UC Davis Coffee Center Conference Program

Tuesday March 11, 2014 8:30a-4:30p UC Davis Conference Center

8:00-9:00a **Registration**

9:00-9:15a **Opening Remarks**
Bruce German, Ph.D.
Foods for Health Institute, Department of Food Science & Technology UC Davis

9:15-10:00a **"Attracting Students to Science and Engineering with Coffee: A New Freshman Level Design Experience"**
William Ristenpart, Ph.D.
Department of Chemical Engineering & Materials Science, UC Davis
Despite the huge size of the coffee industry, to date there are no academic programs of study that focus on training the next generation of coffee scientists and professionals. Here I describe our first steps at UC Davis toward creating a curriculum focused on coffee.

10:00-10:30a **"What Can Coffee Genetics and Genomics Bring to the *Cup*?"**
Juan Medrano, Ph.D.
Department of Animal Science, UC Davis
Genomics – the study of an organism's entire sequence of genes is a driving force behind innovative agricultural technologies and practices. The challenge is how genome information can be used to enhance the sustainability of coffee production with changing environmental conditions, as well as to define the nature of aromas and tastes.

10:30-10:45a **Coffee Break**

10:45-11:30a **"The Microbiology of Coffee Production"**
David Mills, Ph.D.
Department of Food Science & Technology and Viticulture & Enology, UC Davis
This presentation identifies two areas of interest in the microbiology of coffee production: the study of prebiotics or resistant fibers that enrich beneficial microorganisms in the gastrointestinal tract obtained from coffee waste streams, and the microbial ecology of food fermentations and food production facilities. Dr. Mills is interested in the microbial successions that occur within fermented coffee processing as well as the shifts in the building "microbiome" in coffee production facilities as it relates to production practices.

11:30-12:00p **"From Wine to Coffee: The Role of Sensory Evaluation"**
Hildegarde Heymann, Ph.D.
Department of Viticulture & Enology, UC Davis

12:00-1:00p **Lunch**

1:00-1:40p **"Assessment of Host-Microbial Interactions to Enhance Our Understanding of Nutrition and Health"**
Carolyn Slupsky, Ph.D.
Departments of Nutrition and Food Science & Technology, UC Davis
Coffee is known to be rich in polyphenolic compounds and soluble fiber, which in turn can affect the gut microbiome and ultimately host metabolism. Our research emphasizes the link between food, nutrition, and health through measurement of host and microbial metabolism.

1:40- 2:10p **"Enabling Technologies for Measure of Bioactive Compounds"**
Carlito Lebrilla, Ph.D.
Department of Chemistry, UC Davis
Methods developed for biomarker discovery will be used to observe molecular components of coffee.

2:10-2:25p **Coffee Break**

2:25-3:00p **"Analytics for the discovery of bioactive compounds in agricultural products and by-products"**
Daniela Barile, Ph.D.
Department of Food Science & Technology, UC Davis
The systematic examination of bioactive carbohydrates in all agricultural commodities (such as coffee) can now be routinely accomplished using new analytical methodologies. Interpretation of the high accuracy mass spectrometry data is done in conjunction with enzymatic assays that allow the full characterization of molecular composition and structure, which in turn enables predicting biological activity.

3:00-4:30p **Panel Discussion on Coffee Research and Industry Engagement**

4:30-5:00p **Closing Remarks**
Bruce German, Ph.D.

5:00-6:00p **Robert Mondavi Institute Wine Facility Tour and Tasting**