Friday, May 22.　The 1st Day

【2F: Main Hall】

Opening Remarks　12:30～12:40

Keynote Lecture Ⅰ　12:40～13:30

Chair　Yasuhiro Takashima
(CiRA, Kyoto University)

KL1

iPS cell-based therapy for neurological diseases

Presenter　Jun Takahashi
(Center for iPS Cell Research and Application, Kyoto University)

Session 1 : Hematopoiesis Ⅰ　13:30～14:10

Chair　Mamiko Sakata
(Department of Hematology, Faculty of Medicine, University of Tsukuba)

Invited Lecture

O1-1 (13:30～13:55)

iPSC-derived next-generation T cell therapy for EBV-associated lymphomas and chronic active EBV disease

Miki Ando
(Department of Hematology, Juntendo University School of Medicine)

O1-2 (13:55～14:10)

Treg cells prevent hematopoietic stem cell aging through the suppression of autoimmunity.

Yuko Tadokoro
(Division of Molecular Genetics, Cancer Research Institute, Kanazawa University)

Coffee Break　14:10～14:30

Session 2 : Epithelium 14:30～16:05

Chair Emi Nishimura

(Division of Aging and Regeneration, Institute of Medical Science, The University of Tokyo)

Invited Lecture

O2-1 (14:30～14:55)

Inflammatory IL-1 signaling remodels epidermal stem cell compartments by suppressing Wnt activity

Aiko Sada

(Division of Skin Regeneration and Aging, Medical Institute of Bioregulation, Kyushu University)

O2-2 (14:55～15:10)

Fetal reversion from diverse lineages sustains the intestinal stem cell pool and confers stress resilience

Shiro Yui[1], Sakura Kirino[2], Fumiya Uefune[1], Kensuke Miyake[3], Nobuhiko Ogasawara[2], Sakurako Kobayashi[2], Satoshi Watanabe[2], Yui Hiraguri[2], Go Ito[2,4], Keiichi Akahoshi[5], Daisuke Ban[5], Johan H. van Es[6], Hans Clevers[6], Mamoru Watanabe[7], Ryuichi Okamoto[2]

([1]Center for stem cell and regenerative medicine, Institute of Biomedical Engineering, Institute of Science Tokyo, Tokyo, Japan, [2]Department of Gastroenterology and Hepatology, Institute of Science Tokyo, Tokyo, Japan, [3]Institute of Integrated Research, Institute of Science Tokyo, Tokyo, Japan, [4]The Center for Personalized Medicine for Healthy Aging, Institute of Science Tokyo, Tokyo, Japan, [5]Department of Hepatobiliary and Pancreatic Surgery, Institute of Science Tokyo, Tokyo, Japan, [6]Oncode, Hubrecht Institute, Royal Netherlands Academy of Arts and Sciences (KNAW), University Medical Center (UMC) Utrecht, the Netherlands, [7]Organoid Center, Graduate School of Medicine, Juntendo University, Tokyo, Japan)

O2-3 (15:10～15:25)

Pregnancy-responsive fibroblast controls heahlty skin remodeling as a mechano-chemical signaling hub

Yoshihiko Kobayashi[1,2], Kazunori Sunadome[3], Koichiro Maki[2], Hiroki Fukunaga[4], Hitomi Matsubara[5], Sahomi Ohkubo[2], Ritsuko Maki[2], Maki Yoshikawa[2], Aleksandra Tata[6], Purushothama Rao Tata[6], Ken-ichi Matsumoto[7], Taiji Adachi[2], Mitsuhiro Iwaki[4], Takuya Yamamoto[3], Fumiko Toyoshima[1,2]

([1]Medical Research Laboratory, Institute of Science Tokyo, [2]Institute for Life and Medical Sciences, Kyoto University, [3]Center for iPS Cell Research and Applications, Kyoto University, [4]Advanced ICT Research Institute, National Institute of Information and Communications Technology, [5]Center for Integrative Medical Sciences, RIKEN, [6]Department of Cell Biology, Duke University School of Medicine, [7]Interdisciplinary Center for Science Research, Shimane University)

O2-4 (15:25～15:40)

A Comparative Analysis of the Small and Large Intestines Decodes the Temporal Programs of Intestinal Stem Cells.

