Monday, March 4 (Day 1)

9:00-10:00 Registration

10:00-10:05 Opening Remarks by Eisuke Nishida

Session 1: Developmental timing and tempo (1)
Chair: Mitsuru Morimoto

10:05-10:30 **S1-1**
The Dynamics of Spinal Cord Development
James Briscoe (The Francis Crick Institute, UK)

10:30-10:55 **S1-2**
Adjusting the timing of mammalian development
Aydan Bulut-Karslioglu (Max Planck Institute for Molecular Genetics, Germany)

10:55-11:10 **S1-3***
Same Clock Ticks Different Time: Molecular Insights into Temporal Scaling of Neurogenesis
Quan Wu (Kyoto University, Japan)

11:10-11:40 *Coffee Break*

Chair: Yumi Konagaya

11:40-12:05 **S1-4**
How ultradian gene expression oscillations can be used to measure time to differentiation
Nancy Papalopulu (University of Manchester, UK)

12:05-12:30 **S1-5**
Spatial regulation of extracellular matrix turnover rates guides macro-scale organ shape
Hironobu Fujiwara (RIKEN Center for Biosystems Dynamics Research, Japan)

*Selected Talk

12:30-13:30 *Lunch*

13:30-15:00 **Poster Session 1**
13:30-14:30 Presenters of Odd numbered posters
14:30-15:00 Free discussion

Session 2: Biological time-defining mechanisms & technologies (1)
Chair: Mariko Okada

15:00-15:25 **S2-1**
Imaged-based prediction of single-cell transcriptomic phenotypes and beyond
Katsuyuki Shiroguchi (RIKEN Center for Biosystems Dynamics Research, Japan)

15:25-15:50 **S2-2**
No Flight of Fancy: Manifold-Constrained Statistical Inference on Cellular Process Dynamics
Gioele La Manno (Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland)

15:50-16:05 **S2-3***
Time-Dependent Proliferation of Ventral Foregut Primes Enhancer Landscape for Organ-Specific Differentiation
Yan Fung Wong (University of Copenhagen, Denmark)

16:05-16:35 *Coffee Break*

Chair: Tomoya Kitajima

16:35-17:00 **S2-4**
Life-long Persistence of Nuclear Proteins and RNAs in the Brain
Martin Hetzer (Institute of Science and Technology Austria, Austria)

*Selected Talk

17:00-17:25 **S2-5**
Dysregulation of ribosome-associated quality control elicits cognitive disorders via overaccumulation of TTC3
Motomasa Tanaka (RIKEN Center for Brain Science, Japan)

17:25-17:50 **S2-6**
Landscapes of protein self-assembly and quality control across the lifespan
Daniel Jarosz (Stanford University, USA)

18:00-20:30 Social Gathering at RIKEN BDR Lounge

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*Selected Talk

Tuesday, March 5 (Day 2)

Session 3: Developmental timing and tempo (2)
Chair: James Briscoe

9:30-9:55 **S3-1**
Temporal disparities between sexes creates sexual conflict that contribute to the persistence of size variability
Maria Dominguez Castellano (Instituto de Neurociencias, Alicante, Spain)

9:55-10:20 **S3-2**
Neuronal subtype specification in the developing nervous system by a common temporal transcription factor sequence
Andreas Sagner (FAU Erlangen-Nürnberg, Germany)

10:20-10:35 **S3-3***
Tbx6/Ripply mechanism as a dynamic to static converter in somite segmentation
Taijiro Yabe (National Institute for Basic Biology, Japan)

10:35-11:05 *Coffee Break*

Chair: Yu-Chiun Wang

11:05-11:30 **S3-4**
Geometry and landscape for the segmentation clock
Paul François (Université de Montréal, Canada)

11:30-11:45 **S3-5***
Towards reconstituting primate axial development in vitro
Cantas Alev (Kyoto University, Japan)

11:45-13:00 *Group Photo & Lunch*

13:00-14:30 **Poster Session 2**
13:00-14:00 Presenters of Even numbered posters
14:00-14:30 Free discussion

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*Selected Talk

Session 4: Dynamics in homeostasis
Chair: Hironobu Fujiwara

14:30-14:55 **S4-1**
Spermatogenic cycle and wave: self-organizing dynamical patterns of germ cell turnover in the mouse testis
Shosei Yoshida (National Institute for Basic Biology, Japan)

14:55-15:20 **S4-2**
Using 3D Epithelioids to study long-term tissue responses
Alberto Pradilla-Dieste (The Gurdon Institute, University of Cambridge, UK)

15:20-15:35 **S4-3***
Growth of the maternal intestine during reproduction
Tomotsune Ameku (Imperial College London, UK)

15:35-16:05 *Coffee Break*

Chair: Takefumi Kondo

16:05-16:30 **S4-4**
Erebosis, a new cell death mechanism during homeostatic turnover of gut enterocytes
Sa Kan Yoo (RIKEN Center for Biosystems Dynamics Research, Japan)

16:30-16:55 **S4-5**
Phase transition of epithelial tissues through ERK-mediated mechanical feedback
Tsuyoshi Hirashima (Mechanobiology Institute, National University of Singapore, Singapore)

16:55-17:20 Presentation by Zoom
S4-6
Somatic mutation in normal tissues
Inigo Martincorena (Wellcome Sanger Institute, UK)

*Selected Talk

Wednesday, March 6 (Day 3)

Session 5: Hallmarks and drivers of aging
Chair: Katsuyuki Shiroguchi

9:30-9:55 **S5-1**
Towards healthy ageing: Investigating the regulation of protein aggregation
Della David (Babraham Institute, UK)

9:55-10:20 **S5-2**
Aging-related changes to stem cells and the stem cell niche
Leanne Jones (University of California, San Francisco, USA)

10:20-10:45 **S5-3**
Cell biological mechanisms of aging-associated aneuploidy in eggs
Tomoya Kitajima (RIKEN Center for Biosystems Dynamics Research, Japan)

10:45-11:15 *Coffee Break*

Chair: Sa Kan Yoo

11:15-11:40 **S5-4**
Clock Aging: Molecular basis for age-related functional decline
Hikari Yoshitane (The University of Tokyo, Japan)

11:40-12:05 **S5-5**
NFkB Dynamics And Transcriptional Regulation In Cellular Senescence
Mariko Okada (Institute for Protein Research, Osaka University, Japan)

12:05-13:05 *Lunch*

Session 6: Biological time-defining mechanisms & technologies (2)
Chair: Della David

13:05-13:30 **S6-1**
Energetics of Biological Systems
Jonathan Rodenfels (Max Planck Institute for Molecular Cell Biology and Genetics, Germany)

*Selected Talk

13:30-13:45 **S6-2***
Restoration of biological age during prolonged fasting-refeeding modulated by fasting-responsive linker histone
Kazuto Kawamura (Max Planck Institute for Biology of Ageing, Germany)

13:45-14:00 **S6-3***
Dietary Availability Acutely Governs Puberty Timing via Hypothalamic Neural Circuit
Kazunari Miyamichi (RIKEN Center for Biosystems Dynamics Research, Japan)

14:00-14:25 Presentation by Zoom
S6-4
Cytosine methylation dynamics across the lifespan in mammals
Steve Horvath (Altos Labs, UK)

14:25-14:30 Closing remarks by James Briscoe

*Selected Talk