

## **Hitachi High-Technologies Corporation and OpGen Announce Early Access Program for Human Chromosome Mapping Analytical Service**

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### ***Companies to Introduce Human Chromosome Explorer<sup>SM</sup> Cloud-Based Informatics and Data Management Platform***

**Tokyo and Gaithersburg, Md.—October 19, 2014—**[Hitachi High-Technologies Corporation](#) and [OpGen, Inc.](#), a leading genetic analysis company, today announced the introduction of an Early Access Program for its upcoming Human Chromosome Explorer<sup>SM</sup>, human chromosome mapping analytical service for clinical research and life science research applications.

The companies entered a development agreement in October 2013 to develop the human chromosome mapping analytical service. The service combines OpGen's market-leading Whole Genome Mapping<sup>TM</sup> technology with a newly developed suite of bioinformatics and data management applications in Hitachi High-Technologies' and Hitachi group's cloud-based environment for comprehensive and efficient, automated analysis of structural variations of entire human genomes.

Collaborations under the early access program are currently underway. Hitachi High-Technologies is accepting additional applications for human structural variation projects under the early access program through the end of the year, and expects to launch the full analytical service including automated detection and analysis of heterozygous chromosomal aberrations in early 2015.

“We are pleased to be collaborating with the Hitachi High-Technologies and OpGen teams to explore the capabilities of their technology to complement massively parallel sequencing approaches to the detection of complex structural variations in humans. We are especially intrigued with the human chromosome mapping technology and its potential to resolve variation in complex genomic regions that are not accessible to short-read sequencing,” said Michael Talkowski, Assistant Professor of Neurology, Psychiatry, and Pathology, and Director, Genomics and Technology Core at Massachusetts General Hospital, Harvard Medical School.

The Human Chromosome Explorer<sup>SM</sup> service enables customers to have high resolution, high fidelity whole genome maps produced for human samples, complete with automated, comprehensive reports of structural variations across the human genome, with secure data access and analysis in the cloud. The complete cloud solution further enables customers to store, analyze, and manage their human genome SV datasets and projects and to share data through collaboration modules, genome annotation database interfaces, and other informatics tools.

“We are very enthusiastic about our ongoing partnership with Hitachi High-Technologies and the deepening relationship between our two companies,” said Evan Jones, Chairman and CEO of OpGen. “The joint development of the new human chromosome mapping and structural variation analytical platform is a great example of a solutions approach to human genome informatics that will ultimately advance translational research and the study of numerous human genetic diseases. We look forward to continued work with our Hitachi High-Technologies colleagues as we add features and deploy this enabling platform service on a global basis.”

The global, yet information-rich view from Whole Genome Mapping<sup>TM</sup> offers critical insight into the order, orientation, length, and location of biologically and clinically significant components of complex genomes, which may include DNA copy number variations, indels, inversions, and translocations—genetic information which is often undetected with next generation sequencing alone. These genetic variations have been associated with cancer, autism, neuropsychiatric disorders, and many cognitive and developmental disorders.

“We believe the Human Chromosome Explorer<sup>SM</sup> will be a highly complementary technology for whole genome analysis with next generation sequencing technologies, for the analysis of long-range genetic events. We are excited to provide enhanced value for the discovery of complex structural variants in human chromosomes with our developing technology with OpGen,” said Yoshito Nejime, Deputy General Manager, New Business Development Division of Hitachi

High-Technologies Corporation.

Hitachi High-Technologies and OpGen plan to introduce more details about the service in the booth 839 at the [American Society of Human Genetics Annual Meeting](#), being held October 18-22 in San Diego.

#### **About Hitachi High-Technologies Corporation**

Hitachi High-Technologies Corporation (TOKYO:8036), headquartered in Tokyo, Japan, is engaged in activities in a broad range of fields, including Electronic Device Systems, Fine Technology Systems, Science & Medical Systems, Industrial & IT Systems, and Advanced Industrial Products. The company's consolidated sales for FY 2013 were more than \$6.2 billion. For further information, visit <http://www.hitachi-hitec.com/global/>.

#### **About OpGen, Inc.**

OpGen is a commercial-stage company using rapid molecular testing and bioinformatics to combat multi-drug resistant infections. Our products and services enable healthcare providers to rapidly identify hospital patients who are colonized with life threatening, multi-drug resistant organisms (MDROs). The Acuitas™ MDRO Gene Test provides a comprehensive profile of MDRO resistance genes from patients screened for colonization or infection. Our products are enabled by our Lighthouse™ MDRO Management Solution which provides detailed molecular information about an individual patient's resistance profile and integrates this information with data from other patients and hospital wide aggregate results to help improve overall patient outcomes and to reduce hospital costs.

We have developed and commercialized the Argus® Whole Genome Mapping™ System, MapIt™ Services, and MapSolver™ bioinformatics products and services for mapping and analysis of microbial, plant, animal, and human genomes. Through our strategic partnership with Hitachi High-Technologies we are commercializing Human Chromosome ExplorerSM, a complete solution for mapping, assembly, and analysis of human genomes with high performance bioinformatics. For more information, please visit [www.opgen.com](http://www.opgen.com).

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