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BIONANOMATRIX AWARDED NEW NIH GRANT FOR DEVELOPMENT OF NANOSCALE PLATFORM FOR SINGLE-MOLECULE DNA MAPPING AND HAPLOTYPE APPLICATIONS

–Goal Is Development of a Fully Integrated Nanochannel Chip and Reader for Single-Molecule Mapping, Enabling Direct Visualization and Analysis of Long Strands of DNA in Context and at Very High Resolution--

Philadelphia, PA, August 6, 2008 –BioNanomatrix, Inc., a developer of breakthrough nanoscale whole genome imaging platforms for genetic diagnostics, personalized medicine and biomedical research, today announced receipt of a grant from the National Human Genome Research Institute of the U.S. National Institutes of Health (NIH). Under the direction of BioNanomatrix principal investigator Dr. Ming Xiao, the two-year \$399,020 project will develop a nanoscale platform for single-molecule haplotyping imaging and analysis of long strands of DNA at ultra-high resolution in a massively parallel format.

“We are pleased that the NIH has again recognized the potential of our revolutionary nanoscale single-molecule imaging and analysis technology by awarding us this new grant, which is explicitly intended to support the development of a platform to produce consistent linearization and imaging of individual DNA molecules, allowing for high resolution mapping of labeled genomic sites,” said Han Cao, Ph.D., chief scientific officer of BioNanomatrix. “This added support will help us accelerate the development of the platform, which we believe could add significantly to the understanding of genetic diseases by increasing access to whole genome analysis and by allowing researchers to view and analyze the critical haplotype information that is currently difficult to obtain.”

The goal of the project is to develop a fully integrated nanochannel chip and reader capable of single-molecule mapping of linearized genomic material extracted directly from a sample, enabling direct visualization and analysis of long strands of DNA in context and at very high resolution. The platform is designed to accommodate massively parallel analyses of individual DNA molecules to permit standardized, high-throughput mapping of sequence motifs or polymorphic sites along the DNA. Such capabilities could transform biological analyses, permitting highly sensitive detection of genetic information for genome-wide association studies, especially where crucial haplotype information is required. These capabilities would result in a greater understanding of genetic variation and genetic diseases and also enable applications such as rapid mapping of pathogen genomes.

BioNanomatrix has previously been awarded grants to accelerate the development of its single-molecule whole genome imaging platform, to use its nanoscale platform to identify and quantify damage caused to DNA by ionizing radiation and to develop chip-based nanofluidics systems for cell fractionation for applications in cancer diagnostics and research. The company is also the co-recipient of a five-year grant from the U.S. National Institute of Standards and Technology Advanced Technology Program to co-develop a platform enabling sequencing of the human genome at a cost of \$100.

About BioNanomatrix

BioNanomatrix is developing breakthrough nanoscale whole genome imaging and analytic platforms for applications in genetic diagnostics, personalized medicine and biomedical research applications. The company is applying its expertise in nanochips, nanodevices and nanosystems to develop its patented platform technology to provide fast, comprehensive, and low-cost analysis of genomic, epigenomic and proteomic information with sensitivity at the single-molecule level. Its current development efforts include a federally funded project to sequence the human genome at a cost of \$100. BioNanomatrix's technologies are licensed exclusively from Princeton University. Founded in 2003, the company is headquartered in Philadelphia, Pennsylvania. For more information, visit: www.BioNanomatrix.com.

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