



Day 1 – Wednesday, September 08, 2023

All times are shown in Pacific Daylight Time

Emerging 'Omic' Discoveries in Milk

Moderated by Professor Seamus O'Mahony, University College Cork, Cork, Ireland

- 8:30-8:40 a.m. **Welcome Address**
UCC President John O'Halloran, University College Cork, Cork, Ireland
- 8:45-8:55 a.m. **Twenty Years of Collaboration for Discovery and Innovation**
Distinguished Professor Bruce German, University of California Davis, CA, USA
- 9:00-9:35 a.m. **Keynote Address: Metabolomics and Milk**
Professor David Wishart, University of Alberta, Alberta, Canada
- 9:40-10:05 a.m. **Invited Presentation: On the Structures and Clonal Repertoires of Milk Immunoglobulins**
Professor Albert Heck, Utrecht University, Utrecht, Netherlands
- 10:10-10:35 a.m. **Biosensor Approach to Quantify Exosomal miRNAs in Human Milk and Neonatal Serum**
Professor Sharon Donovan, University of Illinois Urbana Champaign, UC, USA
- 10:35-11:05 a.m. **Refreshment Break**
- 11:05-11:30 a.m. **Genetic Influences on the Human Milk Metabolome**
Dr. Kelsey Johnson, University of Minnesota, MN, USA
- 11:35 a.m.-12:00 p.m. **Omics Approaches Highlight Milk Molecules Impacting Offspring Early Gut Maturation**
Dr. Sandrine Le Guillou, INRAE, Paris, France
- 12:05 p.m.-12:30 p.m. **Deciphering Interplay between Peptides and Responsible Proteases in Human Milk Using Peptidomics**
Professor Lotte Bach Larsen, Aarhus University, Aarhus, Denmark
- 12:30-1:30 p.m. **Lunch**



IMGC HYBRID 20 SYMPOSIUM 23

Bioactive Milk Proteins, Peptides and Enzymes

Moderated by Professor Paul McSweeney, University College Cork, Cork, Ireland

- 1:30-2:05 p.m. **Keynote Address: Bioactive Proteins in Milk from Different Mammals - Variability and Stability During Processing**
Professor Kasper Hettinga, Wageningen University & Research, Wageningen, Netherlands
- 2:10-2:35 p.m. **Invited Presentation: Protein Partitioning during Microfiltration of Whey and Related Opportunities for Nutritional Ingredient Innovation**
Professor Seamus O'Mahony, University College Cork, Cork, Ireland
- 2:40-3:05 p.m. **Survival of Bioactive Milk Proteins Across Digestion in Preterm Infants Fed Human Milk**
Associate Professor David Dallas, Oregon State University, OR, USA
- 3:10-3:25 p.m. **Student Award: A Proteomic Approach to Identify Disulfide-bridges in Human Milk Proteins**
Martin Thesberg, Aarhus University, Aarhus, Denmark
- 3:25-3:55 p.m. **Refreshment Break**
- 3:55-4:20 p.m. **Uncovering the Dynamics of Proteolytic Activity in Human Milk**
Associate Professor Anthony O'Donoghue, University of California San Diego, CA, USA
- 4:25-4:50 p.m. **Scalable Production of Human Osteopontin from Immortalized Human Breast Milk Cells: Proof of Concept for a Breast Milk Protein Production Platform**
Dr. Leila Strickland, BIOMILQ, North Carolina, USA
- 4:55-5:20 p.m. **Changes in Bovine α -lactalbumin N-glycosylation during the First Month After Calving**
Dr. Inge Gazi, Utrecht University, Utrecht, Netherlands
- 6.00 – 8.00 p.m. **Poster session (upstairs café)**



Day 2 – Thursday, September 07, 2023

Novel Discoveries in Bioactive Milk Lipids

Moderated by Professor Alan Kelly, University College Cork, Cork, Ireland

- 8:30-9:05 a.m. **Keynote Address: Milk Polar Lipids: Towards Joint Effects on Lipid Metabolism, Intestinal Health and Gut Microbiota**
Dr. Marie-Caroline Michalski, INRAE, Paris, France
- 9:10-9:35 a.m. **Invited Presentation: Beyond Coincidence: Regulation of Milk Fat Globule Size and Its Adaptation to the Environment**
Professor Nurit Argov-Argaman, Hebrew University of Jerusalem, Jerusalem, Israel
- 9:40-9:55 a.m. **Invited Presentation: SPLASH!® Milk Science Update - 11th anniversary: Highlights and Upcoming Hot Topics**
Dr. Danielle Lemay, University of California Davis, CA, USA
- 10:00-10:15 a.m. **Student Award: The Role Played by Milk Fat in Bacillus Subtilis Growth and Metabolome**
Chen Raz, Hebrew University of Jerusalem, Jerusalem, Israel
- 10:15-10:45 a.m. **Refreshment Break**
- 10:45-11:10 a.m. **Low Colostrum Intake Results in Accumulation of Peroxisome β -oxidation Substrates in Gilt Vaginal Tissue**
Research Associate Professor Theresa Casey, Purdue University, IN, USA
- 11:15 a.m.-11:40 a.m. **A Study of Fatty Acid Profiles and Creaming Stability of Human Milk**
Assistant Professor Fanyu Meng, Beijing Technology and Business University, Beijing, China
- 11:45-12:10 p.m. **From Composition to Function: Identification and Validation of Bioactive Components in a Dairy Stream Enriched in Phospholipids and Glycoproteins**
Assistant Professor Gulustan Ozturk, University Wisconsin Madison, WI, USA
- 12:10-1:10 p.m. **Lunch**

