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**Institute for Genome Sciences Awarded FDA Contract to
Expand Genome Sequence Database for Pathogen Identification**

Baltimore, Md. — April 1, 2014. Researchers at the Institute for Genome Sciences at the University of Maryland School of Medicine have been awarded a research program contract from the U.S. Food and Drug Administration (FDA) to sequence, assemble, and annotate a population of bacterial pathogens using two high-throughput sequencing (HTS) technologies in support of the expansion of a vetted public reference database.

The continued development of HTS technologies for accurate identification of microorganisms for diagnostic use will have significant impact on human healthcare, biothreat response, food safety, and other areas. Developing a comprehensive, curated database of microbial genome sequences and associated metadata will serve as a valuable reference to evaluate and assess HTS-based diagnostic devices. Leading the sequencing and analysis phases of the project, the Genomics Resource Center (GRC) at the Institute is a cutting-edge genomic sequencing and analysis center with a long history of high-quality microbial genomics research that has sequenced and analyzed more than 5,000 microbial genome sequences in just the past five years.

The genome sequencing will use two HTS platforms, Illumina and Pacific Biosciences, and multiple genome assembler software packages and assembly QA/QC pipelines to assemble and validate the resulting draft genome sequences. By using two complementary sequencing platforms, GRC researchers will be able to cross-validate consensus sequences to generate the highest possible genome sequence accuracy. The comprehensive, curated database to which these annotated genome sequences will be added will enable high confidence confirmation of *in vitro* microbial pathogen identification. This database will be accessible through the collection of the National Center for Biotechnology Information (NCBI)'s public domain databases. The combination of genomic data and metadata will help to advance the goal of developing HTS-based *in vitro* diagnostics and the assessment of their potential.

The GRC was formed to serve the global genomics and bioinformatics communities, and its reputation is built on both its deep history in sequencing, genomics and analysis, and its end-to-end service level from initial project consultation through publication. The GRC is led by Luke Tallon, scientific director and founding leader of the GRC, and Lisa Sadzewicz, administrator director of the facility. “We are excited to contribute our genome sequencing and analysis expertise to this important project with the FDA,” says Tallon.

“This database will be an important reference for the scientific and medical diagnostic communities,” says Claire Fraser, PhD, Director of the Institute for Genome Sciences. “We have worked with federal agencies and global scientific partners to sequence and analyze an extensive population of bacterial pathogens since our Institute launched in 2007 and are pleased to develop this reference database with the FDA.”

“The Institute for Genome Sciences is truly unique to an academic medical university because it houses cutting-edge sequencing technologies overseen by internationally renowned experts in the field who are deeply engaged in the research enterprise,” 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. “This award recognizes the strength of the University of Maryland School of Medicine’s genomics program, which will make significant contributions to better identifying and, ultimately, treating infectious diseases.”

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

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

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