

Program

June 27, 2013

Registration 12:00 -

12:55 - 13:00 Opening Remarks: Hiroo Iwata

(Director of Institute for Frontier Medical Sciences, Kyoto University)

13:00 - 14:15 Session 1. Extracellular Matrix Engineering

Chair: Hiroo Iwata and Tatsuo Nakamura

Engineering hydrogels as synthetic extracellular matrices for cell culture and tissue regeneration [30 min]

Kristi S. Anseth (University of Colorado, U.S.A.)

Functional hydrogels as cell scaffolds for tissue regeneration [20 min]

Masaya Yamamoto (Institute for Frontier Medical Sciences, Kyoto University)

Untangling the complexity of the extracellular matrix: From the matrixome database to the innovation of stem cell technology [25 min]

Kiyotoshi Sekiguchi (Institute for Protein Research, Osaka University)

14:15 - 14:25 Intermission 1.

14:25 - 15:40 Young Investigator Forum 1.

Chair: Akihiro Kusumi and Shimon Sakaguchi

Pleiotropic nature of hematopoietic stem cell responses to an inflammatory cytokine IL-1 [15 min]

Makoto Otsu (Institute of Medical Science, University of Tokyo)

Distribution and function of IL-7-expressing cells in intestinal tissues [15 min]

Takahiro Hara (Institute for Virus Research, Kyoto University)

Regulation of innate immune response through a CCCH-type zinc finger protein, ZAPS [15 min]

Sumio Hayakawa (Institute for Genetic Medicine, Hokkaido University)

A cytotoxic type III secretion effector of *Vibrio parahaemolyticus* targets vacuolar H⁺-ATPase subunit c and ruptures host cell lysosomes [15 min]

Shigeaki Matsuda (Research Institute for Microbial Diseases, Osaka University)

Filamin acts as a key regulator in epithelial defence against transformed cells [15 min]

Mihoko Kajita (Institute for Genetic Medicine, Hokkaido University)

15:40 - 16:00 Intermission 2.

16:00 - 16:50 Session 2. Regulation of Organogenesis

Chair: Jun Takahashi and Norio Nakatsuji

Physical forces as a regulator of morphogenesis and homeostasis - paving a way to medical applications - [25 min]

Toshihiko Ogura (Institute of Development, Aging and Cancer, Tohoku University)

Ultradian oscillations in somitogenesis and neurogenesis [25 min]

Ryoichiro Kageyama (Institute for Virus Research, Kyoto University)

17:00 - 19:00 Poster Session

P-1

Inferring gene regulatory network from RNA-seq data of mouse hematopoietic stem and progenitor cells

Sung-Joon Park (Institute of Medical Science, University of Tokyo)

P-2

Roles of maternal embryonic leucine zipper kinase, Melk, in stem cells

Rika Saito (Institute of Medical Science, University of Tokyo)

P-3

Identification of proteins binding to the unique domain in RANK required to establish osteoclastogenic signals

Kazuaki Tsumura (Institute of Medical Science, University of Tokyo)

P-4

Characterization of PCTK1 as a Novel Regulator for Oriented Cell Division

Sayaka Iwano (Institute for Virus Research, Kyoto University)

P-5

Oscillatory expression of bHLH transcriptional factors in neural stem cells

Itaru Imayoshi (Institute for Virus Research, Kyoto University)

P-6

The Lin28b/ let-7 axis regulates the proliferation of embryonic hepatoblasts

Yasuo Takashima (Medical Institute of Bioregulation, Kyushu University)

P-7

Identification of a novel mTOR target linking to transcriptional regulation and cancer progression

Hirokazu Nakatsumi (Medical Institute of Bioregulation, Kyushu University)

P-8

Selective requirement of DOCK8 for dendritic cell migration in three-dimensional environments

Yosuke Harada (Medical Institute of Bioregulation, Kyushu University)

P-9

C-type lectin receptor Mincle and MCL mediate acquired immunity induced by mycobacterial glycolipid TDM

Daiki Mori (Medical Institute of Bioregulation, Kyushu University)

P-10

SPACA1-deficient male mice are infertile with abnormally shaped sperm heads reminiscent of globozoospermia

Yoshitaka Fujihara (Research Institute for Microbial Diseases, Osaka University)

P-11

The I κ B kinase complex regulates the stability of cytokine-encoding mRNA induced by TLR/IL-1R by controlling degradation of regnase-1

Hideki Iwasaki (Research Institute for Microbial Diseases, Osaka University)

P-12

Micro RNA-124a is required for hippocampal axogenesis and retinal cone survival through Lhx2 suppression

Shoichi Irie (Institute for Protein Research, Osaka University)

P-13

Quantitative analysis of deamidation and isomerization in β 2-microglobulin by ^{18}O labeling

Masafumi Fukuda (Institute for Protein Research, Osaka University)

P-14

The novel PI3K-mTOR inhibitor, BEZ235, circumvents erlotinib-resistance of EGFR mutant lung cancer cells triggered by HGF

Takako Sano (Cancer Research Institute, Kanazawa University)

P-15

CCL3-CCR5 axis regulates progression of fibrosis/carcinogenesis occurring as a result of chronic colitis in mice

Soichirou Sasaki (Cancer Research Institute, Kanazawa University)

P-16

Roles of mTORC1 signaling in the regulation of glioma malignancy

Daisuke Yamada (Cancer Research Institute, Kanazawa University)

P-17

Dullard gene regulates endochondral bone formation via suppression of TGF- β signaling during skeletal development

Tadayoshi Hayata (Medical Research Institute, Tokyo Medical and Dental University)