Microbiome: Breakthrough Innovations and Discoveries

Moderated by Professor Catherine Stanton, Teagasc, Ireland

- 1:10-1:45 p.m. **Keynote Address: The Complexities of the Milk Microbiome – From a Vital Vertical Transfer Route to Human Infection**
Director Paul Ross, APC Microbiome Ireland & UCC, Cork, Ireland
- 1:50-2:15 p.m. **Invited Presentation: Short- and Long-Term Implications of Human Milk Microbiota on Maternal and Child Health**
Dr. Cristina Campoy, University of Granada, Granada, Spain
- 2:20-2:45 p.m. **Lactose Intake, Lactase Persistence Genetics, and Gut Microbiome in a Multi-Ethnic Cohort: Considerations for Precision Nutrition**
Dr. Danielle Lemay, USDA, USA
- 2:50-3:05 p.m. **Student Award: Characterization of the Bovine Colostrum Virome and Two Novel Staphylococcus Aureus Bacteriophages**
Kevin Linehan, University College Cork, Cork, Ireland
- 3:05-3:35 p.m. **Refreshment Break**
- 3:35-4:00 p.m. **Identifying the Ecological Processes that Shape the Human Milk Microbiome**
Assistant Professor Steven Frese, University of Nevada, Reno, NV, USA
- 4:05-4:30 p.m. **HMO 2'FL Produces a Strong Bifidogenic Response that is Divergent Across Multiple Age Groups, from Infants to Adults**
Dr. Jenni Firman, USDA, USA
- 4:35-4:45 p.m. **Sponsor Flash Talk by the National Dairy Council: The Impact of Unique Bioactives in Milk and Dairy Products on Health and Wellness**
Dr. Chris Cifelli, National Dairy Council, Dublin, Ireland
- 4:50-5:05 p.m. **Student Award: Microbiota and Resistome Analysis of Colostrum and Milk from Dairy Cows Treated with Antibiotic-Based Dry Cow Therapies**
Dhrati Patangia, APC Microbiome Ireland, Cork, Ireland
- 6:00-10:00 p.m **Dinner Reception**



Day 3 – Friday, September 08, 2023

Hottest Topics in Milk and Immunity

Moderated by Dr Elaine McCarthy, University College Cork, Cork, Ireland

- 9:00-9:35 a.m. **Keynote Address: Human Milk and Immunity in Preterm Infants: Opportunities and Challenges**
Professor Nicholas Embleton, Newcastle University, Newcastle, UK
- 9:40-10:05 a.m. **Invited Presentation: Cow's Milk Consumption and the Maturation of the Gut Microbiome and the Immune System in Infants**
Professor Markus Ege, LMU University Hospital, Munich, Germany
- 10:10-10:35 a.m. **A Retrospective Comparison of IgE-Mediated Cows Milk Protein Allergy Management**
Dr. Juan Trujillo, University College Cork, Cork, Ireland
- 10:40-11:05 a.m. **Probiotic Supplementation in Human Milk-Fed Preterm Infants: Effects on Systemic Immunity and Inflammation**
Professor Lewis Rubin, Georgetown University Medical Center, DC, USA
- 11:05-11:35 a.m. **Refreshment Break**
- 11:35-12:05 P.m. **2022 Most Valuable Presentation Award: Human Milk Samples Obtained Pre- and Post-Influenza Vaccination Reveals a Poor Boosting of Seasonally-Relevant, Hemagglutinin-Specific Antibodies**
Assistant Professor Rebecca Powell, Icahn School of Medicine at Mount Sinai, NY, USA
- 12:10 -12:35 p.m. **Histological and Transcriptomic Investigations into the Effect of Human Milk on Intestinal Immune Development in a Neonatal Piglet Model**
Clinical Assistant Professor Bethaney Fehrenkamp, University of Idaho, ID, USA
- 12:40-1:05 p.m. **Immune-Related miRNAs In Breastmilk and Their Relation to Regulatory T Cells in Breastfed Children**
Dr. Lina Tingö, Linköping university, Linköping, Sweden
- 1:10-1:20 p.m. **Closing Remarks: The Future of IMGC**
Dr Jennifer Smilowitz, University of California Davis, IMGC, CA, USA
- 1:20-2:20 p.m. **Lunch**
- 2:20 p.m. **End of Conference**