16th International Symposium on Milk Genomics and Human Health  
November 12-14, 2019  
Radisson Blu Scandinavia Hotel  
Aarhus, Denmark

MILK AND HEALTH IN A SUSTAINABILITY PERSPECTIVE

Day 1 – Tuesday, November 12, 2019

8:00 a.m.  Registration

Hot Topics – Sustainability
Chairman: Henrik J. Andersen, Arla Foods Ingredients, Aarhus, Denmark

9:00 a.m.  Welcome- Where We Have Been, Where We Are Going?  
Bruce German, University of California-Davis, Davis, CA, USA

9:15 a.m.  Invited Speaker: ½ Liter of Milk a Day – What are the Implications? (climate, LCA, circular aspects)  
Troels Kristensen, Aarhus University, Tjele, Denmark

9:45 a.m.  Keynote Speaker: The Role of Dairy in a Sustainable Healthy Diet: Evidence from Australian Population Health Survey  
Brad Ridoutt, CSIRO Agriculture, Clayton South, Australia

10:30 a.m.  Coffee Break

11:00 a.m.  Keynote Speaker: Food Systems for Health, Env and Enterprise: The SUSFANS Project and Its Findings  
Monika Zurek, Oxford University, Oxford, United Kingdom

11:45 a.m.  Sustainable Dairy Production and its Exploitation into Healthy Dairy Products  
Nina Aagaard Poulsen, Aarhus University, Tjele, Denmark

12:15 p.m.  Student Travel Award Recipient: Genetic Variants and Post-translational Modifications of Milk Proteins in Relation to Non-Coagulating Milk  
Kajsa Nilsson, Lund University, Lund, Sweden

12:35 p.m.  Lunch

The Microbiome and the Metagenome
Chairman: Bruce German, University of California-Davis, Davis, CA, USA

1:30 p.m.  Keynote Speaker: Microbiota Impact in the Early Stages of Life and the Effects on Health Later in Life  
Christopher Stewart, Newcastle University, Newcastle upon Tyne, United Kingdom

2:15 p.m.  Invited Speaker: The Composition of the Perinatal Intestinal Microbiota in Cattle  
Mikael Niku, University of Helsinki, Helsinki, Finland

2:45 p.m.  Coffee Break

3:15 p.m.  The Composition of the Postprandial Metabolome of Human Blood and Urine Depends on the Human Genome and the Dairy Products Consumed  
Guy Vergères, Agroscope, Bern, Switzerland

3:45 p.m.  Student Travel Award Recipient: Infant Commensal Complexed with Secretory IgA Prevents Enteric Infection
4:05 p.m.  **Panel Discussion – Linking Sustainability to the Microbiome and Metagenome**  
*Moderator: Bruce German, University of California-Davis*
Panelists: Troels Kristensen, Aarhus University; Brad Ridoutt, CSIRO Agriculture; Monika Zurek, Oxford University; Mikael Niku, University of Helsinki; Christopher Stewart, Newcastle University

4:30 p.m.  **Update from 2018’s Most Valuable Presentation- Human milk oligosaccharides directly enhance gut barrier integrity to alter infections**  
*Ishita Shah, University of California-Davis, Davis, CA, USA*

4:50 p.m.  **Highlights from IMGC’s “SPLASH® milk science update” and Upcoming Hot Topics**  
*Danielle Lemay, Western Human Nutrition Research Center, USDA, CA, USA*

5:15-7:15 p.m.  **Poster Reception with Refreshments**

6:15-8:15 p.m.  **Joint Scientific Advisory Council/Steering Committee Meeting (Closed Session)**
Day 2 – Wednesday, November 13, 2019

**Comparative Biology and Genomics**
*Chairman: Danielle Lemay, Western Human Nutrition Research Center, USDA, CA, USA*

8:30 a.m.  **Invited Speaker: Composition, Structure and Digestive Dynamics of Milks from Different Species**
*Debashree Roy, Riddet Institute, Massey University, Palmerston North, New Zealand*

