Programme

Sunday 25th September

17:00	**Katherine Brown – Development, UK** Welcome
	Chair: Olivier Pourquié – Harvard Medical School/Brigham and Women's Hospital, USA
17:15	**Azim Surani – Wellcome Trust/CRUK Gurdon Institute, UK** Development of the human germline
17:45	**Edith Heard – Institut Curie, France** Epigenetic dynamics of X-chromosome inactivation in development and disease
18:15	**Ali Brivanlou – The Rockefeller University, USA** Self-organization of the *in vitro* attached human embryo
18:30	**Drinks and posters in the Crystal Ballroom**
20:00	**Dinner in Visions Restaurant**

Monday 26th September

From 06:30	**Breakfast in Visions Restaurant**
	Chair: Patrick Tam – University of Sydney, Australia
09:00	**Austin Smith – WT-MRC Cambridge Stem Cell Institute, UK** Naïve pluripotency in human
09:30	**Fredrik Lanner – Karolinska Institutet, Sweden** Resolving human preimplantation development using single cell RNA sequencing
10:00	**Eric Siggia – The Rockefeller University, USA** A micropattern assay for signalling in the early human embryo
10:30	**Coffee in the Crystal Ballroom**
11:00	**Elias Zambidis – The Johns Hopkins University School of Medicine, USA** Tankyrase inhibition permits reversion to a human naïve state with improved functional pluripotency
11:15	**Silvia Santos – MRC-Imperial College London, UK** Decoding cellular signals: signalling dynamics and commitment during hESC differentiation

11:30	**Jason Spence – University of Michigan, USA** Modelling human development *in vitro* and *in vivo* using pluripotent stem cell derived organoids
12:00	**Brigid Hogan – Duke University, USA** Genome editing of human lung stem cells
12:30	**Lunch in Visions Restaurant**
	Chair: Corinne Houart – King's College London, UK
13:45	**Anne Grapin-Botton – DanStem, University of Copenhagen, Denmark** Three-dimensional models of pancreas development
14:15	**Ray Dunn – Institute of Medical Biology, A* STAR, Singapore** Expandable human pancreatic progenitor cells — a novel inroad toward the production of β cells
14:30	**Alan Mullen – Massachusetts General Hospital, USA** DIGIT is a conserved long noncoding RNA that regulates GSC expression to control definitive endoderm differentiation
14:45	**Takanori Takebe – Yokohama City University, Japan & Cincinnati Children's Hospital, USA** Modelling early human liver development from pluripotency
15:15	**Danwei Huangfu – Sloan Kettering Institute, USA** Forward human genetics for identifying developmental regulators
15:30	**Group photo**
15:45	**Coffee and posters in the Crystal Ballroom**
17:30	**Anestis Tsakiridis – University of Sheffield, UK** Modelling human embryonic development using neuromesodermal progenitors
17:45	**Bruno Reversade – Institute of Medical Biology, A* STAR, Singapore** Arhinia: to have, or not to have, a nose
18:00	**Vincenzo Calvanese – University of California, Los Angeles, USA** Establishing self-renewal during human haematopoietic stem cell development
18:30	**Guy Sauvageau – University of Montreal, Canada** Multifaceted function of polycomb group proteins
19:00	**Drinks and posters in the Crystal Ballroom**
20:00	**Dinner in Visions Restaurant**

