

22 June, Day 2



Theme Sessions
New Technologies

NEW TECHNOLOGIES: IMAGING

7:30 – 9:15 EDT

Chairs: Scott E. Fraser, University of Southern California, USA
Prisca Liberali, FMI, Switzerland

SELF-ORGANISATION AND SYMMETRY BREAKING IN MULTICELLULAR SYSTEMS

Prisca Liberali, FMI, Switzerland

LIVE SINGLE CELL QUANTIFICATION OF THE GATA SWITCH DYNAMICS DURING ADULT AND DEVELOPMENTAL ERYTHROPOIESIS

Nouraiz Ahmed, ETH Zurich, Switzerland

QUANTIFYING INTERSTITIAL PH AND CALCIUM CONCENTRATION OF MOUSE BONE MARROW BY INTRAVITAL RATIOMETRIC IMAGING

Shu-Chi Yeh, Massachusetts General Hospital, USA

IN VIVO IMAGING OF HUMAN NEURONAL DEVELOPMENT AT SINGLE CELL RESOLUTION IN CHIMERA MODELS

Krishnan Padmanaabhan, University of Rochester School of Medicine, USA

XIST NUCLEATES LOCAL PROTEIN GRADIENTS TO PROPAGATE SILENCING ACROSS THE X CHROMOSOME DURING DEVELOPMENT

Yolanda Markaki, University of California, Los Angeles (UCLA), USA

SUPER-RESOLUTION IMAGING REVEALS DYNAMIC CHANGES IN CHROMATIN STRUCTURE AND GENE ACTIVITY IN SINGLE CELLS AT THE ONSET OF HETEROKARYON REPROGRAMMING

Jose Martinez-Sarmiento, University of Pennsylvania, USA

MULTIMODAL, MULTIDIMENSIONAL AND MULTIPLEX IMAGING OF INTRINSIC AND EXTRINSIC SIGNALS EMPOWERS INTRAVITAL ANALYSES OF STEM CELLS, CELL LINEAGES AND TISSUE MORPHOGENESIS

Scott E. Fraser, University of Southern California, USA

NEW TECHNOLOGIES: SINGLE-CELL OMICS

14:00 – 15:45 EDT

Chairs: Barbara Treutlein, ETH Zürich, Switzerland
Sten Linnarsson, Karolinska Institute, Sweden

MOLECULAR ARCHITECTURE OF THE DEVELOPING HUMAN BRAIN

Sten Linnarsson, Karolinska Institute, Sweden

MAPPING OF THE NICHE-SPECIFIC EXPRESSION USING PIC-SEQ ANALYSIS IN MOUSE EMBRYONIC DEVELOPMENT

Kyoung Jae Won, University of Copenhagen, Denmark

CEPO UNCOVERS CELL IDENTITY THROUGH DIFFERENTIAL STABILITY

Hani Jieun Kim, The University of Sydney, Australia

DEVELOPMENT WITHOUT DIVISION IN ZEBRAFISH EMBRYOS

Kalki Kukreja, Harvard University, USA

SINGLE-CELL INDIVIDUAL COMPLETE MTDNA SEQUENCING UNCOVERS HIDDEN MITOCHONDRIAL HETEROGENEITY IN HUMAN AND MOUSE OOCYTES

Mo Li, King Abdullah University of Science and Technology (KAUST), Saudi Arabia

MODELING THE IMPACT OF ALZHEIMER'S DISEASE GENETIC RISK ON MICROGLIA STATES AND FUNCTIONS

Martine Therrien, Broad Institute of MIT and Harvard, USA

LINEAGE DYNAMICS DURING BRAIN ORGANOID FORMATION

Barbara Treutlein, ETH Zürich, Switzerland

23 June, Day 3



Theme Sessions
New Technologies

NEW TECHNOLOGIES: CRISPR BASED TECHNOLOGIES

7:30 – 9:15 EDT

Sponsored by: Horizon Discovery Ltd

Chairs: Martin Kampmann, PhD, University of California, San Francisco, USA

Kristen J. Brennand, PhD BSc, Icahn School of Medicine, USA

USING STEM CELLS TO EXPLORE THE GENETICS UNDERLYING BRAIN DISEASE

Kristen J. Brennand, PhD BSc, Icahn School of Medicine, USA

THE IPSC NEURODEGENERATIVE DISEASE INITIATIVE (INDI)

Michael Ward, National Institutes of Health (NIH), USA

A CRISPR PRIME EDITING PIGGYBAC TRANSPOSON ALLOWS FOR ENRICHMENT OF GENE EDITED CELLS IN HUMAN PLURIPOTENT STEM CELLS

Reto Eggenschwiler, Hannover Medical School, Germany

GENOME-WIDE FUNCTIONAL SCREENING OF HUMAN GENETIC DISORDERS IN PLURIPOTENT STEM CELLS AND THEIR NEURAL DERIVATIVES

Atilgan Yilmaz, The Hebrew University of Jerusalem, Israel

A PHENOTYPE-AGNOSTIC FUNCTIONAL SCREENING PLATFORM OPTIMIZED FOR HUMAN PLURIPOTENT STEM CELL-DERIVED LINEAGES

Alessandro Bertero, University of Washington, USA

TINC - A METHOD TO DISSECT REGULATORY COMPLEXES AT SINGLE-LOCUS RESOLUTION - REVEALS AN EXTENSIVE PROTEIN COMPLEX AT THE NANOG PROMOTER

Anja Knaupp, Monash University, Australia

CRISPR-BASED FUNCTIONAL GENOMICS UNCOVER REGULATORS OF DISEASE-ASSOCIATED STATES OF GLIA AND NEURONAL PATHWAYS CONTRIBUTING TO NEURODEGENERATIVE DISEASE

Martin Kampmann, PhD, University of California, San Francisco, USA

NEW TECHNOLOGIES: BIENGINEERING

14:00 – 15:45 EDT

Chairs: Jennifer Lewis, Harvard University, USA

Noo Li Jeon, Seoul National University, Korea

IMPACT PLATFORM FOR VASCULARIZED MICROPHYSIOLOGICAL SYSTEMS

Noo Li Jeon, Seoul National University, Korea

CYBORG ORGANOIDS: MEASURING HUMAN ISLET-WIDE CELL PHYSIOLOGY WITH SOFT IMPLANTED NANOELECTRONICS

Juan Alvarez, Harvard University, USA

MACHINE-GUIDED CELL-FATE ENGINEERING

Evan Appleton, Harvard Medical School, USA

BMP2 SURROGATE USING BISPECIFIC NANOBODIES FOR CARTILAGE REGENERATION

Eri Takematsu, Stanford University, USA

A MICROFLUIDIC ORGANOID PLATFORM FOR STUDYING HUMAN HEART DEVELOPMENT AND FUNCTION

David Sachs, Icahn School of Medicine at Mount Sinai, USA

NANOPATTERNED SCAFFOLDS AUGMENT SURVIVAL OF HUMAN IPSC-DERIVED ENDOTHELIAL CELLS IN THE MURINE ISCHEMIC LIMB

Ngan Huang, Stanford University, USA

IN VITRO VASCULARIZATION OF HUMAN KIDNEY AND CARDIAC TISSUES

Jennifer Lewis, Harvard University, USA