May Koyama[1], Takuya Yamamoto[1,2,3]

([1]Center for iPS Cell Research and Application (CiRA), Kyoto University, [2]Institute for the Advanced Study of Human Biology (ASHBi), Kyoto University, [3]Medical-Risk Avoidance Based on iPS Cells Team, RIKEN Center for Advanced Intelligence Project (AIP))

Invited Lecture

O2-5 (15:40～16:05)

Dynamic Interplay between Morphogenesis and Cell Fate Determination during Embryogenesis

Takefumi Kondo
(Laboratory for Developmental Genome System, RIKEN Center for Biosystems Dynamics Research)

Coffee Break 16:05 ~ 16:25

Session 3 : Embryo model 16:25 ~ 17:45

Chair Yasuhiro Takashima
(CiRA, Kyoto University)

Invited Lecture

O3-1 (16:25～16:50)

Embryo Model–Based Strategies to Overcome Interspecies Barriers in Human Organ Generation from PSCs

Hideki Masaki
(Stem Cell Therapy Division, Institute of Integrated Research, Institute of Science Tokyo)

O3-2 (16:50～17:05)

Identifying Fates of Aneuploid Cells in a Human Blastocyst Model

Rina C. Sakata[1,2,3], Viviane S. Rosa[1,2], Sarah Cooper[3], Mi Trinh[3], Sam Behjati[3,4], Roser Vento-Tormo[2,3], Marta N. Shahbazi[1,2]
([1]MRC Laboratory of Molecular Biology, Cambridge, UK, [2]The Loke Centre for Trophoblast Research, University of Cambridge, Cambridge, UK, [3]Wellcome Sanger Institute, Cambridge, UK, [4]Department of Paediatrics, University of Cambridge, Cambridge, UK)

O3-3 (17:05～17:20)

Polycomb-mediated repressive architecture primes the 3D blueprint for gene activation during developmental transition

Mio Harachi, Shinsuke Ito, Takashi Kondo, Haruhiko Koseki
(Laboratory for Developmental Genetics,RIKEN Center for Integrative Medical Sciences (IMS))

Invited Lecture

O3-4 (17:20～17:45)

Naive Human PSCs Model Pre- to Post-Implantation Development

Yasuhiro Takashima
(CiRA, Kyoto University)

Short Break 17:45 ~ 17:55

Miltenyi Biotec technical seminar for multi-dimensional stem cell research 17:55～18:10

Presenter Yoichi Uda
(Miltenyi Biotec K.K.)

Sponsored by：Miltenyi Biotec K.K.

Panel Discussion：Let's Talk About Stem Cells 18:10～18:40

Discussion Leader

Shosei Yoshida
(Division of Germ Cell Biology, National Institute for Basic Biology, National Institutes of Natural Sciences)

【2F: Reception Hall B】

Poster Session (Free Discussion) 18:40～20:10

P-1

Topography-driven spatial patterning of epidermal proliferation in a 3D skin culture with a micropatterned scaffold

Mizuho Ishikawa[1], Youna Katanosaka[1,2], Kenji Izumi[3], Aiko Sada[1]
([1]Division of Skin Regeneration and Aging, Medical Institute of Bioregulation, Kyushu University, [2]Graduate School of Medical Sciences, Kyushu University, [3]Division of Biomimetics, Graduate School of Medical and Dental Sciences, Niigata University)

P-2

Investigation of the Mechanisms Underlying Testicular Regeneration in Newts

Mai Takehara[1,2], Mitsuki Kyakuno[2,3], Mizuki Honda[1], Yukio Sato[5], Takashi Takeuchi[5], Yasuyuki Ohkawa[6], Shinya Oki[4], Takuya Imamura[1], Toshinori Hayashi[1,2]
([1]Graduate School of Integrated Sciences for Life, Hiroshima University, [2]Amphibian Research Center, Hiroshima University, [3]Faculty of Life and Environmental Sciences, Shimane University, [4]Institute of Resource Development and Analysis, Kumamoto University, [5]School of Life Science, Faculty of Medicine,Tottori University, [6]Division of Transcriptomics, Medical Institute of Bioregulation, Kyushu University)

P-3

β-methylamino-L-alanine (BMAA) induces a pre-senescent state in neurons differentiated from human neural stem cells

Yui Ebina[1,2], Myat Nyein Khine[1], Renu Wadhwa[1], Kazumi Hirano[1,2]
([1]AIST-INDIA DAILAB, National Institute of Advanced Industrial Science and Technology (AIST), [2]Department of Biotechnology, Graduate School of Engineering, Tokyo University of Agriculture and Technology)