Tuesday 27th September

From 06:30	**Breakfast in Visions Restaurant**
	Chair: James Briscoe – The Francis Crick Institute, UK
09:00	**Paola Arlotta – Harvard University, USA** From cortical development to cortex in the dish
09:30	**Matthew Johnson – Boston Children's Hospital, USA** Comparative single-cell RNA sequencing analysis of neural progenitor diversity in human, mouse, and ferret
09:45	**Yechiel Elkabetz – Tel Aviv University, Israel** Streamlined derivation of cortical rosettes and cerebral organoids from pluripotent stem cells by combined pathway inhibition allows standardized modelling of development and disease
10:00	**Pierre Vanderhaeghen – Université Libre de Bruxelles, Belgium** From pluripotent stem cells to cortical circuit
10:30	**Coffee in the Crystal Ballroom**
11:00	**Elena Cattaneo – University of Milan, Italy** Translating the natural history of human striatal development into pluripotent stem cell differentiation
11:30	**Lorenz Studer – Memorial Sloan Kettering Cancer Center, USA** CNS and PNS repair using human pluripotent stem cells
12:00	**Sally Temple – Neural Stem Cell Institute, USA** Human retinal pigmented epithelial stem cells – their plasticity and promise for retinal regeneration
12:30	**Lunch in Visions Restaurant**
	Chair: Kate Storey – Dundee University, UK
13:45	**Gholson Lyon – Cold Spring Harbor Laboratories, USA** New human genetic syndromes involving transcription, translation, and protein stability
14:00	**Yann Barrandon – Swiss Federal Institute of Technology Lausanne, Switzerland** Human thymic epithelial cells: from structure to function
14:30	**Tracy Tran – University of Southern California, USA** Comparative analysis of mouse and human kidney development to inform *in vitro* nephrogenesis
14:45	**Coffee in the Crystal Ballroom**

15:00	Discussion session: translation to the clinic **Panel: Yann Barrandon, Guy Sauvageau, Lorenz Studer, Sally Temple** **Moderator: Katherine Brown**
16:30	Social activities – meet in Reception
19:00	**Drinks in the Foyer**
20:00	**Dinner in the Crystal Ballroom**

Wednesday 28th September

From 06:30	**Breakfast in Visions Restaurant**
	Chair: Benoit Bruneau – Gladstone Institute of Cardiovascular Disease, USA
09:00	**Laurie Boyer – Massachusetts Institute of Technology, USA** An epigenetic blueprint for cardiac development
09:30	**Gordon Keller – University Health Network, Canada** Modelling human cardiovascular development from pluripotent stem cells
10:00	**Boris Greber – Max Planck Institute for Molecular Biomedicine, Germany** Principles of cardiac induction in human ES cells
10:15	**Coffee in the Foyer**
10:45	**Olivier Pourquié – Harvard Medical School/Brigham and Women's Hospital, USA** Making muscle *in vitro*
11:15	**April Craft – Harvard Medical School, USA** Emulating the embryonic development of cartilage to generate functional tissue for repair
11:45	**Todd McDevitt – Gladstone Institute of Cardiovascular Disease, USA** Engineering pluripotent stem cell morphogenesis
12:15	**Closing remarks**
12:30	**Lunch in Visions Restaurant** **Depart**

Posters

1	**Ramiro Alberio**	Transcriptional profiling of single pig PGC demonstrate conserved mechanisms of germ cell specification in mammals
2	**Giovanni Canu**	Cell-cycle dependent mechanisms controlling differentiation of haematopoietic stem cells
3	**Ravi Chalamalasetty**	Understanding the role of Wnt signaling pathway in neuro-mesodermal progenitor lineage commitment
4	**Gabriela Edwards Faret**	The role of glial cells in spinal cord regeneration in Xenopus laevis
5	**Kiara Eldred**	Growing retinas in a dish: mechanisms governing cone subtype fate in the human eye
6	**Charles Emerson**	iPSC-derived myogenic progenitors for studies of human myogenesis and disease modeling
7	**Hiroshi Endo**	Identification of critical signal conditions for inducing hematopoietic mesoderm from human pluripotent stem cell
8	**Lino Ferreira**	High-throughput identification of small molecules that affect human embryonic vascular development
9	**Alessandro Fiorenzano**	Cripto is essential to capture mouse epiblast stem cell and human embryonic stem cell pluripotency
10	**Hannah Glover**	L-Proline induces primed pluripotency through the MAPK and mTOR pathways
11	**Rodrigo Grandy**	Role of cell cycle during early lineage commitment of human pluripotent cells
12	**Boris Greber**	Principles of cardiac induction in human ES cells
13	**Sarah Hadyniak**	Generation of red and green color detecting cone cells in the human eye
14	**Meike Hohwieler**	Human pluripotent stem cell-derived acinar/ductal organoids generate human pancreas upon orthotopic transplantation and allow disease modelling
15	**Wajid Jawaid**	Resolving early mesodermal diversification
16	**Agnieszka Jedrusik**	Selecting the best embryo – how mouse embryology can improve human IVF treatment
17	**Andrew Johnson**	The evolution of pluripotency
18	**Matthew Johnson**	Comparative single-cell RNA sequencing analysis of neural progenitor diversity in human, mouse, and ferret
19	**Sam Kimmey**	Assessing protein synthesis in a continuum of cellular states by mass cytometry
20	**Chrysoula Konstantinidou**	Intrinsic sex differences in cell plasticity
21	**Philipp Kramer**	Reproducible and efficient differentiation of human pluripotent stem cells to pancreatic progenitors using a novel serum-free medium
22	**Alan Leung**	An alternative origin of human ectomesenchyme
23	**Juli Liu**	A novel long noncoding RNA, HBL1, regulates human cardiomyocyte development
24	**Yan-Ru Lou**	Laminin-based matrices for hepatic lineage specification of human pluripotent stem cells
25	**Ioanna Mastomina**	Role and regulation of the cMyc oncogene during mouse body axis elongation
26	**Sandra Melo**	Synergy between master regulators and morphogens during skin differentiation

