NanoString Collaborates with MODEL-AD Consortium to Accelerate Alzheimer's Disease Research

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nCounter Mouse AD Gene Expression Panel Applied to Characterize Five Novel Mouse Models

New nCounter Human AD Gene Expression Panel Launched at AAIC 2019

SEATTLE, July 15, 2019 (GLOBE NEWSWIRE) -- NanoString Technologies, Inc. (NASDAQ:NSTG), a provider of life science tools for translational research and molecular diagnostic products, today announced a collaboration with the MODEL-AD consortium that has resulted in the development of two nCounter® gene expression panels for use in Alzheimer's disease (AD) research, and the presentation of data from several studies at the Alzheimer's Association International Conference (AAIC) 2019 meeting. The development of the panels is described in detail, highlighting that data from AD patients was used to identify the key gene groupings to be assayed in animal models (Carter et al). In addition, the panel was used for initial characterization of novel mouse models of late-onset AD (Howell et al).

Historically, AD research and drug development have been hampered by the lack of mouse models that accurately recapitulate the disease. The MODEL-AD consortium was established in 2016 to facilitate preclinical research in Alzheimer's disease, and is funded by a $25 million grant from the National Institutes of Health (NIH). The consortium, consisting of researchers at Indiana University (IU), The Jackson Laboratory (JAX), University of Pittsburgh, Sage Bionetworks, and the University of California Irvine, focuses on developing and characterizing AD animal models, aligning them with corresponding stages of clinical disease using translatable biomarkers, and ensuring their availability to all researchers for use in preclinical drug development, along with guidelines, protocols, and validation data.

"There is a need for novel mouse models of Alzheimer's disease as our current models are insufficient to accurately mimic human disease," said Bruce Lamb, Ph.D., Executive Director of the Paul and Carole Stark Neurosciences Research Institute at Indiana University. "A reproducible method to characterize novel mouse models could help establish clinical gold standards in the field."

Working in collaboration, NanoString and MODEL-AD consortium researchers developed two nCounter AD Panels, one for use in mouse studies and another for use in human studies. These panels measure the expression of 770 genes covering 30 modules discovered in a recent study of human brain tissue ("Meta-analysis of the human brain transcriptome identifies heterogeneity across human AD coexpression modules robust to sample collection and methodological approach"). The collaborators have used the Mouse AD Panel to characterize five IU/JAX MODEL-AD mouse models to date, including the Abca7*A1527G SNP, Ceacam1 KO, hCR1 KI, Il1rap KO, and Mthfr*C677T SNP models. All data from these studies will be made available online on the AMP-AD Knowledge Portal (www.ampadportal.org), and the novel mouse models will be made available from The Jackson Laboratory with no restrictions on for-profit use.

"The AD Panels support our goal of providing novel tools to address challenges in the field of neurodegenerative disease research, a new and growing market for NanoString," said Chad Brown, NanoString's senior vice president of sales and marketing. "We recognize the unmet need in AD mouse model development and disease characterization and are glad to be supporting the MODEL-AD mission."

"The Mouse AD panel will provide the ability to analyze the AD-like transcriptome in the 40 new mouse models the MODEL-AD consortium is working to develop," said Mike Sasner, Ph.D., research scientist at The Jackson Laboratory. "It will also make studies in AD models more reproducible and translationally relevant by enabling analysis of expression modules that have previously been shown to be relevant for clinical disease."

The nCounter Mouse AD and Human AD Panels are currently available for purchase from NanoString. Learn more about these products at nanostring.com/adpanels.

AAIC nCounter Mouse AD Studies

Title: A Novel Systems Biology Approach to Evaluate Mouse Models of Late Onset Alzheimer's Disease: nCounter Mouse AD Panel

Lead author: Gregory Carter, Ph.D., The Jackson Laboratory, Bar Harbor, ME, USA

Date/Time: Monday, July 15

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Title: Initial Characterization of Novel Mouse Models of Late Onset Alzheimer's Disease Based on Human Genetic Associations

Lead author: Gareth Howell, Ph.D., The Jackson Laboratory, Bar Harbor, ME, USA

Date/Time: Monday, July 15

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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 2,600 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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