9:15 a.m.  **Invited Speaker: Functionality and Structural Aspects of Milk Genetic Variants**
*Jared Raynes, Food and Nutrition, Commonwealth Scientific and Industrial Research Organization (CSIRO), Werribee, Australia*

9:45 a.m.  **Genomic Variation in Milk Proteins in European Cattle Breeds**
*Bernt Guldbrandtsen, Aarhus University, Tjele, Denmark*

10:15 a.m.  **Coffee Break**

10:45 a.m.  **Sequence-Based GWAS, Network and Pathway Analyses Reveal Genes Co-Associated with Milk Cheese-Making Properties and Milk Composition in Montbéliarde Cows**
*Marie-Pierre Sanchez, INRA, Jouy-en-Josas, France*

11:15 a.m.  **Student Travel Award Recipient: Variability of Oligosaccharides in Milk from Native Nordic Cattle Breeds**
*Anne Vuholm Sunds, University of Aarhus, Tjele, Denmark*

11:35 a.m.-12:30 p.m.  **Lunch**

**Inherent Milk Characteristics and Functionalities**
*Chairman: Marie Paulsson, Lund University, Lund, Sweden*

12:30 p.m.  **Keynote Speaker: Casein Micelle Mineralization**
*Thom Huppertz, Friesland Campina, The Netherlands*

1:15 p.m.  **Invited Speaker: Milk Cathepsins – Implications for Health and Functionality**
*Lotte Bach Larsen, Aarhus University, Tjele, Denmark*

1:45 p.m.  **Student Travel Award Recipient: High Proportion of Transient Neonatal Zinc Deficiency (TNZD) Causing Alleles in the General Population**
*Yarden Golan, Technion-Israel Institute of Technology, Haifa, Israel*

2:05 p.m.  **Coffee Break**

2:30 p.m.  **Invited Speaker: Understanding the Function of the Milk Fat Globule Membrane**
*Carolyn M. Slupsky, University of California-Davis, CA, USA*

3:00 p.m.  **Isolation, Characterization, and Biological Properties of Milk Extracellular Vesicles**
*Jan Trige Rasmussen, Aarhus University, Aarhus, Denmark*

3:30 p.m.  **Invited Speaker: The Role of Whey Protein in Postprandial Glycaemic Control**
*Daniela Jakubowicz, Tel Aviv University, Israel*

4:00 p.m.  **Natural Glycosidases in Bovine Milk**
*Søren Drud-Heydary Niels, Aarhus University, Tjele, Denmark*

4:30 p.m.  **End of day 2**

6:30-10:30 p.m.  **Symposium Group Dinner at Smedjen (The Smitty), Centralværkstedet**
Matrix Effects of Milk and Milk Components
Chairman: Peter Langborg Wejse, Arla Foods, Aarhus, Denmark

9:00 a.m.  Keynote Speaker: The Dairy Matrix and Health: Current Evidence and Knowledge Gaps
Michelle McKinley, Queens University Belfast, Belfast, United Kingdom

9:45 a.m.  Invited Speaker: Dairy Matrix Effects: Response to Consumption of Dairy Fat Differs when Eaten within the Cheese Matrix – a Randomized Controlled Trial
Emma Feeney, University College Dublin, Dublin, Ireland

10:15 a.m.  Coffee Break

10:45 a.m.  Discovering Added-Value Compounds in Dairy Streams: Proteomic Profiling Reveals the Presence of Xanthine Oxidase with Remarkable Antimicrobial Activity
Gulustan Ozturk, University of California-Davis, Davis, CA, USA

11:15 a.m.  Student Travel Award Recipient: Maternal Allergy and the Presence of Non-Human Proteinaceous Material in Human Milk
Pieter Dekker, Wageningen University, Wageningen, The Netherlands

11:35 a.m.  Panel Discussion – the Dairy Matrix
Moderator: Merete Myrup, Danish Agriculture & Food Council
Panelists: Michelle McKinley, Queens University Belfast; Emma Feeney, University College Dublin; Bruce German, University of California-Davis

12:00 p.m.  Closing Remarks

12:15 p.m.  Lunch

12:45 p.m.  End of Conference