

Tuesday September 27, 2016

### Overview

- 8:00 am **Registration**
- 9:00 am **Welcome:** *Butch Dias, California Dairy Research Foundation, Davis, California*
- 9:15 am **Introduction: How lactation can decode life science's great challenges**  
*Bruce German, Foods for Health Institute and Dept. of Food Science & Technology, University of California, Davis, USA*
- 9:45 am **Emerging hot topics in milk science**  
*Danielle Lemay, Genome Center and Foods for Health Institute, University of California, Davis, USA*
- 10:15 am **Coffee Break**

### Milk and Gut Microbiomes

- 10:45 am **KEYNOTE: New insight on how milk "farms" the neonate gut microbiota**  
*David Mills, Dept. of Food Science, University of California, Davis, USA*
- 11:30 am **Rebuilding the infant gut microbiome: Insights from ecology and evolution**  
*Steve Frese, Evolve Biosystems, Inc., Davis, CA, USA*
- 12:00 pm **Safety and tolerability following consumption of *bifidobacterium longum* subspecies *infantis* in exclusively breastfed term infants**  
*Jennifer Smilowitz, Foods for Health Institute, Dept. of Food Science & Technology, University of California, Davis, USA*
- 12:30 pm **Lunch**
- 1:30 pm **Linking the genome of lactic acid bacteria to the metabolic response of humans having ingested fermented dairy products**  
*Guy Vergères, Agroscope, Institute for Food Sciences, Switzerland*
- 2:00 pm **Ruminant milk and soy solids differentially affect growth, colon gene and protein expression, and microbiota profiles in the interleukin-10 gene-deficient mouse model of inflammatory bowel disease**  
*Nicole Roy, AgResearch Limited Grasslands Research Centre, New Zealand*
- 2:30 pm **Student Travel Award Recipient: Use of the milk microbiome to predict infant fecal bacterial community composition**  
*Janet Williams, University of Idaho, USA*
- 2:50 pm **Student Travel Award Recipient: Accurate monitoring of living and total bacterial populations in milks for improved microbial management**  
*Zhengyao Xue, Dept. of Food Science, University of California, Davis, USA*
- 3:10 pm **Coffee Break**
- 3:40 pm **Identification of sialic acid-utilising bacteria in a piglet caecal community using RNA-SIP**  
*Wayne Young, AgResearch Limited Grasslands Research Centre, New Zealand*
- 4:10 pm **Student Travel Award Recipient: Sialic acid release by bacteroides thetaiotamicron from milk oligosaccharides may facilitate the growth of potentially pathogenic bacteria**  
*Apichaya Bunyatratchata, Dept. of Food Science, University of California, Davis, USA*
- 4:30 pm **Update from 2015 Most Valuable Presentation Recipient: The role of milk lactoferrin on neurodevelopment and cognition: a dose response, randomized trial**  
*Bing Wang, School of Medicine, Xiamen University, China, and School of Animal and Veterinary Sciences, Charles Sturt University, Sydney, Australia*

### Evening Sessions

- 5:00-6:00 pm **Joint Scientific Advisory Council/Steering Committee Meeting (Closed Session)**
- 5:30-7:30 pm **Poster Reception**

Wednesday September 28, 2016

### New Frontiers for Milk Glycans

- 9:00 am **KEYNOTE: Milk glycoproteomics: Preserving, enhancing, and delivering bioactivity**  
*Daniela Barile, Dept. of Food Science, University of California, Davis, USA*
- 9:45 am **Milk oligosaccharides function as signaling molecules**  
*Bethany Henrick, Foods for Health Institute and Dept. of Food Science & Technology, University of California, Davis USA*
- 10:15 am **Modulation of dendritic cell differentiation and function by human milk oligosaccharides**  
*Michiko Shimoda, School of Medicine, University of California, Davis, USA*
- 10:45 am **Coffee Break**
- 11:10 am **Student Travel Award Recipient: Enzymatic modification of bovine milk oligosaccharides and their functional properties**  
*Valerie Weinborn, Dept. of Food Science, University of California, Davis, USA*
- 11:30 am **Student Travel Award Recipient: A novel method for high-throughput analysis of bovine milk oligosaccharides**  
*Randall Robinson, Dept. of Food Science, University of California, Davis, USA*
- 11:50 am **Student Travel Award Recipient: Discovering natural bioactive peptides in cheese with mass spectrometry**  
*Randall Robinson, Dept. of Food Science, University of California, Davis, USA*
- 12:10 pm **Student Travel Award Recipient: Pilot scale isolation of bioactive glycans from dairy co-products: capturing the whey glycome**  
*Joshua Cohen, Dept. of Food Science, University of California, Davis, USA*
- 12:30 pm **Lunch**
- 1:30 pm **Prenatal caprine milk oligosaccharide consumption affects the development of mice offspring**  
*Caroline Thum, AgResearch Limited Grasslands Research Centre, New Zealand*
- 2:00 pm **High-throughput milk oligosaccharide analysis using a rapid cartridge-based capillary electrophoresis Instrument**  
*Elisha Goonatilleke, Dept. of Chemistry, University of California, Davis, USA*
- 2:30 pm **Glycosylated bioactives compounds in porcine milk: identification and quantification during lactation and correlation with the fecal metagenome**  
*Jaime Salcedo, Dept. of Food Science, University of California, Davis, USA*
- 3:00 pm **Coffee Break**

### Milk and Mammary RNA: From molecular regulators to diagnostics

- 3:30 pm **Milk fat globules as a non-invasive source of mammary microRNA**  
*Christine Leroux, INRA, France*
- 4:00 pm **Student Travel Award Recipient: Constitutive expression of microRNA-150 in mammary epithelium suppresses secretory activation and impairs de novo lipogenesis**  
*Richard Heinz, University of Colorado Anschutz Medical Campus, Aurora, CO, USA*
- 4:20 pm **Student Travel Award Recipient: RNA-Seq of mammary epithelial organoids from virgin and lactating glands of 15 Holstein-Friesian cows**  
*Hannah Lyman, Genome Center, University of California, Davis, CA, USA*

### Evening Event

- 6:30-11 pm **Group Dinner**

Thursday September 29, 2016

**Milk Proteomics: New technologies and applications**

- 9:00 am      **KEYNOTE: Glycomic and glycoproteomic variations of human milk**  
*Carlito Lebrilla, Dept. of Chemistry, University of California, Davis, USA*
- 9:45 am      **Human milk-derived EV are a major macromolecular component in breast milk with distinct bioactive properties**  
*Bernd Stahl, Nutricia Research Centre for Specialized Nutrition, Utrecht, The Netherlands*
- 10:15 am     **Composition of major proteins in breast milk: High-throughput technics for quantitative analysis**  
*Michael Affolter, Nestle Research Centre, Switzerland*
- 10:45 am     **Coffee Break**
- 11:15 am     **Damage to potential allergy-preventing proteins by regular heating and UVC treatment**  
*Kasper Hettinga, Wageningen University, The Netherlands*
- 11:45 am     **Comparing the sensitizing capacity of raw and processed cow's milk in a murine sensitization model for food allergy**  
*Ton Baars, Research Institute of Organic Agriculture, Switzerland and Betty van Esch, Utrecht Institute of Pharmaceutical Sciences, Utrecht University, The Netherlands*
- 12:15 pm     **Impact of the degree of prematurity and time post-partum on proteases and antiproteases in human milk and the infant stomach**  
*Veronique Demers-Mathieu, Oregon State University, Corvallis, USA*
- 12:45 pm     **CLOSING REMARKS**
- 1:00 pm      **LUNCH**