PROGRAM

Day 1 (11/10) Tuesday

13:30-14:00 Registration

14:00-14:10 Opening Remarks
Keizo Tomonaga [Director of Institute for Life and Medical Sciences, Kyoto University]

PI Session I: Aging, Senescence & Stress Response — Chair: Jongsoon Lee and Keiko Nonomura

14:10-14:30 Aberrant growth factor signaling in senescence and cancer
Chanhee Kang (IMBG)

14:30-14:50 Testicular Microenvironment Dynamics: A Nexus Between Gonadal Homeostasis and Systemic Male Health
Zhi Zhou (ShanghaiTech) [Online]

14:50-15:10 Spatiotemporal regulation of MKK4 dictates switch-like JNK activation and binary cell-fate decisions under stress
Mutsuhiro Takekawa (IMSUT)

15:10-15:30 Regulation of lung mechanics across regeneration and disease
Peng Fei, Sui (SIBCB)

15:30-15:50 Break

PI Session II: Virology, Immunity & Infection 【Core to Core session】 — Chair: Keizo Tomonaga and Takao Hashiguchi

15:50-16:10 HSV-1 evades APOBEC1-mediated antiviral immunity via UL13- and host CDK-mediated activation of its uracil-DNA glycosylase
Akihisa Kato (LiMe)

16:10-16:30 Epitranscriptomic Regulation of Endogenous RNA ligands of MDA5
Helene Minyi Liu (IBMB)

16:30-16:50 Decoding and manipulating tumor-immune interaction with proximity labeling
Shuo Han (SIBCB)

16:50-17:10 A Stress-Responsive Pathway Linking Inflammation and Energy Metabolism
Jaeseok Han (SIMS)

17:10-17:30 Tumor assembloids: A novel paradigm for modeling dynamic cellular interactions in human cancers
Kunyoo Shin (IMBG)

17:30-18:30 Break /Hotel Check in

18:30- Dinner (Welcome Reception)

Day 2 (11/11) Wednesday

PI Session III: Cellular Senescence & Tumor Biology — Chair: Atsushi Iwama and Masatoshi Ohgushi

9:00-9:20	Metabolic control of chondrocyte senescence in osteoarthritis Jin-Hong Kim (IMBG)
9:20-9:40	*IP_3-mediated ER stress Response and Apoptotic stress Response* Katsuhiko Mikoshiba (ShanghaiTech)
9:40-10:00	Decoding the Tumor Immune Microenvironment: From Genetic Screens to Immunometabolic Reprogramming Guangchuan Wang (SIBCB)
10:00-10:20	Cross talk between hematopoietic stem cell and gastric cancer Yosuke Tanaka (IMSUT)
10:20-10:35	Break

YS Session I: Structural Biology & Biomolecular Mechanics — Chair: Katsuhiko Mikoshiba and Misa Minegishi

10:35-10:45	Chaperone network guides state transitions of proteins during folding maturation. Junsun Park (IMBG)
10:45-10:55	Structural Diversity of RecA Filaments Formed on dsDNA or DNA/RNA Hybrid Tsai, Ching-Hao (IBMB)
10:55-11:05	Constitutive arrestin recruitment by orphan GPR52 via anatypical binding mode Xi Lin (ShanghaiTech) [Online]
11:05-11:15	Lamin A/C Loss Couples ECM Stiffening to Nuclear Deformability and Confined Migration in Pterygium Fibroblasts Muskaan, Gurung (SIMS)
11:15-11:25	Primase Purine Preference Shapes Telomere Evolution to Mitigate the End-Replication Problem Lijuan Fu (SIBCB)
11:25-11:40	Group Photo Session
11:40-13:00	Lunch / Director's meeting

PI Session IV: Neurodevelopment & Human Genetics — Chair: Yoko Yazaki-Sugiyama and Mototsugu Eiraku

13:00-13:20	Regulation of PQE-1A nuclear condensates protects against neurodegeneration upon heterochromatin loss. Chan-Yen Ou (IBMB)
13:20-13:40	Astrocyte senescence during neurodegeneration in Parkinson's disease. Jong-Seok, Moon (SIMS)

13:40-14:00 Genome-wide association study on longitudinal and cross-sectional traits of child health and development in a Japanese population
Natsuhiko Kumasaka (IMSUT)

14:00-14:20 Quo vadis, Cryo-EM? High resolution and high throughput on the JEOL CryoARM300-II with narrow-gap optics
Matthias Wolf (OIST)

14:20-14:40 Break / Prep for Concurrent Symposium (Registration)

14:40-14:50 Opening Remarks for "4D System Development and Regeneration Science Initiative Symposium"
Speaker: Hiroshi Kawamoto

【4D Omics】 Oral Session I : 4D Omics in Development Chair: Gen Kondoh

14:50-15:10 Exploring primate cortical folding through spatial transcriptomics
Jun Hatakeyama (IMEG)

15:10-15:30 A brain lipidome atlas: cell-type-specific lipidomic profiles in the human and mouse brains
Shota Yamamoto (MIB)

15:30-15:50 Reconstructing human tissue development with stem cell-derived organoids
Mototsugu Eiraku (LiMe)

15:50-16:10 A Spatiotemporal Transcriptome Atlas of Human Kidney Development
Ryuichi Nishinakamura (IMEG)

Poster session／Coffee Break

16:10-17:00 Poster session (odd number)