P-4

Fucoxanthin; a candidate drug for stress and age-related brain dysfunction

Khine Myat Nyein, Kazumi Hirano, Tomoyo Ochiishi, Sunil C Kaul, Motomichi Doi, Renu Wadhwa
(AIST-INDIA DAILAB, National Institute of Advanced Industrial Science and Technology (AIST))

P-5

Analysis of differences in state transitions between spermatogonial stem cells and pluripotent stem cells

Tosei Hanai[1,2], Shinnosuke Suzuki[1,2], Shosei Yoshida[1,2]
([1]Division of Germ Cell Biology, National Institute for Basic Biology, National Institutes of Natural Sciences, [2]Basic Biology Program, Graduate University for Advanced Studies)

P-6

Functional roles of glycosphingolipids in the maintenance of self-renewal and pluripotency in mouse embryonic stem cells

Hayato Ota, Shoko Nishihara
(Glycan and Life Systems Integration Center, Soka University)

P-7

Neural crest-specific SETBP1 mutation disrupts craniofacial skeletogenesis in a novel mouse model of Schinzel-Giedion syndrome.

Hiromi Yamazaki, Koutarou Nishimura, Hiromi Ito, Naomi Matsumoto, Yui Koike, Daichi Inoue
(Department of Cancer Pathology, Graduate School of Medicine, The University of Osaka)

P-8 (O3-2)

Identifying Fates of Aneuploid Cells in a Human Blastocyst Model

Rina C. Sakata[1,2,3], Viviane S. Rosa[1,2], Sarah Cooper[3], Mi Trinh[3], Sam Behjati[3,4], Roser Vento-Tormo[2,3], Marta N. Shahbazi[1,2]
([1]MRC Laboratory of Molecular Biology, Cambridge, UK, [2]The Loke Centre for Trophoblast Research, University of Cambridge, Cambridge, UK, [3]Wellcome Sanger Institute, Cambridge, UK, [4]Department of Paediatrics, University of Cambridge, Cambridge, UK)

P-9

Temporal Lineage Tracing of Stromal Remodeling in Primary Myelofibrosis Development

Ryosuke Konuma, Shun Uemura, Atsushi Iwama
(Division of Stem Cell and Molecular Medicine, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan)

P-10

Physiological aging remodels ocular basal cell dynamics and reduces COL17A1 expression

Yutong Li[1], Shinri Sato[2], Kyosuke Asakawa[1], Emi Nishimura[1]
([1]Division of Aging and Regeneration, Institute of Medical Science, The University of Tokyo, [2]Department of Ophthalmology, Keio University)

P-11

TPO is essential for maintaining hematopoietic stem cell repopulating capacity during aging

Yuya Atsuta[1], Shuhei Koide[1], Motohiko Oshima[1], Ayako Nakamura-Ishizu[2], Atsushi Iwama[1]
([1]Division of Stem Cell and Molecular Medicine, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan., [2]Department of Microscopic and Developmental Anatomy, Tokyo Women's Medical University, Tokyo, Japan)

P-12

Cell competition of epidermal stem cells selectively eliminates DNA damaged stem cells to maintains skin integrity

Kyosuke Asakawa[1], Yuma Kawamura[1], Yutong Li[1], Takashi Yamanashi[2], Takuma Shibata[1], Jun Seita[2], Emi. K Nishimura[1,2]
([1]Division of Aging and Regeneration, Institute of Medical Science, The University of Tokyo, 4-6-1 Shirokanedai, Minato-ku, Tokyo 108-8639, Japan., [2]Advanced Data Science Project, RIKEN Information R&D and Strategy Headquarters, Tokyo 103-0027, Japan; Center for Integrative Medical Sciences, RIKEN, Yokohama, Kanagawa 230-0045, Japan.)

P-13

Effects of mutant IDH1 inhibitors on the self-renewal capacity of ESCs

Takumi Nito, Tadayuki Akagi
(Department of Life, Environment, and Applied Chemistry, Faculty of Engineering, Fukuoka Institute of Technology)

P-14

Phosphorylation–Dependent Activation of STAT3ER Maintains Pluripotency in ES Cells

Kaito Tomonaga[1], Jin Fujita[1], Kousuke Uranishi[2], Atsushi Ueda[3], Tadayuki Akagi[1]
([1]Department of Life, Environment and Applied Chemistry, Faculty of Engineering, Fukuoka Institute of Technology, [2]Division of Biomedical Sciences, Research Center for Genomic Medicine, Saitama Medical University., [3]Department of Forensic Medicine, Tokai University School of Medicine.)

