Origins and Benefits of Biologically Active Components in Human Milk

July 16-21, 2017
Lisbon, Portugal

Organizers:

Sharon M. Donovan, PhD, RD
University of Illinois, Urbana-Champaign
Urbana, IL, USA

Ted Barrett, PhD
Lovelace Respiratory Research Institute
Albuquerque, NM, USA

Kal Ramanujam, PhD
Arla Foods Ingredients
Aarhus, DENMARK

Sunday, July 16, 2017

4:00-9:00 pm  Conference Registration
6:00-6:45 pm  Welcome Reception
6:45-7:45 pm  Dinner
7:45-8:00 pm  Welcome and Opening Remarks  
Sharon M. Donovan, PhD, RD, University of Illinois, Urbana, IL USA
8:00-9:00 pm  Keynote Speaker  
Setting the stage: Epidemiological evidence for the health benefits of human milk  
Laurence Grummer-Strawn, PhD, WHO Geneva, SWITZERLAND

Monday, July 17, 2017

7:30-9:00 am  Breakfast
9:00 am-12:00 pm  General Session 1: Tools for Assessing Neurocognitive Development in Neonates  
Chair: Sharon M. Donovan, PhD, RD, University of Illinois, Urbana, IL USA

9:00-9:30 am  Assessing neonatal brain and cognitive development in the preclinical piglet model. Ryan Dilger, PhD, University of Illinois, Urbana, USA

9:30-10:00 am  Assessing biobehavioral development in the Rhesus monkey. John Capitanio, PhD, University of California, Davis, USA

10:00-10:30 am  Morning Coffee Break
10:30-11:00 am  Assessing neonatal cognitive development in the human infant. Carol Cheatham, PhD, University of North Carolina Chapel Hill, USA
11:00 am-12:00 pm  Panel Discussion  Merits and limitations of current approaches to assess neurocognitive development and future needs. J. Capitano, C. Cheatham, R. Dilger

12:00-1:30 pm  Lunch and Meet the Experts Session

1:30 pm-4:00 pm  General Session 2: Benefits of Human Milk and DHA on Neurocognitive Development in Human Infants  Chair: Margriet Schoterman, PhD, Friesland Campina, THE NETHERLANDS

1:30-2:00 pm  Breastfeeding and early white matter development. Sean Deoni, PhD, Warren Alpert Medical School of Brown University, Providence, RI, USA

2:00-2:30 pm  DHA during early development - building better brains and beyond. Michelle L. Baack MD, Sanford Health and South Dakota State University, USA

2:30-3:00 pm  Afternoon Coffee Break

3:00-3:30 pm  The importance of breast milk long chain polyunsaturated fatty acids to infant neurocognitive development. Catherine Field, PhD, University of Alberta, CANADA

3:30-4:00 pm  The role of lutein in early neural development. Elizabeth Johnson, PhD, Tufts University, Boston, MA, USA

4:00-5:30 pm  Ten Travel Awardees Research Highlights - 7 min each. Moderator: Sharon Donovan, PhD, RD, University of Illinois, Urbana, USA

5:30-6:00 pm  Free time

6:00-7:00 pm  Dinner and Meet the Experts Session

7:00-9:00 pm  Poster Session 1 - Odd numbered poster boards

Tuesday, July 18, 2017

7:30-9:00 am  Breakfast

9:00 am-12:00 pm  General Session 3: Benefits of Bioactive Milk Components for Cognitive Development: Evidence from Infants and Preclinical Models  Chair: Nicole Roy, PhD, AgResearch, Grasslands Research Centre, Palmerston North, NEW ZEALAND

9:00-9:30 am  Milk composition and infant Rhesus monkey behavior. Katie Hinde, PhD, Arizona State University, Tempe, USA

9:30-10:00 am  Dietary choline effects on neonatal piglet brain and cognitive development. Ryan Dilger, PhD, University of Illinois, Urbana, USA

10:00-10:30 pm  Morning Coffee Break and GROUP PHOTO

10:30-11:00 am  Molecular mechanism(s) of lactoferrin in neurodevelopment and cognitive function. Bing Wang, MD, PhD, Charles Sturt University, Wagga Wagga, AUSTRALIA

11:00-11:15 am  Short talk: A combination of lipidomics, MS imaging and PET scan imaging reveals differences in cerebral functioning in rat pups according to the lipid content of infant formulas. Jean-Charles Martin, PhD, Aix Marseille University, FRANCE

11:15-11:30 am  Short talk: Does milk activate SIRT1 to promote brain health? Shalomé Bassett, PhD, AgResearch, Grasslands Research Centre, Palmerston North, NEW ZEALAND

11:30-12:00 pm  Breast milk non-protein nitrogen recycling by infant colonizing microbiota. David Sela, PhD, University of Massachusetts, Amherst, USA
12:00-1:00 pm Lunch and Meet the Experts Session
1:00-6:00 pm Free time for networking
6:00-7:00 pm Dinner
7:00 pm - Informal Networking

**Wednesday, July 19, 2017**

7:30-9:00 am Breakfast

9:00 am-10:30 am **General Session 4: Recent Advances in HMO Research**
Chair: Meghan Azad, PhD, University of Manitoba, Winnipeg, CANADA

9:00-9:30 am *Human milk oligosaccharides (HMOs): A new generation of prebiotic ingredients.*
Margriet Schoterman, PhD, FrieslandCampina Innovation, Wageningen. THE NETHERLANDS