17:00-17:50 Poster session (even number)

17:50-18:00 Break

18:00- Dinner (Joint Reception)

Day 3 (11/12) Thursday

YS Session II: Genome Integrity, Infection & RNA Regulation — Chair: Feilong Meng and Kosuke Yusa

9:00-9:10	A Dormant Sentinel System for Infection-Triggered Gene Control in *Aedes aegypti* cells Yu-Ning Huang (IBMB)
9:10-9:20	abcFISH enables multiplexed, single-molecule visualization of circular RNA spatial heterogeneity Yuxin Liu (SIBCB)
9:20-9:30	Parallel ZNF598 and GIGYF2 pathways mediate conserved collision dependent mRNA decay with divergent endonucleolytic features Satoshi Hashimoto (IMSUT)
9:30-9:40	RNA binding proteins drive myeloid leukemia Ayuna Hattori (LiMe)
9:40-9:50	Structure and assembly of the MmpL5/ MmpS5 efflux transporter from *Mycobacterium tuberculosis* Zhiqi Xiong (ShanghaiTech) [Online]
9:50-10:00	Break

【4D Omics 】Oral Session Ⅱ: 4D Omics in Tissue Homeostasis — Chair: Yoshinaga Ito

10:00-10:20	Zinc homeostasis underpins proteostasis in the early secretory pathway Yuta Amagai (MIB)
10:20-10:40	Medullary cavity expansion is mediated by distinct cell populations during fetal bone development Shinichiro Sawa (MIB)
10:40-11:00	Uncovering single-cell spatial architecture through large-scale spatial transcriptomics with DeepSpaceDB Alexis Vandenbon (LiMe)
11:00-11:10	Awards Ceremony & Closing Remarks for "4D System Development and Regeneration Science Initiative Symposium" Speaker: Hiroshi Kawamoto

Special Lecture — Chair: Hiroshi Kawamoto

11:10-12:10	Ken-Ichi Arai Award Lecture and Ceremony / Special Lecture for 4D system symposium Speaker: Keiji Hirota (Professor, Department of Immunology and Inflammation,Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, Japan) Title: Type 3 immune responses in host defence and chronic inflammation
12:10–13:00	Lunch

YS Session III: Neuroscience, Metabolism & Physiology — Chair: Jae Bum KIM and Hiroyuki Mori

13:00-13:10 A reciprocal neuromodulatory circuit that controls the persistence of the stress state
Myungmo An (IMBG)

13:10-13:20 Opposing Roles of Adipocyte and Adipose Tissue Macrophage LPL (Lipoprotein Lipase) in Obesity
Eveline (SIMS)

13:20-13:30 Competitive stem-cell quality-control safeguards skin youth
Kyosuke Asakawa (IMSUT)

13:30-13:40 Hypothermic Conditions Impair GnRH Pulse Generator Activity and Gametogenesis
Teppei Goto (LiMe)

13:40-13:50 SynGAP forms condensates from nanomolar concentrations and recruits PSD95 and synaptic membrane proteins, suggesting a role in early synapse formation
Saahil Acharya (OIST)

13:50-14:00 Break

PI session V: Structural Biology & Molecular Pharmacology — Chair: Ming-Jiun Yu and Yukihiko Sugita

14:00-14:20 Molecular Mechanisms of Diuretics: From Protein Structures to Precision Medicine
Chien-Ling Lee (IBMB)

14:20-14:40 The Interplay of ligand recognition, receptor activation, and signaling regulation at the Class-A GPCR Dimer
Fei Xu (ShanghaiTech) [Online]

14:40-15:00 Mirror-image Antibody Mimetics Generated via Synthetic Chemistry and *in vitro* Protein Evolution
Gosuke Hayashi (LiMe)

15:00-15:20 The plasma membrane: organization, dynamics, and function revealed by ultrafast single-molecule super-resolution imaging
Akihiro Kusumi (OIST)

15:20-15:40 Coffee Break

PI session VI: Cell Homeostasis & Innovative Technologies — Chair: Atsushi Mochizuki and Akiko Makino

15:40-16:00 Cellular mechanism of NAD^+ uptake and its importance in development and disease
Gaofeng Fan (ShanghaiTech) Speaker: Mengyao Zhang [Online]

16:00-16:20 Human Brain Organoid Modeling of Autophagy-Dysregulated Neurodevelopmental Disorders Driven by WDFY3 Deficiency
Jae-won, shim (SIMS)

16:20-16:40 To know, to create, and to operate T cells: Development of a universal off-the-shelf T cell medicine produced from ES/iPS cells for the treatment of leukemia and COVID-19
Hiroshi Kawamoto (LiMe)

16:40-17:00 Cancer Detection via Electrical Impedance Tomography and Optimal Control of Elliptic PDEs
Ugur G. Abdulla (OIST)

17:00-17:20 Break / Prep for Awards

17:20-17:40 Awards Ceremony & Closing Remarks for "32nd East Asia Joint Symposium"
Keizo Tomonaga (Director, Institute for Life and Medical Sciences (LiMe), Kyoto University)

17:40-17:50 Greeting From the Next Host

18:00- Dinner (Closing Reception)

Day 4 (11/13) Friday

8:45-15:15 City Tour ~ To the Kansai International Airport

9:00-11:00 Hotel ~ To the Kansai International Airport