Fixed Paraffin Embedded (FFPE) tissues.

Interested parties can learn more about DSP by visiting https://www.nanostring.com/scientific-content/technology-overview/digital-spatial-profiling-technology.

About NanoString Technologies, Inc.

NanoString Technologies is a leading provider of life science tools for translational research and molecular diagnostic products. The company's nCounter® Analysis System is used in life sciences research and has been cited in more than 2,650 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 GeoMx™ Digital Spatial Profiler enables highly-multiplexed spatial profiling of RNA and protein targets in a variety of sample types, including FFPE tissue sections. 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.

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

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