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**UM School of Medicine's Institute for Genome Sciences Awarded  
\$15.2M NIAID Grant on Infectious Disease Research**

Baltimore, Md. — June 30, 2014. The Institute for Genome Sciences (IGS) at the University of Maryland School of Medicine (UMSOM) has received a grant award of \$15.2 million over five years from the National Institute of Allergy and Infectious Diseases (NIAID) to create a research center to apply genomic techniques to the study of pathogens and their hosts, and to expand understanding of the ways that pathogens can cause harm.

The IGS Genome Center for Infectious Diseases (GCID) will use large-scale genomics and bioinformatics approaches to investigate pathogen biology, virulence, drug resistance, immune invasion, host-microbiome interactions, and pathogen resistance. Specialized tracks will focus on host/pathogen interrelationships for bacteria, fungi, and parasites. An interdisciplinary team will be leading the GCID research, including internationally recognized faculty from the Institute for Genome Sciences, the Department of Microbiology and Immunology and the Center for Vaccine Development at UMSOM. The uniquely qualified team includes investigators with extensive contacts within national and international infectious disease communities, whose previous research collaborations have involved a wide range of human pathogens.

“This team has been in the forefront of applying genomic techniques to advance scientific understanding of infectious disease agents, and the NIAID grant will catalyze further development of genomics approaches within global infectious disease communities,” said Claire Fraser, PhD, Director of the Institute for Genome Sciences, and professor of Medicine and Microbiology and Immunology at the UMSOM.

“Integrating genomics with diagnostic and clinical medicine has advanced our biological understanding of diseases and health,” says E. Albert Reece, MD, PhD, MBA, vice president for

medical affairs at the University of Maryland, and John Z. and Akiko K. Bowers distinguished professor and dean of the University of Maryland School of Medicine. “The NIAID grant will foster new collaborations across disciplines within the clinical and research centers in the School of Medicine, as well as within international infectious disease communities.”

The grant, “Host, Pathogen, and the Microbiome: Determinants of Infectious Disease Outcome” will be led by Claire Fraser, PhD, as Principal Investigator and Administrative Core Director, and Drs. David Rasko and Owen White, will be team Principal Investigators.

The funding will support a technology core, a data management core, an immunology core, and an administrative core, as well as research programs that focus on three areas: host/ bacterial pathogens and the microbiome, led by David Rasko, PhD; the genomic analysis of fungal pathogenesis, led by Vincent Bruno, PhD; and integrated genomics research in parasitic tropical diseases led by Joana C. Silva, PhD and Julie C. Dunning Hotopp, PhD. The projects will include whole genome and targeted genome sequencing, transcriptome profiling by RNA-seq, rRNA community profiling, and metagenomics and metatranscriptomic sequencing. The sequencing will be performed using three platforms, including the Illumina MiSeq and HiSeq, and the Pacific Biosciences RSH system.

In addition to vital research projects, IGS will establish workshops and continue educational initiatives to expand the understanding of how to apply genomics to high priority research questions that impact global health.

IGS has previously received grants as a Genome Sequencing Center for Infectious Diseases (GSCID), an NIAID-funded five year contract, and the lead investigators have also had Principal Investigator roles with the NIAID-funded Microbial Sequencing Center (MSC), a five year contract. This U19 grant will run for five years until 2019.

### **About the University of Maryland School of Medicine**

Established in 1807, the University of Maryland School of Medicine is the first public medical school in the United States, the first to institute a residency-training program. The School of Medicine was the founding school of the University of Maryland and today is an integral part of the 11-campus University System of Maryland. On the University of Maryland's Baltimore campus, the School of Medicine serves as the anchor for a large academic health center which aims to provide the best medical education, conduct the most innovative biomedical research and provide the best patient care and community service to Maryland and beyond. [www.medschool.umaryland.edu](http://www.medschool.umaryland.edu)

### **About the Institute for Genome Sciences**

The Institute for Genome Sciences (IGS) is an international research center within the University of Maryland School of Medicine. Comprised of an interdisciplinary, multidepartment team of investigators, the Institute uses the powerful tools of genomics and bioinformatics to understand genome function in health and disease, to study molecular and cellular networks in a variety of model systems, and to generate data and bioinformatics resources of value to the international scientific community. [www.igs.umaryland.edu](http://www.igs.umaryland.edu)

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