Wednesday, March 5 (Day 1)

11:30-13:25 Registration

13:25-13:30 Welcome address by Eisuke Nishida
13:30-13:35 Introductory remarks by Mitsuru Morimoto

Session 1: Recapitulation of early human development
Chair: Cantas Alev

13:35-14:05 **S1-1**
Naive human PSCs model pre- to post-implantation development
Yasuhiro Takashima (Center for iPS Cell Research and Application, Kyoto University, Japan)

14:05-14:35 **S1-2**
Bioengineering human embryo and organ models
Jianping Fu (University of Michigan, USA)

14:35-15:05 **S1-3**
Pioneer factor-mediated epigenetic mechanisms in cell fate control
Makiko Iwafuchi (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

15:05-15:20 **S1-4*** (P-31)
Functional analysis of asynchronous Hes1 oscillations in the neural tube formation
Yuki Maeda (RIKEN Center for Brain Science, Japan)

15:20-15:50 *Coffee Break*

Session 2: Organoids-on-device
Chair: Ryuji Yokokawa

15:50-16:20 **S2-1**
Recapitulating spatial-temporal microenvironments to mimic mechano-chemical cues during neural tube development
Masaya Hagiwara (RIKEN Center for Biosystems Dynamics Research, Japan)

*Rising Star Talk

16:20-16:50 **S2-2**
Innovations in Bottom-Up Tissue Engineering with Microfluidic Technology for Organoid Research
Shoji Takeuchi (The University of Tokyo, Japan)

16:50-17:05 **S2-3*** (P-51)
Establishment of a hiPSC-derived liver-on-a-chip for personalized drug metabolism studies
Isabel Tamargo-Rubio (University Medical Center Groningen, The Netherlands)

Keynote Talk 1
Chair: Mitsuru Morimoto

17:05-17:45 **KT1-1**
Towards the Era of Functional Organoids
Toshiro Sato (Keio University School of Medicine, Japan)

18:30-20:30 Banquet at BDR Lounge

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Thursday, March 6 (Day 2)

Session 3: Urinary system organoids
Chair: Hideya Sakaguchi

9:00-9:30 **S3-1**
Enhancement of Bladder Organoids Through Interaction Between Urotheial Epithelium and Visceral Mesenchyme
Minoru Takasato (RIKEN Center for Biosystems Dynamics Research, Japan)

9:30-10:00 **S3-2**
Engineering human pluripotent stem cells to understand kidney development and disease
Núria Montserrat Pulido (Institute for Bioengineering of Catalonia (IBEC), Spain)

10:00-10:30 **S3-3**
Integrating organoid technology and two/three-dimensional MPS
Ryuji Yokokawa (Kyoto University, Japan)

10:30-11:00 *Coffee Break*

Session 4: The foregut and hindgut derived organoids 1
Chair: Jason Spence

11:00-11:40 **S4-1**
Organoid system for trachea/esophagus development modeling
Mitsuru Morimoto, Aaron Zorn, Keishi Kishimoto (RIKEN Center for Biosystems Dynamics Research, Japan & CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

11:40-12:10 **S4-2**
Engineering tissue complexity into human PSC-derived gastrointestinal organoids
James Wells (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

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Flash Talk by Sponsors
Chair: Minoru Takasato

12:10-12:20 **Open-top multisample dual-view light-sheet microscope for long term live imaging of organoids**
Leica Microsystems K.K.

CELL HANDLER™2 as an Organoid Sorter
Gakuro Harada, PhD.
Yamaha Motor Co., Ltd.

12:20-13:10 *Group Photo & Lunch*

13:10-14:30 **Poster Session 1**
13:10-14:10 Presenters of odd-numbered posters
14:10-14:30 Free discussion

Session 5: The foregut and hindgut derived organoids 2
Chair: Kristi S. Anseth

14:30-15:00 **S5-1**
Organoid-guided Precision Hepatology
Takanori Takebe (CuSTOM, Cincinnati Children's Hospital Medical Center, USA, / Osaka University, Japan / Institute of Integrated Research, Institute of Science Tokyo, Japan)

15:00-15:30 **S5-2**
Interrogating stem cell niches during human lung development
Jason Spence (The University of Michigan, USA)

15:30-15:45 **S5-3*** (P-44)
Investigating the mechanisms by which SMAD6 mutations cause tracheoesophageal birth defects
Vivien Sauer (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

15:45-16:15 *Coffee Break*

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*Rising Star Talk

Session 6: Approaches to creating advanced organoids
Chair: Jianping Fu

16:15-16:45 **S6-1**
Engineering high-fidelity human cochlear organoids
Eri Hashino (Indiana University School of Medicine, USA)

16:45-17:15 **S6-2**
Making MOChi: Taking cues from the embryo to build Midfacial Organoids on a Chip
Samantha Brugmann (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

17:15-17:30 **S6-3*** (P-06)
Modelling human development using pancreatic organoid
Jonathan A. Brassard (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

(Speaker Dinner)

*Rising Star Talk

Friday, March 7 (Day 3)

Session 7: Clinical applications of organoids
Chair: Takanori Takebe

9:00-9:30 **S7-1**
Characterization of mesenchymal support for in vivo GI organoid engraftment
Michael A. Helmrath (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

9:30-10:00 **S7-2**
Primary lung alveolar organoids as a method for mechanistic regenerative biology and disease modeling
William Zacharias (CuSTOM, Cincinnati Children's Hospital Medical Center, USA)

10:00-10:30 **S7-3**
The creation of heart organoids targeted for medical applications
Hidetoshi Masumoto (RIKEN Center for Biosystems Dynamics Research, Japan)

10:30-11:00 *Coffee Break*

Session 8: Customized chemical-physical environment for organoids
Chair: Masaya Hagiwara

11:00-11:30 **S8-1**
Advances in dynamic and responsive materials for intestinal organoid culture
Kristi S. Anseth (University of Colorado Boulder, USA)

11:30-12:00 **S8-2**
Approaches to generate organoids that show robust morphogenesis and perturb them
Sharad Ramanathan (Harvard University, USA)

12:00-12:15 **S8-3*** (P-55)
Emergent Tissue Morphogenesis in Limb Development: A Synergy of 2.5D, 3D Cultures and Mathematical Modeling
Rio Tsutsumi (Institute for the Advanced Study of Human Biology (ASHBi), Kyoto University, Japan)

*Rising Star Talk

12:15-13:10	*Lunch*

13:10-14:30	**Poster Session 2** 13:10-14:10 Presenters of Even-numbered posters 14:10-14:30 Free discussion

Session 9: Brain organoid
Chair: Aaron Zorn

14:30-15:00	**S9-1** **Creating dorso-ventral spinal cord organoid** Hideya Sakaguchi (BDR-Otsuka Pharmaceutical Collaboration Center, RIKEN Center for Biosystems Dynamics Research, Japan)
15:00-15:15	**S9-2*** (P-46) **Light-induced spatial ciliary signaling regulates the dorsal/ventral regionalization of human brain organoids** Issei S. Shimada (Nagoya City University, Japan)

Keynote Talk 2
Chair: James Wells

15:15-15:55	**KT2-1** **Exploring the human gut with bioengineered models and single-cell technologies** J. Gray Camp (Institute of Human Biology (IHB), Roche Pharma Research and Early Development, Roche Innovation Center Basel, Switzerland)
15:55-16:00	Closing remarks by Aaron Zorn

*Rising Star Talk