

Tuesday October 1, 2013

- 9:00 am **Welcome:** Butch Dias, California Dairy Research Foundation, Davis, California
Opening: Bruce German, Foods for Health Institute, Department of Food Science & Technology, University of California, Davis

Milk's Manipulation of the Gut Microbiota

- 9:25 am **KEYNOTE: IMGC 10th Anniversary Plenary Lecture – Dining in With Trillions of Fascinating Friends: Exploring Our Human Gut Microbiota in Health And Disease**
Jeffrey I. Gordon, Center for Genome Sciences and Systems Biology, Washington University School of Medicine, St. Louis, MO
- 10:10 am **Effects of Consuming Milk Oligosaccharides (Extracted from Cheese Whey) on Gut Microbiota and Tolerability in Healthy Humans**
Daniela Barile, Foods for Health Institute, Department of Food Science & Technology, University of California, Davis
- 10:30 am **STUDENT TRAVEL AWARD RECIPIENT: Milk and Milk Containing *Lactobacillus Casei* Differentially Influence the Composition of the Intestinal Microbiota of Mice**
Xiaochen Yin, University of California, Davis
- 10:50 am **Coffee Break**
- 11:20 am **Protein-derived Bioactive Compounds Produced During Ripening of American Cheddar Cheese Modulate Fecal Microbiota from Obese Mice**
Giuliana Noratto, School of Food Science and School of Molecular Biosciences, Washington State University
- 11:40 am **STUDENT TRAVEL AWARD RECIPIENT: Maternal FUT2 Polymorphisms Influence the Gut Microbial Communities of Breastfed Infants**
Zachery Lewis, University of California, Davis
- 11:55 am **STUDENT TRAVEL AWARD RECIPIENT: Milk Promotes Probiotic Efficacy in the Intestine**
Bokyung Lee, University of California, Davis
- 12:10 pm **Lunch**

Mechanisms of Milk Oligosaccharide Utilization by Bacteria

- 1:15 pm **KEYNOTE: Interactions Between Milk Oligosaccharides, Bifidobacteria and the Animal Host**
Dave Mills, Department of Food Science and Technology, Department of Viticulture and Enology and Helen Raybould, UC Davis School of Veterinary Medicine, University of California, Davis
- 2:00 pm **Anything You Can Do I Can Do Better: Divergent Mechanisms to Metabolize Milk Oligosaccharides by Two Bifidobacterial Species**
David Sela, Department of Food Science, University of Massachusetts, Amherst
- 2:20 pm **Various Infant-associated Intestinal Bacteria Hydrolyze Milk Gangliosides In Vitro**
Hyeyoung Lee, Department of Food Science & Technology, University of California, Davis
- 2:40 pm **Coffee Break**

Tenth Year Anniversary: Visions of the Past and the Future

- 3:10 pm **KEYNOTE: International Milk Genomics Consortium: Ten years of Collaboration and Innovation**
Bruce German, Foods for Health Institute, Department of Food Science & Technology, University of California, Davis
- 3:55 pm **Bringing the Science to Practice – Industry Discussion ‘Milk and the Gut’**
Moderator: Peter Williamson, Physiology and Genomics & Veterinary Science, University of Sydney
- 4:30-6:30 pm **Poster Reception**
- 5:00-6:00 pm **Joint Scientific Advisory Council/Steering Committee Meeting**

Wednesday October 2, 2013

- 9:00 am **KEYNOTE: Boy Milk & Girl Milk: Evolutionary Insights**
Katie Hinde, Human Evolutionary Biology, Harvard University, Cambridge, Massachusetts
- 9:45 am **KEYNOTE: Modifying Mammary Gland Function, Then, Now and in the Future**
Russ Hovey, Department of Animal Science, University of California, Davis
- 10:30 am **Coffee Break**

Manipulation of Bovine Milk Fat

- 11:00 am **INVITED LECTURE: Metabolic Regulation of Bovine Milk Fat Globule Size**
Nurit Argov-Argaman, The Department of Animal Sciences, the Robert H Smith faculty of Agriculture, Food and Environment, The Hebrew University, Israel
- 11:20 am **Extremes in Diverse Natural Populations: A Phenotypic Population Screen Discovers a de Novo Mutation for Unsaturated Milk Fat**
Klaus Lehnert, University of Auckland, Auckland, New Zealand
- 11:40 am **STUDENT TRAVEL AWARD RECIPIENT: Regiospecific Analysis of Bovine Milk Fat Triacylglycerols: Variability Within a Dairy Cattle Population**
Daylan Tzompa-Sosa, Wageningen University, the Netherlands
- 12:00 pm **Lunch**

