

# Programme

## Sunday 23 September

- 12:00**      **Registration open**
- 12:30**      **Lunch**
- 14:30**      **Katherine Brown – Development, UK**  
Welcome
- Chair: Jennifer Nichols – University of Cambridge, UK**
- 14:45**      **Antoon Moorman – Academic Medical Centre, The Netherlands**  
A 3D atlas of human development
- 15:15**      **Andrew Copp – UCL Institute of Child Health, UK**  
HDBR - enabling access to human embryonic and fetal material
- 15:30**      **Alain Chédotal – Institut de la Vision, France**  
Tridimensional analysis of human embryogenesis
- 16:00**      **Guojun Sheng – Kumamoto University, Japan**  
Mesenchymal-epithelial transition regulates initiation of pluripotency exit before gastrulation
- 16:15**      **Coffee break**
- 16:45**      **Mitinori Saitou – Kyoto University, Japan**  
Mechanism and *in vitro* reconstitution of human germ cell development
- 17:15**      **Grace Hancock – University of California, Los Angeles, USA**  
The KLF family in human primordial germ cell development
- 17:30**      **Ali Brivanlou – The Rockefeller University, USA**  
Self-organisation of spatial patterns in human embryos
- 18:00**      **Alfonso Martinez Arias – University of Cambridge, UK**  
Human gastruloids: a model system for the early stages of human gastrulation
- 18:30**      **Pre-dinner drinks and poster viewing in the Evelyn Suite**
- 19:45**      **Dinner**

## Monday 24 September

- From 07:00    **Breakfast**
- Chair: Austin Smith – University of Cambridge, UK**
- 09:00**      **Kathrin Plath – University of California, Los Angeles, USA**  
X chromosome dosage compensation in early human development

All meals will be taken in the 1877 Restaurant.

- 09:30**      **Laurent David – University of Nantes, France**  
Pseudo-time modelling coupled to time-lapse imaging reveals dynamics of human preimplantation development
- 09:45**      **Alexander Meissner – Max Planck Institute for Molecular Genetics, Germany**  
The role of DNA methylation in development
- 10:15**      **Philipp Kramer – STEMCELL Technologies Inc., Canada**  
New tools for the generation and culture of 3D organoids
- 10:30**      **Coffee break**
- 11:00**      **Chris Walsh – Harvard Medical School, USA**  
Somatic mutation and cell lineage and the human brain
- 11:30**      **Teresa Rayon – The Francis Crick Institute, UK**  
Understanding species-specific timescales during motor neuron development
- 11:45**      **Alex Pollen\* – University of California, San Francisco, USA**  
Evolution and development of human radial glia
- 12:15**      **Fiona Watt – King's College London, UK**  
Studying cell transition states in mammalian epidermis
- 12:45**      **Lunch**  
**Chair: Kate Storey – University of Dundee, UK**
- 14:00**      **Aryeh Warmflash\* – Rice University, USA**  
Self-organizing stem cell systems to study early human development
- 14:30**      **Matthias Lutolf – Ecole Polytechnique Fédérale de Lausanne, Switzerland**  
Engineering stem cell self-organisation
- 15:00**      **Tracy Grikscheit – Children's Hospital Los Angeles, USA**  
Tissue engineering components of the gastrointestinal tract: from stem cells to organ development
- 15:30**      **Coffee break and group photo**
- 16:15**      **Prisca Liberali\* – Friedrich Miescher Institute for Biomedical Research, Switzerland**  
Self-organization and symmetry breaking in intestinal organoids development
- 16:45**      **Melissa Little – Murdoch Children's Research Institute, Australia**  
Recreating human kidney tissue
- 17:15**      **Christine Seidman – Harvard Medical School, USA**  
Steps and missteps in building a human heart

All meals will be taken in the 1877 Restaurant.

- 17:45 **Elisa Giacomelli – Leiden University Medical Center, The Netherlands**  
Human stem cell-derived cardiac fibroblasts enhance cardiomyocyte maturation in three-dimensional microtissues
- 18:00 **Poster session 1 and pre-dinner drinks in the Evelyn Suite**
- 20:00 **Dinner**

## Tuesday 25 September

From 07:00 **Breakfast**

**Chair: Benoit Bruneau – Gladstone Institutes, USA**

- 09:00 **Belin Selcen Beydag-Tasöz – Danstem/University of Copenhagen, Denmark**  
Understanding human fetal pancreas development using subpopulation sorting, RNA sequencing and single-cell profiling
- 09:15 **Neil Hanley – University of Manchester, UK**  
Integrated strategies to deconstruct human organogenesis
- 09:45 **Olivier Pourquié – Harvard Medical School/Brigham and Women's Hospital, USA**  
The human segmentation clock
- 10:15 **Cantas Alev – Kyoto University, Japan**  
Modeling the segmentation clock with pluripotent stem cells
- 10:30 **Coffee break**
- 11:00 **John Dick – University Health Network, Canada**  
Backtracking human leukaemia evolution to a stem cell origin
- 11:30 **Discussion session: Ethical issues relating to human embryo and stem cell research**  
**Chair: Robin Lovell-Badge – The Francis Crick Institute, UK**  
**Paola Arlotta – Harvard University, USA**  
**Ali Brivanlou – The Rockefeller University, USA**  
**Insoo Hyun – Case Western Reserve University School of Medicine, USA**
- 13:00 **Lunch**
- 14:00 **Free time**
- 15:45 **Coffee break**  
**Chair: Melissa Little – Murdoch Children's Research Institute, Australia**
- 16:15 **Jason Spence – University of Michigan, USA**  
Basal cell differentiation in the developing human lung

All meals will be taken in the 1877 Restaurant.

- 16:45**      **Emma Rawlins – The Gurdon Institute, UK**  
Cell-cell interactions in normal human lung development
- 17:15**      **Aaron Zorn – Cincinnati Children’s Hospital, USA**  
Uncovering the developmental basis of trachea-esophageal birth defects
- 17:30**      **Blair Gage – University Health Network, Canada**  
Generation of functional liver sinusoidal endothelial cells from human pluripotent stem cells
- 17:45**      **Poster session 2 and pre-dinner drinks in the Evelyn Suite**
- 19:45**      **Dinner**

## Wednesday 26 September

- From 07:00**    **Breakfast**
- Chair: François Guillemot – The Francis Crick Institute, UK**
- 09:00**      **Silvia Cappello – Max Planck Institute of Psychiatry, Germany**  
Dissecting molecular and cellular mechanisms of human migrating neurons
- 09:30**      **Anand Swaroop – National Institutes of Health, USA**  
Genetic control of neuronal differentiation in human retina organoids
- 09:45**      **Paola Arlotta – Harvard Medical School, USA**  
Understanding brain development: from the embryo to human brain organoids
- 10:15**      **Coffee break**
- 10:45**      **Arturo Alvarez-Buylla – University of California, San Francisco, USA**  
Origin and self-renewal of adult neural stem cells
- 11:15**      **Malin Parmar – Lund University, Sweden**  
Understanding brain development to guide human pluripotent stem cells to authentic and functional dopamine neurons
- 11:45**      **James Wells – Cincinnati Children’s Hospital Medical Center, USA**  
Human pluripotent stem cell-derived gastro-intestinal organoids: from organogenesis to personalised medicine
- 12:15**      **Olivier Pourquié – Harvard Medical School/Brigham and Women’s Hospital, USA**  
Closing remarks
- 12:30**      **Lunch**  
**Depart**

\*These speakers are supported by The Company of Biologists’ early-career researcher programme.

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