P-15 (O3-3)

Polycomb-mediated repressive architecture primes the 3D blueprint for gene activation during developmental transition

Mio Harachi, Shinsuke Ito, Takashi Kondo, Haruhiko Koseki
(Laboratory for Developmental Genetics,RIKEN Center for Integrative Medical Sciences (IMS))

P-16

Ultradian oscillations of Hes1 regulate proliferation of mouse neural stem cells

Satomi Tsukamoto[1], Taimu Masaki[1,2], Ayumi Goto[1,3], Yuki Maeda[1], Takeru Matsuda[4,5], Junko Hara[1], Hiroshi Kiyonari[1], Ryoichiro Kageyama[1,2,5]
([1]RIKEN Center for Biosystems Dynamics Research, Japan, [2]Graduate School of Medicine, Kyoto University, Japan, [3]Graduate School of Biostudies, Kyoto University, Japan, [4]Graduate School of Information Science and Technology, The University of Tokyo, Japan, [5]RIKEN Center for Brain Science, Japan)

P-17

PRC1 competes with chromatin remodeling factors to safeguard nucleosome occupancy post-replicative chromatin maturation

Junichiro Takano, Shinsuke Ito, Haruhiko Koseki
(RIKEN, Center for Integrative Medical Sciences Division of Devlopmental Genetics)

Saturday, May 23.　The 2nd Day

【2F: Main Hall】

Keynote Lecture Ⅱ　9:00～9:50

Chair　Shosei Yoshida
(Division of Germ Cell Biology, National Institute for Basic Biology, National Institutes of Natural Sciences)

KL2

Transdifferentiation and Stem Cells: A Historical Perspective on Regeneration

Presenter　Kiyokazu Agata[1,2]
([1]Former Director General, National Institute for Basic Biology (NIBB), [2]Emeritus Professor, Kyoto University)

Session 4 : Regeneration　9:50～10:40

Chair　Shosei Yoshida
(Division of Germ Cell Biology, National Institute for Basic Biology, National Institutes of Natural Sciences)

Invited Lecture
O4-1 (9:50～10:15)

Testis regeneration in the newt: a stem cell perspective

Toshinori Hayashi[1,2], Mai Takehara[1,2], Mitsuki Kyakuno[2], Takashi Takeuchi[3], Mizuki Honda[1], Yasuyuki Ohkawa[4], Shinya Oki[5], Takuya Imamura[1]
([1]Graduate School of Integrated Sciences for Life, Hiroshima University, [2]Amphibian Research Center, Hiroshima University, [3]School of Life Science, Faculty of Medicine, Tottori University, [4]Institute of Resource Development and Analysis, Kumamoto University, [5]Division of Transcriptomics, Medical Institute of Bioregulation, Kyushu University)

Invited Lecture
O4-2 (10:15～10:40)

Identification of essential genes required for termination of the asexual state in planarian reproductive switching

Kazuya Kobayashi
(Department of Biology, Faculty of Agriculture and Life Science, Hirosaki University)

Coffee Break　10:40～11:00

Session 5 : Germline 11:00 ~ 12:05

Chair Katsuhiko Hayashi

(Department of Genome Biology, Graduate School of Medicine, The University of Osaka)

Invited Lecture

O5-1 (11:00~11:25)

Oocyte-specific OMC1 is required for maintaining chromosome cohesion through reproductive life

Kei-ichiro Ishiguro

(Graduate School of Medicine, Chiba University)

O5-2 (11:25~11:40)

Self-organized spermatogenic wave coordinates testis-wide homeostasis

Toshiyuki Sato[1], Shosei Yoshida[1,2]

([1]Division of Germ Cell Biology, National Institute for Basic Biology, [2]Graduate Institute for Advanced Studies, SOKENDAI)

Invited Lecture

O5-3 (11:40~12:05)

Step-resolved accessibility mapping reveals non-monotonic sperm chromatin compaction

Yuki Okada[1,2,12,13], Masashi Hada[1], Chen Zhong[1,2], Erina Inoue[1], Yuko Fukuda[1], Chizuko Koga[1], Mihoko Hosokawa[3], Shin-ichiro Chuma[3], Shoko Sato[4], Hitoshi Kurumizaka[4,5,6], Masahito Ikawa[7,8,9,10], Sung Hee Baek[11]

