

Program Schedule

Monday October 6, 2014

Noon - 1:00 pm Lunch

1:00 pm **Welcome:** *Chuck Ahlem, Founding owner and partner, Hilmar Cheese, Hilmar, California, USA*
Opening: *Bruce German, Professor, UC Davis, California, USA*

Milk Genomics – Where It All Starts...

Moderators: Søren Borchersen, Head of R&D VikingGenetics & Vivi Raundahl Gregersen, Department of Genetics and Biotechnology, Aarhus University

1:25 pm **Genomics and RuminOmics**
John Wallace, Professor, Rowett Institute of Nutrition and Health, University of Aberdeen, Scotland

2:00 pm **Bovine Genomic Selection Today - Possibilities to Improve Novel Milk Traits through Genomic Selection**
Hans Stålhammar, Chief Geneticist, VikingGenetics, Sweden

2:35 pm **Epitope Mapping of α S1-Casein by Microarray Immunoassay Reveals Differences in Ige Binding within Dairy Breeds and Between Water Buffaloes, Sheep, Goats**
Maria Lisson, Department of Animal Breeding and Genetics, Justus-Liebig University, Gießen, Germany
Student Travel Award Recipient

2:50 pm **Break**

3:20 pm **Genetic Analysis of Micro- and Macro-elements in Danish Holstein and Danish Jersey Milk**
A.J. Buitenhuis, Associate Professor, Department of Molecular Biology and Genetics - Center for Quantitative Genetics and Genomics, Aarhus University, Denmark

3:40 pm **Quantification of Individual Milk Fatty Acids by Infrared Spectroscopy and Chemometrics: In the Cage of Covariance with Total Fat Content**
Carl Emil Aae Eskildsen, Department of Food Science, University of Copenhagen, Denmark

3:55 pm **Protein Quality in a Sustainable Context**
Toon van Hooijdonk, Professor, Agrotechnology & Food Sciences, Wageningen University, The Netherlands

4:30 pm **Discussion - Genetic Markers and Milk Traits of Tomorrow**

5:00 pm - 7 pm Poster Reception

5:00-6:00 pm **Joint Scientific Advisory Council/Steering Committee Meeting (closed session)**

Tuesday October 7, 2014

Lactation Biology

Moderators: Anne Staudt Kvistgaard, Senior manager, Arla Foods Ingredients Group P/S & Skipper Sørensen, Associate professor, Department of Genetics and Biotechnology, Aarhus University

9:00 am **Good Morning & Practical info**

9:05 am **In-Silico Genomic Approaches to Understanding Lactation, Mammary Development, and Breast Cancer**

Darryl L. Hadsell Associate Professor, Department of Pediatrics, USDA/ARS Children's Nutrition Research Center, Baylor College of Medicine, USA

9:25 am **The Comparative Genomics of Monotremes, Marsupials, and Pinnipeds: Models to Examine the Functions of Milk Proteins**

Julie Sharp, Research Fellow, Centre for Biotechnology and Interdisciplinary Sciences, Deakin University, Australia

9:45 am **The Relationship Between Milk Proteins and Extracellular Matrix in Regulating Murine Mammary Gland Involution**

*Sugeetha Ramakrishnan, School of Medicine, Deakin University, Victoria, Australia
Student Travel Award Recipient*

10:00 am **Effect of A 48h Food Deprivation on the Lactating Goat Mammary MiRNome Obtained by Deep Sequencing**

*Lenha Mobuchon, INRA, Saint Genès Champanelle, France
Student Travel Award Recipient*

10:15 am **Break**

Milk and the Neonate

Moderators: Anne Staudt Kvistgaard, Senior manager, Arla Foods Ingredients Group P/S & Skipper Sørensen, Associate professor, Department of Genetics and Biotechnology, Aarhus University

10:45 am **Animal Models for Early Infant Nutrition**

Per Sangild, Professor, Department of Nutrition, Exercise and Sports, University of Copenhagen, Denmark

11:25 am **TGF- β 2 Protects Intestinal Epithelial Cells by Regulation of Proteins Associated with Stress and Endotoxin Responses**

*Duc Ninh Nguyen, Department of Food Science, University of Copenhagen, Denmark
Student Travel Award Recipient*

11:40 am **Human Milk: Mother Nature's Prototypical Probiotic Food?**

Michelle McGuire, Professor, School of Biological Sciences, Washington State University, USA

