

The 1st Day : Friday, May 24

2F : Main Hall	
8:00	
9:00	
10:00	9:00~12:00 (予定) 幹細胞若手の会 (つくしの会)
11:00	
12:00	
12:30~12:40	Opening Remarks
12:40~13:30	Keynote Lecture 1 Atsushi Iwama Chair : Fumio Arai ▶ P.3
13:30~13:40	Short Break
13:40~14:45	Session 1 Hematopoietic stem cells O-01~O-03 Chair : Atsushi Hirao ▶ P.3
14:45~15:00	Coffee Break
15:00~16:45	Session 2 Tissue stem cells O-04~O-08 Chair : Emi Nishimura ▶ P.4
16:45~16:55	Short Break
16:55~17:35	Trainee's session (Short presentation) ▶ P.5 P-01~P-09 Chair : Yasuhiro Takashima
17:35~17:50	Miltenyi Biotec technical seminar for multi-dimensional stem cell research
17:50~18:00	Short Break
18:00~18:50	Keynote Lecture 2 ▶ P.7 Ryuichi Okamoto Chair : Mineo Kurokawa
19:00~20:00	Poster Session (Free discussion) ▶ P.7 P-01~P-09 & Reception (2F : Reception Hall B)
20:00	

The 2nd Day : Saturday, May 25

2F : Main Hall	
8:00	
8:30~10:05	Session 3 Pluripotent stem cells O-09~O-13 Chair : Shosei Yoshida ▶ P.10
10:05~10:15	General Meeting
10:15~10:30	Coffee Break
10:30~11:50	Session 4 Cancer stem cells / Organoid O-14~O-17 Chair : Noriko Gotoh ▶ P.11
12:00~12:30	Lunch Seminar Sponsored by : LSI Medience Corporation
12:30~13:00	Coffee Break
13:00~13:50	Keynote Lecture 3 ▶ P.12 Shosei Yoshida Chair : Ayaka Yanagida
13:50~14:40	Session 5 New technologies O-18~O-19 Chair : Ayaka Yanagida ▶ P.12
14:40~14:55	Coffee Break
14:55~15:45	Keynote Lecture 4 ▶ P.12 Masaru Ishii Chair : Katsuhiko Hayashi
15:45~15:55	Award Announcement
15:55~16:00	Closing Remarks
16:00	
17:00	
18:00	
19:00	
20:00	

Friday, May 24. The 1st Day

Opening Remarks 12:30~12:40

Keynote Lecture 1 12:40~13:30

Chair Fumio Arai

(Department of Stem Cell Biology and Medicine, Graduate School of Medical Sciences,
Kyushu University)

KL1

New aspects of hematopoietic stem cells and their bone marrow niche

Presenter 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)

Short Break 13:30~13:40

Session 1: Hematopoietic stem cells 13:40~14:45

Chair Atsushi Hirao

(WPI Nano Life Science Institute (WPI- Nano LSI), Kanazawa University / Division of
Molecular Genetics, Cancer Research Institute)

Invited Lecture

O-01 (13:40~14:05)

Understanding normal and malignant human hematopoiesis

Fumihiko Ishikawa

(Tokyo Medical and Dental University and RIKEN)

O-02 (14:05~14:20)

DNA barcoding unveiled features of subsets of hematopoietic stem cells

Yosuke Tanaka, Toshio Suda

(Kumamoto University IRCMS)

Invited Lecture

O-03 (14:20~14:45)

Cell-to-cell communication regulating angiogenesis in the skeletal system

Yoshiaki Kubota

(Department of Anatomy, Keio University School of Medicine)

Coffee Break 14:45~15:00

Session 2: Tissue stem cells

15:00~16:45

Chair Emi Nishimura

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

Invited Lecture

O-04 (15:00~15:25)

Understanding and manipulating postnatal neuronal migration in health and disease

Kazunobu Sawamoto
(Nagoya City University)

O-05 (15:25~15:40)

NSC fate preference transition from neurogenesis to astroglialogenesis by the FGF signaling negative feedback regulator Sprouty 4

Taichi Kashiwagi^{1,2}, Tetsushi Kagawa², Ikuo Nobuhisa²,
Akihiko Yoshimura³, Tetsuya Taga²
(¹Department of Histology and Neuroanatomy, Tokyo Medical University,
²Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University (TMDU), ³Department of Microbiology and Immunology, Keio University School of Medicine)

O-06 (15:40~15:55)

Fate determination of hair progenitor cells by cyclical dermal micro-niche switching

Makoto Takeo^{1,2}, Koh-ei Toyoshima^{2,3}, Miho Ogawa³, Takashi Tsuji^{2,3}
(¹Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu University, ²RIKEN Center for Developmental Biology (CDB) and RIKEN Center for Biosystems Dynamics Research (BDR), ³OrganTech Inc.)

