

BioNano Genomics to Present Results Supporting Next-Generation Mapping in Human Genome Research at ASHG 2016 Annual Meeting

SAN DIEGO, CA – October 10, 2016 – BioNano Genomics, Inc., the leader in physical genome mapping, today announced that it will present four posters, host a workshop and highlight industry research through oral presentations all supporting the utility of next-generation mapping (NGM) with its Irys® System in human genome research at the upcoming [2016 American Society of Human Genetics \(ASHG\) Annual Meeting](#), being held October 18– 22 in Vancouver, Canada.

The BioNano workshop will be led by prominent genomics researchers, Dr. Eric Vilain from UCLA and Dr. Vanessa Hayes from the Garvan Institute, and others. NGM’s role in human disease research, including undiagnosed infant diseases, Duchene Muscular Dystrophy (DMD) and cancer will be presented.

Erik Holmlin, Ph.D., CEO of BioNano Genomics, commented, “We have seen growing momentum among our customers and the genomic research community using the Irys® System to gain significant insights into human genetics beyond what NGS can provide. Results to be presented at ASHG further demonstrate the utility of NGM as an essential tool to identify large structural variations and they contribute to the validation of NGM in clinically-relevant human genome research.”

BioNano will be onsite at **Booth #724** to further discuss its NGM technology and findings presented during the various sessions.

Poster Presentations:

- **Poster #2890W: Using Irys Next-Generation Mapping to Identify Medically-Relevant Genomic Variation**

Presenting Author: Andy W.C. Pang, Ph.D.
Poster Session: Cancer Genetics
Date, Time: Wednesday, Oct. 19 at 3:00 – 4:00 p.m. PT
Location: Exhibit Hall B, West Building

- **Poster #2885T: NanoChannel Array Based Genome Mapping Reveals “Dark Matter” in the Genome: Enabling Comprehensive Genome Wide Large Structural Variation Analysis in Population Studies**

Presenting Author: Han Cao, Ph.D.
Poster Session: Cancer Genetics
Date, Time: Thursday, Oct. 20 at 2:00 – 3:00 p.m. PT
Location: Exhibit Hall B, West Building

- **Poster #3156F: Next-Generation Mapping, a Highly Sensitive and Accurate Method for Interrogation of Clinically Relevant Structural Variation**

Presenting Author: Alex R. Hastie, Ph.D.
Poster Session: Omics Technologies

Date, Time: Friday, Oct. 21 at 3:00 – 4:00 p.m. PT
Location: Exhibit Hall B, West Building

- **Poster #1878F: *In Silico* and Biological Validation of BioNano Mapping Based Insertion, Deletion and Translocation Detection**

Presenting Author: Jian Wang, Ph. D
Poster Session: Bioinformatics and Computational Approaches
Date, Time: Friday, Oct. 21 at 3:00 – 4:00 p.m. PT
Location: Exhibit Hall B, West Building

Workshop:

- **Next-Generation Mapping Reveals Large Structural Variations: So What?**

Date, Time: Thursday, Oct. 20 at 1:00 – 2:30 p.m. PT
Location: Room 1, East Building

Agenda:

- **Eric Vilain, M.D., Ph.D.** of the David Geffen School of Medicine at UCLA, USA
“Use of BioNano’s NGM technology to further understand undiagnosed diseases”
- **Vanessa Hayes, Ph.D.**, Head of the Human Comparative and Prostate Cancer Genomics, Garvan Institute, Australia
“Applications of BioNano optical mapping to cancer patients – NGS is not enough”
- **Alex Hastie, Ph.D.**, Associate Director, Applications, BioNano
“Genome wide detection of large structural variation – latest advances from BioNano”

Relevant Industry Oral and Poster Presentations:

- **Oral Presentation #152: Structural Variation Landscape Across 26 Human Populations Reveals Population Specific Variation Patterns in Complex Genomic Regions**

Presenting Author: Pui Kwok, M.D., Ph.D. the Henry Bachrach Distinguished Professor at the University of California, San Francisco
Poster Session: Workshops/Platforms
Date, Time: Thursday, Oct. 20 at 11:45 a.m. – 12:00 p.m. PT
Location: Room 119, West Building

- **Oral Presentation #314: A Hybrid Approach For *De Novo* Human Genome Sequence Assembly, Phasing, and Detection of Complex Structural Variation**

Presenting Author: Pui Kwok, M.D., Ph.D. the Henry Bachrach Distinguished Professor at the University of California, San Francisco
Poster Session: Workshops/Platforms
Date, Time: Saturday, Oct. 22 at 10:30 – 10:45 a.m. PT

Location: Room 211, West Building

- **Poster Presentation #3146: Identification of Large Pathogenic Structural Variants Using Next-Generation Genome Mapping Technology**

Presenting Author: Eric Vilain, M.D., Ph.D.

Poster Session: Omics Technologies

Date, Time: Thursday, Oct. 20 at 3:00 – 4:00 p.m. PT

Location: Exhibit Hall B, West Building

- **Poster Presentation #2886: Detecting a Novel Subset of Large Genomic Rearrangements in Primary Prostate Cancer Using Next-Generation Mapping**

Presenting Author: Vanessa Hayes, Ph.D.

Poster Session: Cancer Genetics

Date, Time: Friday, Oct. 21 at 3:00 – 4:00 p.m. PT

Location: Exhibit Hall B, West Building

About The Irys® System

The Irys® System provides a comprehensive view of the whole genome via single molecule imaging, facilitating high resolution *de novo* mapping without the guidance of a reference genome and generates valuable insights about the biology of the genome based on information about the order, orientation, arrangement, and interaction of genomic components. The Irys System uses IrysPrep Reagents to extract and label long DNA molecules and the IrysView and IrysSolve software to provide powerful *de novo* assemblies and analysis of the genome.

About BioNano Genomics

BioNano Genomics, Inc., the leader in next-generation mapping (NGM), provides customers with genome analysis tools that advance human, plant and animal genomics and accelerate the development of clinical diagnostics. The Company's Irys® System uses NanoChannel arrays integrated within the IrysChip® to image DNA at the single-molecule level with average single-molecule lengths of about 350,000 base pairs, which leads the genomics industry. The long-range genomic information obtained with the Irys System helps decipher complex DNA involving repeats, which are the primary cause of inaccurate and incomplete genome assembly.

On its own, next-generation mapping with the Irys System enables detection of structural variants, many of which have been shown to be associated with human disease as well as complex traits in plants and animals. As a companion to next-generation sequencing (NGS), next-generation mapping with the Irys System integrates with sequence assemblies to create contiguous hybrid scaffolds that reveal the highly informative native structure of the chromosome.

Only BioNano Genomics provides long-range genomic information with the cost-efficiency and throughput to keep up with advances in next-generation sequencing.

The Irys System has been adopted by a growing number of leading institutions around the world, including: National Cancer Institute (NCI), National Institutes of Health (NIH), Wellcome Trust Sanger Institute, BGI, Garvan Institute, Salk Institute, Mount Sinai and Washington University. Investors in the

Company include Domain Associates, Legend Capital, Novartis Venture Fund and Monashee Investment Management.

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

Notes: BioNano Genomics is a trademark of BioNano Genomics, Inc. Any other names of actual companies, organizations, entities, products or services may be the trademarks of their respective owners.

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