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Science Research Conferences

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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	<i>Welcome and Opening Remarks</i> Sharon M. Donovan, PhD, RD, University of Illinois, Urbana, IL USA
8:00-9:00 pm	<i>Keynote Speaker</i> <i>Setting the stage: Epidemiological evidence for the health benefits of human milk</i> Laurence Grummer-Strawn, PhD, WHO Geneva, SWITZERLAND

Monday, July 17, 2017

7:30-9:00 am	Breakfast
9:00 am-12:00 pm	<i>General Session 1: Tools for Assessing Neurocognitive Development in Neonates</i> <u>Chair:</u> Sharon M. Donovan, PhD, RD, University of Illinois, Urbana, IL USA
9:00-9:30 am	<i>Assessing neonatal brain and cognitive development in the preclinical piglet model.</i> Ryan Dilger, PhD, University of Illinois, Urbana, USA
9:30-10:00 am	<i>Assessing biobehavioral development in the Rhesus monkey.</i> John Capitanio, PhD, University of California, Davis, USA
10:00-10:30 am	Morning Coffee Break
10:30-11:00 am	<i>Assessing neonatal cognitive development in the human infant.</i> 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? Shalome 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 Schoterma, 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'SL 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

4:15-5:15 pm	PANEL: Career Opportunities in Industry and Non Profit Organizations Moderators: Kal Ramanujam, PhD and Ted Barrett PhD
5:15-6:00 pm	Free time
6:00-7:00 pm	Dinner and Meet the Experts Session
7:00-9:00 pm	<i>Poster Session 2 - Even numbered poster boards</i>

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	<i>Breastfeeding, human milk bioactives, and developmental origins of chronic disease in the CHILD cohort. Meghan Azad, PhD, University of Manitoba, Winnipeg, CANADA</i>
9:30-10:00 am	<i>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</i>
10:00-10:30 am	<i>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</i>
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	<i>Nutritionally-mediated programming of developing immune system. Christina West, MD, PhD, Pediatrics Umea SWEDEN</i>
11:30 am-12:00 pm	<i>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</i>
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	<i>The importance of the first 1000 days: An example from Africa. Sophie Moore, PhD, MRC Human Nutrition Research, UK</i>
2:00- 2:30 pm	<i>Placental fetal transfer: A key factor to fetal growth. Elivra Larque, PhD, University of Murcia, SPAIN</i>
2:30-3:00 pm	<i>Glucocorticoids and maternal-offspring resource allocation. Abigail Fowden, PhD, University of Cambridge, UK</i>
3:00-3:30 pm	Afternoon Coffee Break
3:30-4:00 pm	<i>What is "normal" human milk and how is it affected by maternal diet? Shelley McGuire, PhD, Washington State University, Pullman, USA</i>
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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