Invited Lecture

O-07 (15:55~16:20)

The stem cell niche governs the phenotypic antagonism between hair graying and melanoma

Yasuaki Mohri¹, Hironobu Morinaga¹, Tomoki Kato¹, Jialiang Nie¹,
Takashi Yamanashi^{2,3}, Hiroyuki Matsumura¹, Daisuke Nanba¹, Jun Seita^{2,3},
Emi K Nishimura¹
(¹Division of Aging and Regeneration, Institute of Medical Science, The University of Tokyo, ²Advanced Data Science Project, RIKEN Information R&D and Strategy Headquarters, ³Center for Integrative Medical Sciences, RIKEN)

Invited Lecture

O-08 (16:20~16:45)

Applications of lung alveolar organoids derived from human pluripotent stem cells to disease modeling and screening

Shimpei Gotoh
(Center for iPS Cell Research and Application (CiRA), Kyoto University)

Short Break

16:45~16:55

Trainee's session (Short presentation)**16:55~17:35****Chair Yasuhiro Takashima**

(Center for iPS Cell Research and Application (CiRA), Kyoto University)

P-01 (16:55~16:59)**Chromatin remodeling factors BRM and BRG1 regulate the rapid immune response in hematopoietic cells**

Hiroki Nishikawa¹, Mitsuki Matsusaka¹, Haruka Suzuki¹, Hiroki Miyachi¹, Tatsuro Shiina¹, Nonoko Kawabata¹, Tsuyoshi Imasaki¹, Satomi Komori², Yasuyuki Saito², Mika Yoshimura³, Tetsutaro Hayashi³, Terumasa Umemoto⁴, Akira Nishiyama⁵, Tomohiko Tamura⁵, Ryo Nitta¹, Eriko Nitta¹

(¹Division of Structural Medicine and Anatomy, Kobe University Graduate School of Medicine, ²Division of Molecular and Cellular Signaling, Department of Biochemistry and Molecular Biology, Kobe University Graduate School of Medicine, ³Laboratory for Bioinformatics Research, RIKEN Center for Biosystems Dynamics Research, ⁴International Research Center for Medical Sciences, Kumamoto University, ⁵Department of Immunology, Yokohama City University Graduate School of Medicine)

P-02 (16:59~17:03)**Stromal and vascular YAP/TAZ dynamics orchestrate hematopoietic regeneration**

Shun Uemura¹, Masayuki Yamashita¹, Takako Yokomizo-Nakano¹, Ayako Aihara², Takumi Iwawaki², Taito Nishino², Takashi Nagasawa³, Atsushi Iwama¹

(¹Division of Stem Cell and Molecular Medicine, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, ²Biological Research Laboratories, Nissan Chemical Corporation, ³Laboratory of Stem Cell Biology and Developmental Immunology, Graduate School of Frontier Biosciences, Osaka University)

P-03 (17:03~17:07)**Regulatory mechanisms of hematopoietic stem cell senescence by bone marrow microenvironment niche**

Haruka Suzuki, Hiroki Miyachi, Hiroki Nishikawa, Shuhei Kuno, Tatsuro Shiina, Tsuyoshi Imasaki, Satoshi Kikkawa, Ryo Nitta, Eriko Nitta (Kobe University Graduate School of Medicine)

P-04 (17:07~17:11)**The fatty acid elongase ELOVL6 regulates self-renewal of Hematopoietic Stem Cells**

Sakura Kito¹, Takayasu Kato², Yusuke Kiyoki³, Takashi Matsuzaka^{4,5}, Hitoshi Shimano⁴, Shigeru Chiba², Mamiko Sakata-Yanagimoto^{2,6}

(¹Department of Hematology, Graduate School of Comprehensive Human Sciences, University of Tsukuba, ²Department of Hematology, Institute of Medicine, University of Tsukuba, ³Department of Hematology, University of Tsukuba Hospital, University of Tsukuba, ⁴Department of Endocrinology and Metabolism, Institute of Medicine, University of Tsukuba, ⁵Transborder Medical Research Center, University of Tsukuba, ⁶Division of Advanced Hemato-Oncology, Transborder Medical Research Center, Institute of Medicine, University of Tsukuba)