Genetic Selection for Economically Important Traits

- 1:00 pm **KEYNOTE: RNA Sequencing for the Analysis of Complex Traits in Milk**
Juan F. Medrano, Animal Genomics Laboratory, Department of Animal Science, University of California, Davis
- 1:45 pm **Transcobalamin in Cows' Milk Facilitates Uptake of Vitamin B12 into Human Intestinal Epithelial Cells**
Tom Wheeler, AgResearch, Ruakura Research Centre, Hamilton New Zealand
- 2:05 pm **Reducing Methane Emission by Dairy Cows through Genetic Selection**
Marleen Visser, Animal Breeding and Genomics Centre, Wageningen University, the Netherlands
- 2:25 pm **Coffee Break**

Diagnostics

- 3:00 pm **INVITED LECTURE: Probing the Transcriptome of Milk Production: Milk Trumps Mammary Tissue**
Danielle Lemay, Genome Center and Foods For Health Institute, University of California, Davis
- 3:20 pm **Integrating Different Omics Techniques to Better Understand Milk Composition in Relation to Cow's Health: A Case of Negative Energy Balance**
Elsa Antunes Fernandes, Dairy Science and Technology, Wageningen University, the Netherlands
- 3:40 pm **Comparison of Five Different RNA Sources to Examine the Lactating Bovine Mammary Gland Transcriptome Using RNA-Sequencing**
Angela Cánovas, Department of Animal Science, University of California, Davis
- 4:00 pm **Rapid Measurement of Human Milk Macronutrients in the Neonatal Intensive Care Unit: Accuracy and Precision of Fourier Transform Mid-Infrared Spectroscopy**
Jennifer Smilowitz, Foods for Health Institute, University of California Davis
- 4:20 pm **Industry Discussion Bringing genetic traits to Practice**
Moderator: Johan van Arndonk, Animal Breeding and Genomics Centre, Wageningen University, the Netherlands
- 5:00 pm **Adjourn**
- 6:30-11 pm **Group Dinner at the Old Sugar Mill with The Johnny Cash Tribute Show featuring James Garner**
(Bus will pick up in front of Hyatt Place next door to the Conference Center)

Thursday October 3, 2013

Analytics

- 9:00 am **KEYNOTE: The Innovation Enabling Science of Analytics**
Carlito Lebrilla, Department of Chemistry and Department of Biochemistry and Molecular Medicine, University of California, Davis
- 9:45 am **Comprehensive Peptidomic Analysis of Human Milk through Lactation**
Andres Guerrero, Chemistry Department, University California, Davis
- 10:05 am **Peptidomic Profile of Milk of Holstein Cows at Peak Lactation**
David Dallas, Foods for Health Institute, Department of Food Science & Technology, University of California, Davis
- 10:25 am **STUDENT TRAVEL AWARD RECIPIENT: A Novel LC-MS Protein Profiling Method to Characterize and Quantify Individual Milk Proteins and Multiple Isoforms**
Zuzana Krupova, Institut National de la Recherche Agronomique, Paris, France
- 10:40 am **Coffee Break**

Milk-inspired Therapeutics

- 11:20 am **KEYNOTE: The Innovation Enabling Science of Biology**
Julie Sharp, School of Medicine, Deakin University, Australia
- 12:05 pm **STUDENT TRAVEL AWARD RECIPIENT: Developmental Role of Milk in Lung Maturation of Marsupial Pouch Young (Tammar Wallaby)**
Vengama Naidu Modepalli, Deakin University, Australia
- 12:20 pm **STUDENT TRAVEL AWARD RECIPIENT: Tammar Wallaby: A Marsupial Model to Understand the Role of Milk in Regulating Stomach Development**
Sanjana Kuruppath, Deakin University, Australia
- 12:35 pm **Closing Remarks**
- 1:00 pm **Lunch**