



UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE SCIENTIST RECEIVES PRESTIGIOUS MICROBIOME AWARD

Owen White Uses Big Data to Better Understand Human Bacterial Communities

Baltimore, Md., September 27, 2018 – Owen White, PhD, professor of epidemiology and public health, and Associate Director for Informatics at the Institute for Genome Sciences (IGS) at the University of Maryland School of Medicine (UMSOM), has received the 2018 Microbiome Pioneer Award. The prestigious honor is part of the Bioinformatics for the Microbiome Symposium organized by Stanford University. The microbiome is the name given collectively to the community of trillions of microbial organisms that live on and within our bodies.

The event is a gathering for global leaders in medical informatics. ***“We bring together innovative researchers who catalog the human microbiome using modern genetic tools, and who are applying new computational technologies to solve complicated problems, particularly involving patients and disease,”*** said Ami Bhatt, MD, an assistant professor in the Departments of Medicine and Genetics, Divisions of Hematology and Blood and Marrow Transplantation at Stanford University, and one of the conference founders. ***“We selected Dr. White for our award this year because he has been a pioneer in informatics as the principal investigator for two NIH-funded data centers, which then developed tools for communities to use to evaluate the biological properties of the microbiome and host.”***

Dr. White, an internationally recognized expert in bioinformatics, is a pioneer in this field, leading a team of experts at IGS. ***“Our research illuminates how the microorganisms that make up the human microbiome interact with our species, and with each other,”*** says Dr. White. ***“These organisms play a crucial role in many key aspects of our health. So far we have barely scratched the surface of what we will learn.”*** Dr. White’s team is responsible for the developing database systems and tools for analyzing genomes and other genomic information. He has led efforts to publicize and share numerous tools for genome analysis and visualization, so that scientists around the world can use them.

Last year, he and several colleagues published a study that uncovered millions of previously unknown genes from microbial communities in the human gut, skin, mouth, and vaginal microbiome, allowing for new insights into the role these microbes play in human health and disease. The work tripled the amount of data previously analyzed in this project, and was the largest human microbiome study ever. The results were a significant jump in the amount of information available to scientists.

“The microbiome is one of the great undiscovered areas in medicine today, with links to many common and problematic chronic diseases,” said UM SOM Dean **E. Albert Reece, MD, PhD, MBA**, who is also the executive vice president for Medical Affairs, University of Maryland, and



the John Z. and Akiko K. Bowers Distinguished Professor. ***“Dr. White’s work in this area has been pathbreaking, using “big data” to unravel patterns that will lead to clinically relevant discoveries in the years to come.”***

About the University of Maryland School of Medicine

Commemorating its 211th Anniversary, the University of Maryland School of Medicine was chartered in 1807 as the first public medical school in the United States. It continues today as one of the fastest growing, top-tier biomedical research enterprises in the world -- with 43 academic departments, centers, institutes, and programs; and a faculty of more than 3,000 physicians, scientists, and allied health professionals, including members of the National Academy of Medicine and the National Academy of Sciences, and a distinguished recipient of the Albert E. Lasker Award in Medical Research. With an operating budget of more than \$1 billion, the School of Medicine works closely in partnership with the University of Maryland Medical Center and Medical System to provide research-intensive, academic and clinically-based care for more than 1.2 million patients each year. The School has over 2,500 students, residents, and fellows, and nearly \$520 million in extramural funding, with most of its academic departments highly ranked among all medical schools in the nation in research funding. As one of the seven professional schools that make up the University of Maryland Baltimore campus, the School of Medicine has a total workforce of nearly 7,000 individuals. The combined School and Medical System (“University of Maryland Medicine”) has an annual budget of nearly \$6 billion and an economic impact in excess of \$15 billion on the state and local community. The School of Medicine faculty, which ranks as the 8th-highest public medical school in research productivity, is an innovator in translational medicine, with 600 active patents and 24 start-up companies. The School works locally, nationally, and globally, with research and treatment facilities in 36 countries around the world. Visit medschool.umaryland.edu/