P-05 (17:11~17:15)**Polycomb repressive complex 1.1 negatively regulates inflammatory cell death**

Takanori Fukuta, Yaeko Nakajima-Takagi, Shuhei Koide, Masayuki Yamashita, Motohiko Oshima, 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)

P-06 (17:15~17:19)

Plc11 regulates HSC quiescence via intracellular Ca²⁺ alterations

Tomohiro Yabushita, Yosuke Tanaka, Toshio Suda
(International Research Center for Medical Sciences (IRCMS), Kumamoto University)

P-07 (17:19~17:23)

Regulation of epidermal stem cell heterogeneity by the mechanical environment created by undulating structures of the skin

Mizuho Ishikawa^{1,2}, Xuan Ngo Yen², Jun Mizuno³, Kenji Izumi⁴,
Aiko Sada^{1,2}
(¹Medical Institute of Bioregulation, Kyushu University, ²International Research Center for Medical Sciences (IRCMS), Kumamoto University, ³Academy of Innovative Semiconductor and Sustainable Manufacturing, National Cheng Kung University, Tainan, Taiwan, ⁴Graduate School of Medical and Dental Sciences, Niigata University)

P-08 (17:23~17:27)

Specific roles of ancestor-like cancer stem cells in radio-resistance

Masahiro Yamazaki^{1,2,3}, Mengjiao Li¹, Tatsunori Nishimura¹,
Tsunaki Hongu¹, Shigeyuki Takamatsu², Toshifumi Gabata²,
Masaya Ueno⁴, Atsushi Hirao⁴, Susumu Kohno⁵, Chiaki Takahashi⁵,
Kuniko Horie⁶, Kazuhiro Ikeda⁶, Satoshi Inoue⁶, Noriko Gotoh^{1,7}
(¹Division of Cancer Cell Biol., Cancer Research Institute, Kanazawa University, ²Department of Radiology, Graduate School of Medicine, Kanazawa University, ³WISE program for Nano-Precision Medicine, Science, and Technology, ⁴Division of Molecular Genetics, Cancer Research Institute and WPI-Nano Life Science Institute, Kanazawa University, ⁵Division of Oncology and Molecular Biology, Cancer Research Institute, Kanazawa University, ⁶Division of Systems Medicine and Gene Therapy, Saitama Medical University, ⁷Institute for Frontier Science Initiative, Kanazawa University)

P-09 (17:27~17:31)

Adipsin dependent adipocyte maturation promotes breast cancer invasion

Yohei Shimono¹, Jumpei Yoshida², Takanori Hayashi¹, Eiji Munetsuna¹,
Behnoush Khaledian¹, Yuko Kijima³, Naoya Asai⁴, Kenji Kawada²
(¹Department of Biochemistry, Fujita Health University School of Medicine, ²Department of Medical Oncology, Fujita Health University School of Medicine, ³Department of Breast Surgery, Fujita Health University School of Medicine, ⁴Department of Pathology, Fujita Health University School of Medicine)

Miltenyi Biotec technical seminar for multi-dimensional stem cell research

17:35~17:50

Presenter Sohei Nakayama
(Miltenyi Biotec K.K.)

Sponsored by : Miltenyi Biotec K.K.

Short Break

17:50~18:00

Keynote Lecture 2**18:00~18:50****Chair Mineo Kurokawa**

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

KL2**Regenerative medicine for inflammatory bowel disease****Presenter Ryuichi Okamoto**

(Department of Gastroenterology and Hepatology, Graduate School, Tokyo Medical and Dental University (TMDU))

