



Dr. Doug Cook

Dept. of Plant Pathology, UC Davis

Sep. 21
PETR 113

Title: Taking a walk on the wild side: combining ecology and genomics to deduce the function of legume-microbe interactions in natural and agricultural systems

Diversity and functional attributes of legumes and their microbial associates, including nitrogen fixation, metagenomics of plant-associated microbes, drought tolerance, and domestication. Our work spans a range of spatial scales, from the function of natural systems distributed over thousands of square kilometers, to the sub-cellular scale, where we explore signal transduction systems



Dr. Carolyn Young

Samuel Roberts Noble Foundation

Oct. 26
PETR 113

Title: It's the little things that matter: microbes that impact forage production

Neotyphodium species and the genetic basis of indole-diterpenes paxilline and lolitrem B biosynthesis. Research on fungal endophyte interactions with cool season grasses and with *Phymatotrichopsis omnivora*, a destructive plant pathogen of crops.

Carolyn is Editor-in-Chief of the Phytobiomes Journal.



Dr. Kelly Kraven

Samuel Roberts Noble Foundation

Nov. 30
PETR 113

Title: Harnessing the Microbiome for Agricultural Sustainability in Bioenergy-based Systems

Focus on two basic themes: 1) exploration of microbial bio-diversity in the prairie grasslands and exploitation of microbial symbionts and/or useful genes derived from them for crop enhancement; and 2) basic tropic responses in fungi as they relate to the processes of nutrient acquisition and colonization



Dr. Chris Topp

Dept. of Plant Pathology, UC Davis

Oct. 19
PETR 113

Title: There's a World Going on Underground: Imaging Technologies to Understand Root Growth Dynamics and Rhizosphere Interactions

Crop root system growth dynamics and function in response to environmental stresses. Our lab uses several imaging tools (optical, X-ray CT, PET, etc.) along with quantitative genetics and molecular biology to understand the dynamics of root growth and physiology. We aim to understand the relationships among root traits that can be effectively measured both in controlled laboratory environments and in the field, and to identify genes and gene networks that control root, and ultimately whole plant architectural features useful for crop improvement.