

Centennial Feature

The Future of Plant Pathology

The field of plant pathology is pushing forward with new and exciting technologies and applications. Will we boldly go where no plant pathologist has gone before? Now is your chance to step into the future of plant pathology during this special Centennial Session being held on Tuesday, July 29. Join us as we peer into the crystal ball and consider the 'omics of plant pathogens, communities of microbes, culture collections, and effective techniques for teaching the next generation of plant pathologists.



David G. Schmale III

The session will be moderated by **David G. Schmale III**, assistant professor, Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University.

Jo Handelsman, Howard Hughes Medical Institute professor in the Departments of Bacteriology and Plant Pathology and chair of the Department of Bacteriology at the University of Wisconsin-Madison, will be presenting “Phalanx or Traitors?—Signaling in Microbial Communities and Host Health.” She received her Ph.D. degree in molecular biology from the University of Wisconsin-Madison in 1984 and



Jo Handelsman

joined the faculty of the University of Wisconsin-Madison in 1985. Her research focuses on the genetic and functional diversity of microorganisms in soil and insect gut communities. She is a National Academies mentor in the life sciences, a fellow in the American Academy of Microbiology, and codirector of the National Academies Summer Institute on Undergraduate Education in Biology. Her presentation will consider how microbial communities determine the well-being of their hosts.



Brett M. Tyler

Brett M. Tyler, professor in the Virginia Bioinformatics Institute and in the Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, will be presenting “Comparative Functional Genomics of Plant Pathogens.” He received his Ph.D. degree in medical biology from the University of Melbourne, Australia, in 1981 and joined the faculty of Virginia Polytechnic Institute and State University in 2002. He is the 2008 recipient of the APS Noel T. Keen Award. His research in plant pathology has focused on understanding the molecular mechanisms by which oomycete pathogens, such as *Phytophthora*, overcome plants’ defense mechanisms. His current research is focused on the use of functional genomics and computational biology to understand *Phytophthora*-soybean interactions. He will be discussing several bioinformatic and computational tools that illustrate the

kind of approaches that will characterize cutting-edge microbe-plant interaction research over the next 20–50 years.

David M. Geiser, associate professor and director of the *Fusarium* Research Center in the Department of Plant Pathology, The Pennsylvania State University, will be presenting “Chanting the Mantra: Culture Collections in the Age of the ‘-ome.” He received his Ph.D. degree in genetics from the University of Georgia in 1994 and joined the faculty of The Pennsylvania State University in 1998. His research focuses on the molecular evolutionary genetics of fungi, mostly in the realm of molecular phylogenetics and systematics at the species level. His talk will describe proactive efforts to characterize culture collection resources, particularly in the genera *Fusarium* and *Phytophthora*. He will link these proactive efforts to the identity and dynamics of the causative agents of diseases.



David M. Geiser

George W. Hudler, professor and chair of the Department of Plant Pathology and Plant-Microbe Biology, Cornell University, will be presenting “Educating the Next Generation of Plant Pathologists.” He received his Ph.D. degree from Colorado State University in 1976 and immediately thereafter joined the faculty at Cornell University. He teaches two courses: Pathology of Trees and Shrubs and Magical Mushrooms, Mischievous Molds. He has received the Innovative Teaching Award and the Professor of Merit Award from Cornell’s College of Agriculture and Life Sciences, the Excellence in Teaching Award from APS, the SUNY Chancellor’s Award



George W. Hudler

for Excellence in Teaching, and the USDA Northeast Region Award for Teaching Excellence. He is also the author of a book of the same title as his popular undergraduate course, *Magical Mushrooms, Mischievous Molds*. His talk will consider approaches for attracting and educating the next generation of plant pathologists; teaching students to embrace a good mystery, to ask good questions, and to design experiments that will yield data leading to reliable answers.

Make sure to mark this unique session on your meeting agenda for the APS Centennial Meeting. ■