Poster Session**19:00~21:00****P-01****Chromatin remodeling factors BRM and BRG1 regulate the rapid immune response in hematopoietic cells**Hiroki Nishikawa¹, Mitsuki Matsusaka¹, Haruka Suzuki¹, Hiroki Miyachi¹, Tatsuro Shiina¹, Nonoko Kawabata¹, Tsuyoshi Imasaki¹, Satomi Komori², Yasuyuki Saito², Mika Yoshimura³, Tetsutaro Hayashi³, Terumasa Umemoto⁴, Akira Nishiyama⁵, Tomohiko Tamura⁵, Ryo Nitta¹, Eriko Nitta¹¹Division of Structural Medicine and Anatomy, Kobe University Graduate School of Medicine, ²Division of Molecular and Cellular Signaling, Department of Biochemistry and Molecular Biology, Kobe University Graduate School of Medicine, ³Laboratory for Bioinformatics Research, RIKEN Center for Biosystems Dynamics Research, ⁴International Research Center for Medical Sciences, Kumamoto University, ⁵Department of Immunology, Yokohama City University Graduate School of Medicine)**P-02****Stromal and vascular YAP/TAZ dynamics orchestrate hematopoietic regeneration**Shun Uemura¹, Masayuki Yamashita¹, Takako Yokomizo-Nakano¹, Ayako Aihara², Takumi Iwawaki², Taito Nishino², Takashi Nagasawa³, Atsushi Iwama¹¹Division of Stem Cell and Molecular Medicine, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, ²Biological Research Laboratories, Nissan Chemical Corporation, ³Laboratory of Stem Cell Biology and Developmental Immunology, Graduate School of Frontier Biosciences, Osaka University)**P-03****Regulatory mechanisms of hematopoietic stem cell senescence by bone marrow microenvironment niche**Haruka Suzuki, Hiroki Miyachi, Hiroki Nishikawa, Shuhei Kuno, Tatsuro Shiina, Tsuyoshi Imasaki, Satoshi Kikkawa, Ryo Nitta, Eriko Nitta (Kobe University Graduate School of Medicine)

P-04

The fatty acid elongase ELOVL6 regulates self-renewal of Hematopoietic Stem Cells

Sakura Kito¹, Takayasu Kato², Yusuke Kiyoki³, Takashi Matsuzaka^{4,5},
Hitoshi Shimano⁴, Shigeru Chiba², Mamiko Sakata-Yanagimoto^{2,6}

(¹Department of Hematology, Graduate School of Comprehensive Human Sciences, University of Tsukuba, ²Department of Hematology, Institute of Medicine, University of Tsukuba, ³Department of Hematology, University of Tsukuba Hospital, University of Tsukuba, ⁴Department of Endocrinology and Metabolism, Institute of Medicine, University of Tsukuba, ⁵Transborder Medical Research Center, University of Tsukuba, ⁶Division of Advanced Hemato-Oncology, Transborder Medical Research Center, Institute of Medicine, University of Tsukuba)

P-05

Polycomb repressive complex 1.1 negatively regulates inflammatory cell death

Takanori Fukuta, Yaeko Nakajima-Takagi, Shuhei Koide,
Masayuki Yamashita, Motohiko Oshima, 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)

P-06

PlcII regulates HSC quiescence via intracellular Ca²⁺ alterations

Tomohiro Yabushita, Yosuke Tanaka, Toshio Suda

(International Research Center for Medical Sciences (IRCMS), Kumamoto University)

P-07

Regulation of epidermal stem cell heterogeneity by the mechanical environment created by undulating structures of the skin

Mizuho Ishikawa^{1,2}, Xuan Ngo Yen², Jun Mizuno³, Kenji Izumi⁴,
Aiko Sada^{1,2}

(¹Medical Institute of Bioregulation, Kyushu University, ²International Research Center for Medical Sciences (IRCMS), Kumamoto University, ³Academy of Innovative Semiconductor and Sustainable Manufacturing, National Cheng Kung University, Tainan, Taiwan, ⁴Graduate School of Medical and Dental Sciences, Niigata University)

P-08

Specific roles of ancestor-like cancer stem cells in radio-resistance

Masahiro Yamazaki^{1,2,3}, Mengjiao Li¹, Tatsunori Nishimura¹,
Tsunaki Hongu¹, Shigeyuki Takamatsu², Toshifumi Gabata²,
Masaya Ueno⁴, Atsushi Hirao⁴, Susumu Kohno⁵, Chiaki Takahashi⁵,
Kuniko Horie⁶, Kazuhiro Ikeda⁶, Satoshi Inoue⁶, Noriko Gotoh^{1,7}

(¹Division of Cancer Cell Biol., Cancer Research Institute, Kanazawa University, ²Department of Radiology, Graduate School of Medicine, Kanazawa University, ³WISE program for Nano-Precision Medicine, Science, and Technology, ⁴Division of Molecular Genetics, Cancer Research Institute and WPI-Nano Life Science Institute, Kanazawa University, ⁵Division of Oncology and Molecular Biology, Cancer Research Institute, Kanazawa University, ⁶Division of Systems Medicine and Gene Therapy, Saitama Medical University, ⁷Institute for Frontier Science Initiative, Kanazawa University)