([1]Laboratory of Pathology and Development, Institute for Quantitative Biosciences, The University of Tokyo., [2]Veterinary Medical Sciences, Graduate School of Agricultural and Life Sciences, The University of Tokyo., [3]Institute for Frontier Medical Sciences, Kyoto University., [4]Laboratory of Chromatin Structure and Function, Institute for Quantitative Biosciences, The University of Tokyo., [5]Department of Biological Sciences, Graduate School of Science, The University of Tokyo., [6]RIKEN Center for Integrative Medical Sciences., [7]Graduate School of Pharmaceutical Sciences, Osaka University., [8]Immunology Frontier Research Center, Osaka University., [9]The Institute of Medical Science, The University of Tokyo., [10]Center for Infectious Disease Education and Research, Osaka University., [11]Creative Research Initiatives Center for Epigenetic Code and Diseases, School of Biological Sciences, Seoul National University., [12]Graduate School of Pharmaceutical Sciences, The University of Tokyo., [13]Graduate School of Art and Sciences, The University of Tokyo.)

Lunch Seminar 12:05 ~ 12:45

Chair Junya Kanda

(Department of Hematology, Graduate School of Medicine, Kyoto University)

Paradigm Shifts in Cell Therapy: Bridging GVHD Treatment and CAR-T Cell Innovation

Presenter Kentaro Fukushima

(Department of Hematology and Oncology, The University of Osaka, Graduate School of Medicine)

Sponsored by : JCR Pharmaceuticals Co., Ltd.

Short Break 12:45～13:00

General Meeting 13:00～13:10

Session 6 : Hematopoiesis Ⅱ 13:10～14:45

Chair Atsushi Iwama

(Division of Stem Cell and Molecular Medicine, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan)

Invited Lecture

O6-1 (13:10～13:35)

Lineage-restricted contributions of human hematopoietic stem cells under steady-state conditions revealed by clonal tracking

Tetsuichi Yoshizato

(Department of Pathology and Tumor biology, Kyoto University)

O6-2 (13:35～13:50)

SMARCC1 Loss Impairs Differentiation and Enhances Self-Renewal in ASXL1-Mutant Hematopoietic Cells

Taiki Ishida[1], Toshiya Hino[1], Hiroki Hayashida[1], Michiaki Sato[1], Yosuke Masamoto[2,3], Mineo Kurokawa[1,2]

([1]Department of Hematology & Oncology, Graduate School of Medicine, The University of Tokyo, [2]Department of Cell Therapy and Transplantation Medicine, The University of Tokyo Hospital, [3]Department of Blood Transfusion, The University of Tokyo Hospital)

O6-3 (13:50～14:05)

Germline JAK2 H608Y Drives IL-1β–Centered Proinflammatory Stromal Remodeling in Myeloproliferative Neoplasms

Kohshi Ohishi[1], Komei Nishimura[12,3], Ryoichi Ono[4], Keiki Nagaharu[2,5], Eiko Ohya[2,3], Takuya Tsuji[6], Makoto Ikejiri[7], Akihide Nakamura[2,4], Tetsuya Nosaka[4], Isao Tawara[2], Yuka Sugimoto[2]

([1]Transfusion Medicine and Cell Therapy, Mie University Hospital, [2]Department of Hematology and Oncology, Mie University Graduate School of Medicine, [3]Department of Hematology, Matsusaka Chuo General Hospital, [4]Department of Microbiology and Molecular Genetics, Mie University Graduate School of Medicine, [5]Division of Molecular Hematology, Lund Stem Cell Center, Lund University, [6]Faculty of Medicine, Mie University, [7]Department of Clinical Laboratory, Mie University Hospital)

O6-4 (14:05～14:20)

***Akkermansia muciniphila*-derived factor induced extramedullary hematopoiesis (EMH)**

Md Naeem Hossain[1], Yuxin Wang[1], Takuya Shiota[2], Hitoshi Takizawa[1,3]

([1]Laboratory of Stem Cell Stress, International Research Center for Medical Sciences, Kumamoto University, [2]Frontier Science Research Center, Department of Biological Science, University of Miyazaki, [3]Center for Metabolic Regulation of Healthy Aging (CMHA), Kumamoto University)

Invited Lecture

O6-5 (14:20～14:45)

Identification of an endogenous expander for HSCs

Keiyo Takubo[1,2,3]

([1]Department of Cell Fate Biology and Stem Cell Medicine, Tohoku University Graduate School of Medicine, [2]Department of Stem Cell Biology, National Institute of Global Health and Medicine, Japan Institute for Health Security, [3]Kanagawa Institute of Industrial Science and Technology (KISTEC))

Award Ceremony 14:45 ~ 14:55

Closing Remarks 14:55 ~ 15:00