

Themes for the Milk Genomics Satellite Meeting

A symposium for postgraduate students and postdoctoral fellows

Comparative Genomics of lactation – the big questions in mammary gland biology

Monday November 14

Prest Theatre, University of Melbourne

(a short tram ride from the centre of Melbourne)

Registration 8:00-9:00am

8:30am Welcome – Prof Kevin Nicholas

8:40am Opening address- The evolution of lactation Prof Christophe Lefevre (Deakin University)

1. Human lactation; The role of milk in programming development Chair Prof Peter Hartmann (University of Western Australia)

9:00am Breastfeeding, regulation of food intake and obesity (Prof Peter Hartmann, University of Western Australia)

9:30am miRNA in milk – a role in signalling development? (Prof Christophe Lefevre, Deakin University)

9:50am Gene Expression in the human breast during lactation and involution (Dr Julie Sharp, Deakin University)

10:10am Intrinsic messages in human milk; what's new?

The milk cryptome (Ashalyn Watt, Deakin University) – 5mins

Proteomic and metabolomic analysis of human milk (Dr James Lui, University of Western Australia) – 15 mins

10:30am Morning Tea break

2. Comparative genomics of Lactation – what can we learn about mammary gland biology and milk composition Chair Prof Kevin Nicholas (Deakin University)

10:50am Lactation in the fur seal, platypus and tammar wallaby– unique animal models to study the comparative genomics of lactation. (Dr Julie Sharp, Deakin University)

11:10am The mouse; Developing predictive models of lactation performance (Prof Peter Williamson, University of Sydney)

11:30am Hot spots in comparative lactation

Seal lactation; A new model to study involution of the mammary gland (Laurine Buscara, Deakin University) – 10 mins

Innate immunity in the mammary gland; delivery of new antibacterials in wallaby milk (Stephen Wanyonyi, Deakin University) – 10 mins

Sialic acid biosynthesis and sialyltransferase genes during lactation in the tammar wallaby (Dr Jovana Maksimovic, Murdoch Institute) – 10 mins

12:00pm Pigeon Crop milk – is pigeon crop the avian mammary gland? (Dr Tamsyn Crowley, Deakin University)

12:30pm Lunch

3. Stem cells, induced pluripotent stem cells, cloning, transgenics – technologies to address the big questions in mammary gland biology Chair Prof Chris Ormandy

1:30pm Delineating the mammary stem cell hierarchy and its molecular regulators (Prof Jane Visvander, Walter and Eliza Hall Institute)

2:00pm Stem cells in the lactating mammary gland and breastmilk of women (Dr Foteini Hassiotou, University of Western Australia)

2:30pm iPSC and Animal Cloning; the new frontier in lactation (Dr Paul Verma, Monash University)

3:00pm Elf5 and lineage specification in the mammary gland (Dr Chris Ormandy, Garvan Institute).

3:30pm Afternoon Tea

4. Bioinformatics – Databases to drive comparative mammary gland biology into the next decade Chair Prof Christophe Lefevre

3:50pm Comparative genomics of milk proteins and what it tells us about the species (Dr Nora Khaldi, University College Dublin.)

4:10pm Comparative analysis of lactation (Prof Christophe Lefevre, Deakin University)

4:30pm On line tools for gene expression analysis of lactation (Philip Church, Deakin University)

4:45pm miRNA bioinformatics and lactation (Amit Kumar, Deakin University)

5:00pm Close and drinks