

Reproduction and Development: revealing the Origin of Life

12th – 14th March 2018

Wellcome Genome Campus,
Hinxton, Cambridge, UK

The conference will be held in the Rosalind Franklin Pavilion
Breakfast, Lunch and Dinner will be served in Hinxton Hall Restaurant
Posters will be displayed in the Event Space

Draft Conference Programme

Monday 12th March 2018

- 12:30-13:50 **Registration with lunch**
- 13:50-14:00 **Welcome and Introductions**
Magdalena Zernicka-Goetz University of Cambridge, UK – on behalf of the committee
- 14:00-15:00 **Keynote Lecture**
Genome-scale fluctuations in the cytotrophoblast epigenome over gestation and in placental pathologies
Susan Fisher, University of California San Francisco, USA
- 15:00-16:00 **Session 1: Oocyte and sperm formation**
Chair: Myriam Hemberger Babraham Institute, UK
- 15:00 Mechanism and reconstitution *in vitro* of mammalian germ cell development
Mitunori Saitou, Kyoto University, Japan
- 15:30 Reprogramming in the mouse germ line.
Petra Hajkova, MRC London, UK
- 16:00-16:30 **Afternoon Tea**
- 16:30-17:45 **Session 2: Imaging early mammalian development in vivo**
Chair:
- 16:30 Imaging how cells decide their fate, shape and position in living mouse embryos
*Nicolas Plachta, Agency of Science, Technology & Research (A*STAR), Singapore*
- 17:00 Short talk selected from submitted abstract
- 17:15 Short talk selected from submitted abstract

17:30 Short talk selected from submitted abstract

17:45-19:15 **Poster Session 1 (odd numbers) with drinks reception**

19:15 Dinner

Tuesday 13th March 2018

07:30 – 09:00 Breakfast

09:00-10:30 **Session 3: Single cell sequencing and how it can be used to understand early mammalian development**
Chair: Magdalena Zernicka-Goetz University of Cambridge, UK

09:00 Single cell RNAseq revealing human preimplantation development
Fredrik Lanner, Karolinska Institute, Sweden

09.30 Deciphering the gene regulation network in human early embryos at single-cell & single base resolution
Fuchou Tang, Peking University, China

10.00 Short talk selected from submitted abstract

10.15 Short talk selected from submitted abstract

10:30-11:00 **Morning Coffee**

11:00-12:30 **Session 4 : transgenerational inheritance**
Chair: Margherita Turco, University of Cambridge, UK

11:00 Sperm-mediated epigenetic inheritance
Qi Chen, University of Nevada, USA

11:30 Unraveling the secrets of Y chromosome function in meiosis, spermiogenesis, and fertilization.
Monica Ward, University of Hawaii, USA

12:00 Short talk selected from submitted abstract

12:15 Short talk selected from submitted abstract

12:30-14:00 **Lunch**

14:00-15:30 **Session 5: Stem cells embryogenesis: organoid culture, tissue regeneration and stem cells models**
Chair: Dagen Wells, University of Oxford, UK

14:00 Endometrial stem cell deficiency in recurrent pregnancy loss
Jan Brosens, University of Warwick, UK

	14:30 Organoid culture systems to study the maternal-fetal interface of human pregnancy <i>Margherita Turco, University of Cambridge, UK</i>
	15:00 Short talk selected from submitted abstract
	15:15 Short talk selected from submitted abstract
15:30-16:00	Afternoon Tea
16:00-17:30	Session 6: Pre-implantation selection and IVF <i>Chair:</i>
	16:00 Title tbc <i>Dagen Wells, University of Oxford, UK</i>
	16:30 Heterogoneic cell division: Zygotes can segregate entire parental genomes in distinct blastomere lineages <i>Joris Vermeesch, University of Leuven, Belgium</i>
	17:00 Short talk selected from submitted abstract
	17:15 Short talk selected from submitted abstract
17:30-19:00	Poster Session 2 (even numbers) with drinks reception
19:00	Dinner

Wednesday 14th March 2018

07:30 – 09:00	Breakfast
09:00 – 10:00	Keynote lecture Specialized ribosomes: A new frontier in gene expression and organismal biology <i>Maria Barna, Stanford University, USA</i>
10:00-10:45	Session 7: Mammalian development beyond implantation <i>Chair: Thierry Voet KU Leuven, Belgium and WTSI, UK</i>
	10:00 Implicating stem cell identity in embryonic morphogenesis at implantation <i>Marta Shahbazi, University of Cambridge, UK</i>
	10:30 Short talk selected from submitted abstract
10:45-11:15	Morning Coffee

11:15 – 12.15

Session 7 Continued: Mammalian development beyond implantation

11:15 Using single-cell transcriptomics to understand cell fate decision in mouse embryos

Antonio Scialdone, Institute of Epigenetics and Stem Cells, Germany

11:45 Short talk selected from submitted abstract

12:00 Conference summary and final comments
Programme committee

12:15 -13:15

Lunch

**Coaches depart to Cambridge City Centre and Train Station,
Stansted Airport via Heathrow Airport**