



***The Scientist* Names BioNano Genomics' IrysChip V2 One of the Top 10 Innovations of 2014**

SAN DIEGO—December 1, 2014—[BioNano Genomics](#), the leader in genome mapping, announced today that *The Scientist* named the Company's IrysChip™ V2 one of the Top 10 Innovations of 2014. As 2014 draws to a close, *The Scientist* highlights the laboratory and research products introduced in the past year that are poised to revolutionize the life sciences. The high throughput [IrysChip V2](#) is the consumable component of the Irys System™, which gives researchers a rapid, accurate and comprehensive way of identifying structural variation to more effectively drive genomics discoveries.

"Movement or changes in genomes are common. Large segments of the genome are being moved around, rearranged, and inverted, but these structural variations are not able to be easily and systematically detected by traditional methods," said Erik Holmlin, Ph.D., president and CEO of BioNano. "BioNano's Irys System finds all types of structural variations in a single assay, without requiring any prior knowledge of the variants."

Implicated in a rapidly growing list of clinical indications, **structural variations** are fundamental to understanding, diagnosing and treating many human diseases; they also play significant roles in the understanding of food crops and other areas of ag-bio. Structural variations include insertions, deletions, inversions, translocations and repeats. As a whole, they have been termed the "**inaccessible genome**," because they are often missed by the existing repertoire of genomics tools.

"We are excited that the IrysChip V2 was not only named to *The Scientist's* Top 10 Innovations of 2014 but also recognized in the Top 5 along with other revolutionary genomics technologies," said Dr. Holmlin. "Before the IrysChip V2 for the Irys System, we have not had a way to comprehensively study structural variation. Today, researchers can use the Irys System to discover biologically significant patterns in structural variations, which can be relevant for developing new drugs and diagnostics as well as for creating new agriculture and biofuel products."

The Top 5 winners of this year's competition focus on genomics, including tools to do the actual sequencing, technologies to make it easier to prepare genetic regions for sequencing, a genome mapping system for comprehensive structural variation detection, and a processor that can handle the avalanche of data that results from such analyses.

"Our expert panel of judges had a very difficult job to pick the 10 best life-science products for 2014," said Editor-in-Chief Mary Beth Aberlin. "We are very excited to continue our annual recognition of new innovations."

Visit <http://www.the-scientist.com/?articles.view/articleNo/41486/title/Top-10-Innovations-2014/> where you can find the full Top 10 list, read more about the products that earned top spots, and see bios and comments from our expert judges.

About *The Scientist*:

The Scientist is for life science professionals—a publication dedicated to covering a wide range of topics central to the study of cell and molecular biology, genetics, neuroscience, and other life-science fields. We provide print and online coverage of the latest developments in the life sciences including trends in research, new technology, news, business, and careers. It is read by leading researchers in industry and



academia who value penetrating analyses and broad perspectives on life-science topics both within and beyond their areas of expertise. Written by prominent scientists and professional journalists, articles in *The Scientist* are concise, accurate, accessible, and entertaining.

About Irys

Irys makes it possible to routinely and accurately detect genomic structural variation and to finish genome assemblies. The fully automated Irys benchtop instrument uses the IrysChip to uncoil and confine long DNA molecules in proprietary Nanochannel Arrays™ where they are uniformly linearized in a highly parallel display for high-resolution, single-molecule imaging. Irys does not employ DNA fragmentation or amplification, which are typical with next-generation sequencing. The result is sequence information over extremely long “reads” ranging from hundreds of kilobases to a megabase, where the sample’s valuable structural information is preserved. Irys makes it possible for researchers to directly observe structural variants including replications, deletions, translocations and inversions.

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 picture 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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