P-18

Mouse embryonic stem cell-based drug screen for novel modulators of mesoderm and ectoderm differentiation

Yoshimi Uchida (Medical Research Institute, Tokyo Medical and Dental University)

P-19

IQGAP1 functions as a modulator of Dishevelled nuclear localization in Wnt signaling

Toshiyasu Goto (Medical Research Institute, Tokyo Medical and Dental University)

P-20

Maintenance of immature phenotype of the hematopoietic cell clusters in the aorta-gonad-mesonephros region by Sox17

Ikuro Nobuhisa (Medical Research Institute, Tokyo Medical and Dental University)

P-21

Strawberry notch1, a helicase-related chromatin factor, regulates development of mouse preimplantation embryo

Yusuke Watanabe (Institute of Development, Aging and Cancer, Tohoku University)

P-22

Regulation of BRCA1/BARD1 expression by tumor-related E3 ubiquitin ligase

Yumiko Furukawa (Institute of Development, Aging and Cancer, Tohoku University)

P-23

Biomechanical simulation of multicellular tissue morphogenesis: Effects of apical contractility on epithelial curvatures

Satoru Okuda (Institute for Frontier Medical Sciences, Kyoto University/ RIKEN CDB)

P-24

Therapeutic application of EP2 agonist for cartilage regeneration

Makoto Fukuta (Institute for Frontier Medical Sciences, Kyoto University)

P-25

Regeneration of human tumor antigen-specific T cells using the iPSC technology

Kyoko Masuda (Institute for Frontier Medical Sciences, Kyoto University)

P-26

Fabrication of cell aggregates containing biodegradable hydrogel microspheres to control cell behaviors

Shuhei Tajima (Institute for Frontier Medical Sciences, Kyoto University)

P-27

Suppression of allo-immune response by ES cell-derived regulatory macrophage-like cell

Hajime Sasaki (Institute for Genetic Medicine, Hokkaido University)

19:00 - 21:00 Reception. MC: Junya Toguchida

June 28, 2013

9:00 - 10:15 Young Investigator Forum 2.

Chair: Taiji Adachi and Gen Kondo

Regulation of chromatin demethylation [15 min]

Yu-ichi Tsukada (Medical Institute of Bioregulation, Kyushu University)

Functional role of ciliary kinases in cilia development and human diseases [15 min]

Yoshihiro Omori (Institute for Protein Research, Osaka University)

Gastric tumorigenesis by activation of tumor necrosis factor-alpha signaling in bone marrow-derived cells [15 min]

Tomo-o Ishikawa (Cancer Research Institute, Kanazawa University)

The mechanisms of hair follicle aging and stem cell regulation [15 min]

Hiroyuki Matsumura (Medical Research Institute, Tokyo Medical and Dental University)

Max is a repressor of germ-cell-related gene expression in mouse embryonic stem cells [15min]

Ikuma Maeda (Institute of Development, Aging and Cancer, Tohoku University)

10:15 - 10:35 Intermission 3.

10:35 - 11:50 Session 3. Ontogeny of Hematopoietic Cell Lineages

Chair: Takashi Nagasawa and Hirofumi Suemori

Epigenetic regulation of neural stem cell differentiation and brain function [25 min]

Tetsuya Taga (Medical Research Institute, Tokyo Medical and Dental University)

The lineage restriction process during hematopoiesis: revision of the classical concept of the myeloid-lymphoid dichotomy [20 min]

Hiroshi Kawamoto (Institute for Frontier Medical Sciences, Kyoto University)

Revisiting the ontogeny of the mononuclear phagocyte system: embryonic and adult hematopoietic contributions [30 min]

Florent Ginhoux (Agency for Science, Technology and Research, Singapore)

11:50 - 13:30 Lunch and Network Organizer Meeting

13:30 - 14:45 Session 4. Cell Differentiation and Tissue Induction
Chair: Yuji Hiraki and Takashi Tada

Direct reprogramming of fibroblasts to hepatocyte-like cells [25 min]
Atsushi Suzuki (Medical Institute of Bioregulation, Kyushu University)

Regulatory mechanisms governing the establishment of the chondro-tendinous/ligamentous junction [20 min]
Chisa Shukunami (Institute for Frontier Medical Sciences, Kyoto University)

Regulation of tendon induction, patterning and elongation [30 min]
Ronen Schweitzer (Shriners Hospital for Children and Oregon Health and Science University, U.S.A.)

14:45 - 15:05 Intermission 4.

15:05 - 15:55 Session 5. Immune responses
Chair: Nobuko Hosokawa and Shoichiro Sumi

A novel strategy of immune regulation in the era of regenerative medicine [25 min]
Ken-ichiro Seino (Institute for Genetic Medicine, Hokkaido University)

Chemokine-mediated fibrotic changes in tumor development and progression [25 min]
Naofumi Mukaida (Cancer Research Institute, Kanazawa University)

15:55 - 16:45 Session 6. Vascular Differentiation and Regeneration
Chair: Atsuko Sehara and Jun Yamashita

Identification of endothelial stem like cells in the preexisting blood vessels [25 min]
Nobuyuki Takakura (Research Institute for Microbial Diseases, Osaka University)

Protease activation triggers the process of tissue regeneration [25 min]
Koichi Hattori (Institute of Medical Science, University of Tokyo)

16:45 - 17:00 Closing

Commendation for Young Investigator Award & Poster Presentation Award

Closing Remarks: Yuji Hiraki

(Associate Director of Institute for Frontier Medical Sciences, Kyoto University)