Nature Biotechnology Publishes First Paper Describing NanoString's Technology

NanoString, CalTech, ISB and the University of Washington Collaborate to Demonstrate Highly Sensitive, Direct, Multiplexed Gene Expression Analysis

SEATTLE, Wash.—February 19, 2008 (BUSINESS WIRE)—NanoString Technologies today announced the first peer-reviewed publication describing NanoString's technology will be published in the Nature Biotechnology March 7th issue and is available in the Advanced Online Publication section today http://www.nature.com/nbt/journal/vaop/ncurrent/abs/nbt1385.html.

The paper entitled *Direct Multiplexed Measurement of Gene Expression with Color-Coded Probe Pairs* describes the performance of the nCounter Analysis System, which captures and counts individual mRNA transcripts by a novel molecular bar-coding technology. The new platform was compared to microarrays, TaqMan® PCR, and SYBR®Green real-time PCR and results demonstrated that the nCounter system is more sensitive than microarrays and is similar in sensitivity to real-time PCR. The paper describes experiments using nCounter CodeSets to profile the expression of 509 human genes in a single multiplexed assay, analysis of a gene set that overlaps with the MAQC gene expression study and quantitation of transcript levels for 21 sea urchin genes across 7 embryo samples. Results demonstrated a remarkable correlation in the pattern of gene expression between NanoString technology and real-time PCR at all transcript levels. The paper was a result of a collaboration between scientists at NanoString Technologies, Dr. Roger Bumgarner at the University of Washington, Dr. Eric Davidson at the California Institute of Technology, and Dr. Leroy Hood at the Institute of Systems Biology.

The nCounter Analysis System uses a novel digital technology that enables direct multiplexed measurement of gene expression and offers high levels of sensitivity and precision, including detection of fractional fold change differences, a feature unique to this platform. The technology uses molecular barcodes and single molecule imaging to detect and count hundreds of unique transcripts in a single reaction. The system is comprised of a fully automated sample prep station, a digital analyzer, the CodeSet (molecular barcodes) and all other reagents needed to perform the analysis and is ideally suited for researchers seeking to validate gene expression signatures, working with small amounts of starting material or studying defined gene sets.

"The nCounter technology is a unique and direct way to measure gene expression. In this paper we show that the technology analyzes hundreds of genes in a single reaction, produces measurements that are comparable to, or better than, microarrays and are comparable to qPCR", said Dr. Roger Bumgarner, Associate Professor and Director, Center for Array Technologies at the University of Washington. "However, the key aspect of this technology is that the method is scalable to large numbers of samples at relatively modest cost. As such, it has the potential to revolutionize the application of gene expression measurements to patient diagnoses."

Dr. Leroy Hood, President of the Institute for Systems Biology explained, "The digital analysis of RNA will become one of the most important techniques in modern biology. The NanoString approach represents one of the first digital RNA counting technologies—and it opens up the possibility of transforming how we think about transcriptomes—especially for transcripts expressed at low levels."

”We are looking forward to the increase in efficiency and accuracy that results from the use of the NanoString technology for system level analysis of gene expression in our research into gene regulatory networks”, added Dr Eric Davidson, Professor of Cell Biology at California Institute of Technology

The nCounter Analysis System is now available commercially. For more information please visit NanoString Technologies at www.nanostring.com.

About NanoString Technologies, Inc.

NanoString Technologies is a life sciences tool company that has developed a novel technology for creating molecular barcodes for tagging individual molecules in a biological sample. NanoString is headquartered in Seattle, Washington. For more information, please visit us at www.nanostring.com.

About University of Washington

Founded in 1861, the University of Washington is one of the oldest state-supported institutions of higher education on the West Coast and is one of the preeminent research universities in the world. The UW educates a diverse student body to become responsible global citizens and future leaders through a challenging learning environment informed by cutting-edge scholarship. We discover timely solutions to the world’s most complex problems and enrich people’s lives throughout our community, the state of Washington, the nation and the world. For more information, please visit www.washington.edu.

About the Institute for Systems Biology

The Institute for Systems Biology (ISB) is an internationally renowned, non-profit research institute headquartered in Seattle and dedicated to the study and application of systems biology. Founded by Leroy Hood, Alan Aderem and Ruedi Aebersold, ISB seeks to unravel the mysteries of human biology and identify strategies for predicting and preventing diseases such as cancer, diabetes and AIDS. ISB´s systems approach integrates biology, computation and technological development, enabling scientists to analyze all elements in a biological system rather than one gene or protein at a time. Founded in 2000, the Institute has grown to 13 faculty and more than 220 staff members; an annual budget of more than $35 million; and an extensive network of academic and industrial partners. For more information about ISB, visit www.systemsbiology.org.

About California Institute for Technology

The mission of the California Institute of Technology is to expand human knowledge and benefit society through research integrated with education. We investigate the most challenging, fundamental problems in science and technology in a singularly collegial, interdisciplinary atmosphere, while educating outstanding students to become creative members of society. Caltech faculty and alumni have received wide recognition for their achievements in science and engineering. www.caltech.edu

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