9:30-10:00 am *A review of the impact of human milk oligosaccharides on the gut-brain axis.*
Rachel Buck, PhD, Abbott Nutrition, Columbus, OH, USA

10:00-10:15 am Short talk: *Dietary bovine and human milk oligosaccharides influence regional brain volumes and recognition memory in the young pig.*
Stephen Fleming, University of Illinois, Urbana, USA

10:15-10:30 am Short talk: *Presence of 6’S L in mouse maternal milk improves attention and reduces impulsivity in the adult offspring.*
Jonas Hauser PhD, Nestlé Research Center, Lausanne, SWITZERLAND

10:30-11:00 am Morning Coffee Break

11:00 am-3:00 pm **General Session 5: Multifunctional Bioactive Milk Components that Benefit Cognitive, Immune and GI Development**
Chair: David Sela, PhD, University of Massachusetts, Amherst, USA

11:00-11:30 am *Milk fat globule membrane and cognitive, immune and metabolic outcomes in human infants.*
Magnus Domellöf, MD, PhD, University Umeå, SWEDEN

11:30 am-12:00 pm *Lactoferrin and immune and gastrointestinal outcomes.*
Sharon Donovan, PhD, RD, University of Illinois, Urbana, USA

12:00-1:30 pm Lunch and Meet the Experts Session

1:30-2:00 pm *Osteopontin and immune and gastrointestinal outcomes in Rhesus monkeys and human infants.*
Bo Lönnerdal PhD, University of California, Davis, USA

2:00-2:30 pm *Functional effects of bovine milk (-components) on human immune function.*
Joost van Neerven, PhD, Wageningen University. THE NETHERLANDS

2:30-3:00 pm How artificial intelligence is paving the way for the discovery and development of new active ingredients, from anti-inflammatories to glucose regulating and more.
Nora Khaldi, PhD, Nuritas, Dublin, IRELAND

3:00-3:30 pm Afternoon Coffee Break

3:30-3:45 pm Short talk: *Smart gut in early life - understanding the role of the milk fat globule membrane in microbial fermentation in the large intestine.*
Caroline Thum, PhD AgResearch and Riddet Institute, Massey University, NEW ZEALAND

3:45-4:00 pm Short talk: *Digested early lactation stage preterm human milk suppresses TNF-induced inflammation and cytotoxicity in human intestinal epithelial cells.*
Yimin Chen, PhD, RD, Rush University, Chicago, IL USA
Thursday, July 20, 2017

7:30-9:00 am Breakfast

9:00 am-10:30 am General Session 6: Nutrition in Pregnancy and Lactation on Infant Outcomes Chair: Catherine Field, PhD, University of Alberta, CANADA

9:00-9:30 am Breastfeeding, human milk bioactives, and developmental origins of chronic disease in the CHILD cohort. Meghan Azad, PhD, University of Manitoba, Winnipeg, CANADA

9:30-10:00 am Mother's nutritional miRNA legacy: Nutrition during pregnancy and its possible implications to developing cardiometabolic disease in later life. Alberto Davalos, PhD, IMDEA Foods, Madrid Institute for Advanced Studies - Food, SPAIN

10:00-10:30 am Human milk to prevent and heal gastrointestinal tract injury in children after bone marrow transplantation. Stella Davies, MD, PhD, Cincinnati Children's Hospital, Cincinnati, OH, USA

10:30-11:00 am Morning Coffee Break

11:00-12:00 am General Session 7: Maternal Influences on Infant Immune Development. Chair: Ted Barrett, PhD, Lovelace Respiratory Research Institute, Albuquerque, NM, USA

11:00-11:30 am Nutritionally-mediated programming of developing immune system. Christina West, MD, PhD, Pediatrics Umea SWEDEN

11:30 am-12:00 pm Pre/postnatal influences of the microbiome on infant immune development. Harald Renz, MD, Institute of Laboratory Medicine and Pathobiochemistry, Molecular Diagnostics, Philipps University Marburg, University Hospital Giessen and Marburg Gmbh, GERMANY

12:00-1:30 pm Lunch and Meet the Experts Session

1:30-12:00 pm General Session 8: The First 1000 Days - Window of Opportunity for Improved Maternal and Infant Health. Chair: Kal Ramanujam, PhD, Arla Foods, DENMARK

1:30-2:00 pm The importance of the first 1000 days: An example from Africa. Sophie Moore, PhD, MRC Human Nutrition Research, UK

2:00-2:30 pm Placental fetal transfer: A key factor to fetal growth. Elivra Larque, PhD, University of Murcia, SPAIN

2:30-3:00 pm Glucocorticoids and maternal-offspring resource allocation. Abigail Fowden, PhD, University of Cambridge, UK

3:00-3:30 pm Afternoon Coffee Break

3:30-4:00 pm What is “normal” human milk and how is it affected by maternal diet? Shelley McGuire, PhD, Washington State University, Pullman, USA

4:00-5:30 pm Business Meeting

5:30-6:00 pm Free Time
6:00-7:00 pm  Dinner and Meet the Experts Session
7:00 pm -  Awards and Informal Networking

Friday, July 21, 2017

7:30-9:00 am  Breakfast
9:00 am-11:00 am  Trainee Session: Conducting pre-clinical to clinical studies in human milk bioactives - how to get started and how to succeed?

Co-Chairs: Meghan Azad, PhD, University of Manitoba, Winnipeg, CANADA and David Sela, PhD, University of Massachusetts, Amherst, USA

11:00 am  Lunch to go and departures

END OF CONFERENCE

For additional information contact:
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