Speakers Bios

JACK GILBERT

Professor Jack A Gilbert is a Professor in Pediatrics, Section Head for Biology at Scripps Institution of Oceanography, Director of the Microbiome Core, and Director of the UCSD Microbiome and Metagenomics Center at University of California San Diego. He uses molecular analysis to test fundamental hypotheses in microbial ecology.

Dr. Gilbert cofounded the Earth Microbiome Project, the American Gut Project, and the Microbiota Vault, he also cofounded BiomeSense Inc to develop automated sample processing robots. He has authored more than 400 peer reviewed publications and book chapters, is the founding Editor in Chief of ASM mSystems journal, and incoming President for Applied Microbiology International (previously Society for Applied Microbiology).

JAY LENNON

Dr. Jay T. Lennon is a Professor in the Department of Biology at Indiana University where he serves as the Chair of the Evolution, Ecology, and Behavior (EEB) Section. From test tubes to the globe, his research team studies the ecology and evolution of microbial communities. Lennon's work has helped to better understand the factors that generate and maintain microbial biodiversity. In turn, his research has shed light on the implications of microbial diversity for the stability and functioning of complex systems using a combination of molecular biology, modeling, data mining and synthesis, laboratory experiments, and field work in a wide range of habitats. Lennon is a fellow of American Association for the Advancement of Science, the Ecological Society of American, and American Academy of Microbiology.

JENNIFER MARTINY

Jennifer Martiny is a Professor of Ecology and Evolutionary Biology at the University of California, Irvine. She received her B.S. in Ecology, Behavior, and Evolution at UC San Diego and her Ph.D. at Stanford University. Her research aims to uncover fundamental principles of the generation and maintenance of diversity in microbial communities. To do this, she brings together perspectives from microbiology, ecology, and evolutionary biology. Dr. Martiny is a fellow of the Ecological Society of America, the American Academy of Microbiology, and the American Association for the Advancement for Science.

VICTORIA ORPHAN

Victoria's multidisciplinary research program spans the interface between environmental microbiology, geochemistry, and geology. Through the integrated application of environmental 'omics approaches, stable isotope analysis, and imaging, her group is characterizing the interspecies interactions and ecological physiology of archaea, bacteria, and viruses linked to the cycling of methane, sulfur, nitrogen, and metals in ocean sediments and extreme environments.

MICHELLE O'MALLEY

Michelle A. O'Malley is a Professor in the Department of Chemical Engineering at the University of California, Santa Barbara and the Associate Director of UCSB's Bioengineering Program. She earned a B.S. in Chemical Engineering and Biomedical Engineering from Carnegie Mellon University in 2004 and a PhD in Chemical Engineering from the University of Delaware in 2009, where she worked with Prof. Anne Robinson to engineer overproduction of membrane proteins in yeast. O'Malley was a USDA-NIFA postdoctoral fellow in the Department of Biology at MIT. At UCSB, her research group engineers protein synthesis within anaerobes and consortia for sustainable chemical production, bioremediation, and natural product discovery. O'Malley's research has been featured on NPR's Science Friday, the BBC Newshour, the LA Times, and several other media outlets. She was named one of the 35 Top Innovators Under 35 in the world by MIT Technology Review in 2015, one of the 10 "Scientists to Watch" by Science News in 2019 and is the recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE) – the highest honor bestowed on early career scientists by the US government. She is also the recipient of the Allan P. Colburn Award from the AIChE, the ASM Award for Early Career Applied and Biotechnological Research, the AIChE Division 15 Early Career Award, a DOE Early Career Award, an NSF CAREER award, the Camille Dreyfus Teacher-Scholar Award, the ACS BIOT Division Young Investigator Award, an ACS PMSE Division Young Investigator Award, an ACS WCC "Rising Star" Award, and a Hellman Faculty Fellowship. She was elected to the American Institute of Medical and Biological Engineers in 2020 as is the Chair-Elect of the ACS Division of Biochemical Technology (BIOT).

DAVID BRESLAUER

David leads technology innovation at Bolt, creating and incubating biomaterials for improved consumer products. His obsession with biomaterials began with graduate research on silk during his Bioengineering Ph.D. at UC Berkeley and UCSF.

ADAM GUSS

Adam Guss is a Senior R&D Scientist at Oak Ridge National Laboratory. His research focuses on the development of genetic toolboxes for non-model microorganisms and the application of those tools to engineer microbes to convert waste feedstocks like plastics and renewable feedstocks like lignocellulose into sustainable fuels and chemicals.

JANET WESTPHELING

Dr. Jan Westpheling is a Professor of Genetics in the Franklin College of Arts and Sciences at the University of Georgia. She received her B.S. degree in Microbiology from Purdue University. Jan worked as a Research Technician at Eli Lilly before going back to graduate school to earn her Ph.D. in Genetics from the John Innes Institute. She worked for a year for Biogen in Geneva, conducted postdoctoral research at Harvard University, and served on the faculty at the University of Pennsylvania Medical School before joining the faculty at the University of Georgia where she is today. Jan is a two-time recipient of the Creative Research Medal from the University of Georgia, and she served as a Member of

the National Research Council Committee on the Development and Acquisition of Medical Countermeasures against Biological Warfare Agents in 2005. During our interview, Jan shares more about her life and science.