

OpGen Announces Partnership with University of California, Davis, to Develop High Resolution Microbial Genetic Maps in Support of The 100K Genome Project

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Whole Genome Maps to Aid in Outbreak Management and Surveillance of Food Borne Illnesses

Gaithersburg, Md.—December 19, 2012—OpGen, Inc. today announced the company has entered into a scientific and technical partnership with the University of California, Davis, (UC Davis) in cooperation with the FDA supported 100K Genome Project to create high resolution microbial genetic maps.

The 100K Genome Project is a collaboration that was initiated by the U.S. Food and Drug Administration (FDA), UC Davis, and Agilent Technologies to sequence the genetic code of at least 100,000 infectious organisms and accelerate the diagnosis of foodborne illnesses. UC Davis will integrate OpGen's Argus® Whole Genome Mapping System into its current DNA sequencing workflow for sequence assembly and validation of the genomes.

Through the integration of OpGen's Whole Genome Mapping technology, The 100K Genome Project will create a new gold standard for high-quality microbial reference genomes. These data will be used in the surveillance and management of international foodborne microbial outbreaks, and to establish a high-fidelity global reference database for microbial genomes. The 100K Genome Project will publish the genomes that are completed and validated using OpGen's Whole Genome Maps to a database, providing access to the genomic maps for public health agencies throughout the world. The FDA is advocating rigorous quality control standards for this reference database whereby genomic information should be validated by two independent methods.

"OpGen's technology allows us to complete sequencing and provide quality control of genomes drafted by data produced using short read next-generation sequencing methods," said Bart C. Weimer, Ph.D., Professor, Department of Population and Reproduction, School of Veterinary Medicine, University of California, Davis, and Director of The 100K Pathogen

Genome Project. “Whole Genome Mapping provides an independent method to detect sequence variations and misassemblies, and aids us in closing the gaps. Final Whole Genome Maps will assist health agencies in outbreak management of food borne diseases which cause tremendous risk to public health.”

“We are pleased to be a partner in this collaboration with UC Davis and the FDA in helping to set a high-quality, validated standard for this important reference database of microbes, which pose the greatest threats to food safety and public health,” said Douglas White, Chief Executive Officer of OpGen. “OpGen is committed to advancing public health and providing actionable information to the healthcare community.”

The Centers for Disease Control and Prevention (CDC) estimates that each year roughly one in six Americans (or 48 million people) become sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases.¹ There are 31 known foodborne pathogens, including *Salmonella*, *Listeria*, and *E. coli*, among others.¹ Many of these pathogens are tracked by public health systems that track diseases and outbreaks.¹ Rapid identification and detection of these pathogens can lead to more effective control and management of microbial disease outbreaks.

About Argus® Whole Genome Mapping System

OpGen’s Argus® Whole Genome Mapping System is the only commercially available technology that can provide a high-resolution, complete visual map of a whole genome and individual chromosomes. The company’s unique single molecule analysis technology provides a whole genome view that complements genome assembly and enables scientists to identify highly repetitive regions, tandem repeats and translocations that are very difficult to identify and clarify with sequencing alone. Sequencing projects can now be finished and validated with less investment in time, cost and computational effort.

About OpGen, Inc.

OpGen, Inc. is a leading innovator in providing rapid, accurate genomic and DNA analysis systems and services. The company’s Argus® Whole Genome Mapping System, GenomeBuilder™ and MapIt® Services provide high-resolution, whole genome maps for sequence assembly and finishing, strain typing and comparative genomics in the life sciences market. OpGen’s powerful technology dramatically improves the quality of data and time-to- results by providing sequence information from single DNA molecules more rapidly and less expensively than was previously possible. The company is dedicated to positively influencing individual healthcare outcomes, advancing scientific research and enhancing public health by delivering precise, actionable information and results to customers in the life science and healthcare communities. OpGen’s customers include leading genomic research centers, biodefense organizations, academic institutions, clinical research organizations and biotechnology companies. For more information, visit www.opgen.com.

About The 100K Genome Project

Established in March 2012 by UC Davis, Agilent Technologies and the U.S. Food and Drug Administration, The 100K Genome Project is a landmark consortium that addresses the persistent food safety concerns by engaging world-wide partners to create a publicly available genetic database of the most common foodborne disease-causing microbes. By sequencing 100,000 pathogen genomes, the project will bring a new paradigm to public health to empower precise and robust molecular testing in the food chain – from the farm to the kitchen table. For more information, visit <http://100kgenome.vetmed.ucdavis.edu>.

About UC Davis

For more than 100 years, UC Davis has engaged in teaching, research and public service that matter to California and transform the world. Located close to the state capital, UC Davis has more than 33,000 students, more than 2,500 faculty and more than 21,000 staff, an annual research budget of nearly \$750 million, a comprehensive health system and 13 specialized research centers. The university offers interdisciplinary graduate study and more than 100 undergraduate majors in four colleges — Agricultural and Environmental Sciences, Biological Sciences, Engineering, and Letters and

Science. It also houses six professional schools — Education, Law, Management, Medicine, Veterinary Medicine and the Betty Irene Moore School of Nursing.

References

¹Centers for Disease Control and Prevention, <http://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html>