12:05 pm **Lunch**

12:55 pm **Conference photo**

- 1:10 pm** **NMR Metabolomics of Term and Preterm Milk during the First Month of Lactation**
Ann Spevacek, Postdoctoral Researcher, UC Davis, USA
- 1:30 pm** **Comparative Proteomics of Human And Macaque Milks: Humans Get a Helping Hand During Post-Natal Development**
Kristen Beck, Genome Center, University of California Davis, USA
Student Travel Award Recipient

Technological Aspects of Milk

Moderator: Grith Mortensen, Director, Arla Foods amba

- 1:45 pm** **Milk Genomics from a Technological Perspective**
Lotte Bach Larsen, Professor, Department of Food Science, Aarhus University, Denmark
- 2:15 pm** **Strategies for Improving Milk Coagulation Properties**
Nina Poulsen, Department of Food Science, Aarhus University, Denmark
- 2:35 pm** **Break**
- 3:05 pm** **Milk Phospholipids as Emulsifiers in Infant Formula**
Lars Hellgren, Associate Professor, Department of Systems Biology, Technical University of Denmark, Denmark
- 3:25 pm** **Lipid and Protein Release During In Vitro Digestion of Different Cheese Types**
Sylvie Turgeon, Professor and Acting director, Institute of Nutrition and Functional Foods, Laval University, Canada
- 3:55 pm** **Discussion - Bringing Basic Science into Application**
- 4:30 pm** **Practical info**
- 7:00 pm** **Group Dinner: Varna Palæet** (Busses to pick up at hotels at 6:30 pm)

Wednesday October 8, 2014

Obesity and the Metabolic Syndrome

Moderators: Bruce German, Professor, UC Davis & Peter Langborg Wejse, Senior Food Scientist, Arla Foods Ingredients Group P/S

- 9:00 am** **Good Morning & Practical info**
- 9:05 am** **Dairy and Weight Management: A Review of the Evidence**
Arne Astrup, Professor, Department of Nutrition, Exercise and Sports, University of Copenhagen, Denmark
- 9:45 am** **Effect of Milk Protein And Butter with Different Fat Composition on the Observed Metabolites in Human Urine and Blood – Assessed by an Untargeted Metabolomics Approach**
Bashar Amer, PhD student, Department of Food Science, Aarhus University, Denmark

10:00 am Milk Protein Fractions and Body Weight Regulation – Mechanistic Studies Using Metabolomics in a Mouse Model
Morten Rahr Clausen, Assistant Professor Department of Food Science, Aarhus University, Denmark

10:20 am Break

Biological Effects of Milk Constituents

Moderators: Bruce German, Professor, UC Davis & Peter Langborg Wejse, Senior Food Scientist, Arla Foods Ingredients Group P/S

10:50 am Biological Effects of Milk Peptides/Proteins – State of the Art
Bo Lönnerdal, Professor, University of California Davis, USA

11:20 am Osteopontin – A Bioactive Milk Protein with Immunological Properties
Esben Skipper Sørensen, Associate Professor, Department of Molecular Biology and Genetics - Molecular Nutrition, Aarhus University, Denmark

11:50 am Consumption of Fucosyllactose by Infant Borne Bifidobacteria
Mina Popovic, Department of Life Science, University of Modena and Reggio Emilia, Modena, Italy
Student Travel Award Recipient

12:05 pm Lunch

1:05 pm Role of Protease Inhibitors in Breast Milk in Protection Against Allergy
Kasper Hettinga, Assistant Professor, Food Quality and Design, WU Agrotechnology & Food Sciences, Wageningen UR, The Netherlands

1:25 pm Biotransfer of Milk Mirnas to the Baby: A New Functional Component of Milk?
Meagan Gillespie, Post-doctoral fellow, Commonwealth Scientific and Industrial Research Organisation, Australian Animal Health Laboratory, Australia

1:45 pm Early Supplementation of Phospholipids and Gangliosides Affect Brain and Cognitive Development in Neonatal Piglets
Emily C. Radlowski, Department of Animal Sciences, Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, USA

2:15 pm Discussion - Is the 'hunt' for specific health components the way forward?

2:45 pm Break

3:15 pm Three Days of Highlights

3:45 pm Presentation of Award for 2013 IMGC Symposium MVP (Most Valuable Presentation)

4:10 pm Emerging Hot Topics in Milk Science: A Behind-The-Scenes Tour of “SPLASH! milk science update”
Danielle G. Lemay, Research Professor, UC Davis Genome Center, UC Davis, USA

4:30 pm Closing Remarks