27	**David Miguel Gomez**	Prediction of the mode and rate of differentiation in a population of stem cells using a branching process
28	**Alan Mullen**	DIGIT is a conserved long noncoding RNA that regulates GSC expression to control definitive endoderm differentiation
29	**Jihan Osborne**	Bifurcating the role of Lin28 in branching morphogenesis
30	**Anna Osnato**	Transcriptional networks variations during cell cycle progression in human embryonic stem cells
31	**Roberto Quaranta**	Investigating the cardiac progenitor stage during cardiomyocyte induction of human pluripotent stem cells
32	**Alexander Ross**	Intestinal organoids derived from human pluripotent stem cells exhibit a unique interaction with TGF beta signalling that is pervasive across human gut segments and developmental stages
33	**Marta Shahbazi**	Development of the human embryo beyond day 7 in a dish
34	**Rachel Shparberg**	A novel growth factor-like role for the amino acid L-proline in driving neural lineage commitment through early primitive ectoderm-like cell, definitive ectoderm-like and neurectoderm populations
35	**Benoit Sorre**	Model systems to study embryonic patterning
36	**Kenichiro Taniguchi**	An apicosome initiates self-organizing morphogenesis in human pluripotent stem cells
37	**Ayala Tovy Hollander**	p53 is essential for DNA methylation fidelity in naive embryonic stem cells and its loss promotes clonal heterogeneity
38	**Tracy Tran**	Comparative analysis of mouse and human kidney development to inform in vitro nephrogenisis
39	**Maria Natalia Vergara**	Development of a high throughput screening platform for stem cell-derived retinal organoids
40	**Laure Verrier**	Development of a human ES cell reporter to distinguish transit amplifying and neurogenic neural progenitors
41	**Lauren Wasson**	The role of chromatin modifying proteins in congenital heart disease: modeling human patient mutations in iPS cells
42	**Zhihong Xue**	A G-rich motif in the lncRNA Braveheart interacts with a zinc finger transcription factor to specify the cardiovascular lineage
43	**Zhongzhou Yang**	A p53 based genetic tracing system to accurately follow postnatal cardiomyocyte expansion in heart regeneration
44	**Erika Yeh**	BRAF mutation leads to distinct phenotypes in CFC patient-derived iPSCs differentiated into glutamatergic cortical neurons and GABAergic interneurons
45	**Venkatram Yellapragada**	The role of makorin ring finger protein-3 (MKRN3) in the development and function of GnRH-secreting neurons
46	**Loukia Yiangou**	Optimisation and characterisation of small molecule cell cycle inhibitors to study cell fate specification of hESCs
47	**John Yu**	Lung stem cell derived organoids for studying alveologenesis and disease modeling
48	**Nadja Zeltner**	Capturing the biology of mild versus severe disease in a pluripotent stem cell-based model of Familial Dysautonomia