



BIONANO GENOMICS SEES CONTINUED ADOPTION OF THEIR IRYS® SYSTEM IN ASIA-PACIFIC

Beijing-based Biomarker Technologies Acquires Irys System

SAN DIEGO and BEIJING, China—July 22, 2015—[BioNano Genomics](#) announced today the purchase of an **Irys® System** by Biomarker Technologies Corporation located in Beijing, China. Biomarker selected BioNano's platform to enable comprehensive exploration of genomics structural variation (SV) and to enhance *de novo* genome assemblies for various plant and animal species, including those where no reference exists as of today. The Irys system, relying on its High-throughput IrysChip®, is an ideal SV discovery tool as it can detect various types of SVs in a single run, as well as enabling rapid and accurate *de novo* genome assembly.

Mr. Hongkun Zheng, Chief Executive Officer of Biomarker, said “We plan to collaborate with BioNano to further explore the fields of life science, clinical research and applications service, and are impressed by the unique capabilities of the Irys technology to efficiently discover complex structural variations and drastically improve the quality of diploid genome assemblies, as featured by their *Nature Genetics* and *Nature Methods* papers that were published¹ in the last few weeks. One of our goal as a company is to deeply investigate the biology behind genomics- this is why we have been looking of a path to discover complex large SVs that are not easily detected today by traditional methods such as DNA Arrays, NGS, and other platforms. With the introduction of the Irys system we expect now to be able to deliver on the ability to see through the complexity of the genomes at population scale like never before!”

Han Cao, Ph.D., founder and chief scientific officer of BioNano Genomics, said, “The Irys System, enables researchers to rapidly identify accurate structural information over long-range distances with minimal alteration during sample preparation to the native genomic samples there is no PCR, cloning or library making to reduce potential bias. As a versatile and sensitive single molecule imaging platform, Irys enables the *de novo* assembly of genomes containing complex, highly variable regions, as well as the discovery of structural variation, both balanced and imbalanced, within complex heterogeneous samples.”

Genome maps assembled with the Irys System could reveal the biological and clinical information contained in our genome. This is achieved by exploring the relevance of order and orientation of functional components of complex genomes, including genes, exon/intron structure, regulatory elements, providing positioning information such as length and location of high repeats. The analysis can for example also reveal viral integration sites across the entire genome that are often implicated in the cause of complex diseases such as cancer.

1-References: Nature publications cited above

<http://www.nature.com/nmeth/journal/vaop/ncurrent/full/nmeth.3454.html>

<http://www.nature.com/ng/journal/vaop/ncurrent/full/ng.3340.html>

About Biomarker

Biomarker is a global leader in high-throughput gene sequencing and gene data mining company since its establishment in 2009. With the enterprise mission of “Implementing biotechnology innovations to



better serve the society and benefit the people", Biomarker Technologies continues to expand in areas such as scientific research, biocloud computing and medical testing services, relying on innovation with increasing investment in hardware and software, to provide our customers with high quality and high throughput sequencing and bioinformatics services. Biomarker provides global services using advanced high-throughput sequencing and high performance computing platform, with a research and development team of advanced graduate degrees, focusing on innovation with a number of self-developed proprietary new technology invention patents and software copyrights. With the recent completion of a series B financing round of more than 100 million RMB financing, the company continues to increase investments in scientific research and service platforms with the introduction of the Irys system, to deliver fully as a full genomic service solution provider.

About BioNano Genomics

Headquartered in San Diego, BioNano Genomics is delivering an altogether better way of gaining a fully informed understanding of genomes. The Company's platform provides researchers and clinicians the most comprehensive, organized and actionable structure of a genome with unprecedented insights into how the individual components of genomes are ordered, arranged, and interact with each other. BioNano Genomics works with institutions in life science, translational research, molecular diagnostics and personalized medicine. The Company is supported by private investors and grant funding from genomics programs at federal agencies, including the NIH and NIST-ATP.

www.BioNanoGenomics.com

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BioNano Media Contact

The Ruth Group
Melanie Sollid-Penton
msollid@theruthgroup.com
646.536.7023