P-09

Adipsin dependent adipocyte maturation promotes breast cancer invasion

Yohei Shimono¹, Jumpei Yoshida², Takanori Hayashi¹, Eiji Munetsuna¹, Behnoush Khaledian¹, Yuko Kijima³, Naoya Asai⁴, Kenji Kawada²

¹Department of Biochemistry, Fujita Health University School of Medicine,

²Department of Medical Oncology, Fujita Health University School of Medicine,

³Department of Breast Surgery, Fujita Health University School of Medicine,

⁴Department of Pathology, Fujita Health University School of Medicine)

Saturday, May 25. The 2nd Day

Session 3: Pluripotent stem cells

8:30~10:05

Chair Shosei Yoshida

(National Institute for Basic Biology)

O-09 (8:30~8:45)

Replacement of variant PRC1 with CBX7-PRC1 blocks de novo Polycomb repression-mediated exit of pluripotent stem cells from self-renewal

Mitsuhiro Endoh¹, Haruhiko Koseki², Hitoshi Niwa¹

(¹Institute of Molecular Embryology and Genetics (IMEG), Kumamoto University,

²RIKEN Center for Integrative Medical Sciences (RIKEN-IMS))

O-10 (8:45~9:00)

AKT2 inhibition accelerates the acquisition of phagocytic ability in iPSCs-derived neutrophils

Toshiya Hino¹, Fumio Nakahara¹, Masashi Miyauchi¹, Yusuke Ito¹,
Yosuke Masamoto¹, Ken Morita¹, Yuki Kagoya¹, Hirotatsu Kojima²,
Mineo Kurokawa^{1,3}

(¹Department of Hematology and Oncology, Graduate School of Medicine, The University of Tokyo, ²Drug Discovery Initiative, Graduate School of Pharmaceutical Sciences, The University of Tokyo, ³Department of Cell Therapy and Transplantation Medicine, The University of Tokyo Hospital)

Invited Lecture

O-11 (9:00~9:25)

Approaching primate early embryo development using pluripotent stem cells

Ayaka Yanagida, Hiroo Sasaki, Iori Sasaki

(Department of Veterinary Anatomy, Graduate School of Agriculture and Life Sciences, The University of Tokyo)

O-12 (9:25~9:40)

Establishment of a Selective Culture System for Spermatogonial Stem Cells (SSCs) and Its Potential Applications

Shinnosuke Suzuki^{1,2}, Shosei Yoshida^{1,2}, Brian Hermann³, Kuniya Abe⁴

(¹National Institute for Basic Biology, ²The Graduate Institute for Advanced Studies, SOKENDAI, ³University of Texas at San Antonio, ⁴RIKEN BioResource Research Center)

Invited Lecture

O-13 (9:40~10:05)

Mechanisms underlying the distinct cell fates during oocyte differentiation

Kanako Ikami

(Howard Hughes Medical Institute/University of California, Davis)

General Meeting

10:05~10:15

Coffee Break

10:15~10:30

Session 4: Cancer stem cells / Organoid**10:30~11:50****Chair Noriko Gotoh**

(Cancer Research Institute, Kanazawa University)

O-14 (10:30~10:45)**Identification of a niche-mimicking synthetic polymer scaffold for the maintenance of neural stem cells in a culture system without growth factors and serum**Tetsuya Taga¹, Norihisa Bizen^{1,2}, Kouichi Tabu¹, Mei Wu³,
Christian Mangani³, Rong Zhang³, Mark Bradley^{3,4}¹Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University (TMDU), ²Division of Neurobiology and Anatomy, Graduate School of Medical and Dental Sciences, Niigata University, ³EaStChem, School of Chemistry, University of Edinburgh, Edinburgh, UK, ⁴Precision Healthcare University Research Institute, Queen Mary University of London, London, UK)

Invited Lecture

O-15 (10:45~11:10)**Stem Cells, Cancer, and Endogenous Retroviruses**Takashi Aoi¹, Michiyo Koyanagi¹, Erika Tanaka^{1,2}¹Division of Stem Cell Medicine, Graduate School Medicine, Kobe University, ²Department of Obstetrics and Gynecology, Graduate School Medicine, Kobe University)**O-16 (11:10~11:25)****Fetal-like reprogramming is the key to understand the heterogeneity of colorectal cancer**Shiro Yui

(Tokyo Medical and Dental University)

Invited Lecture

O-17 (11:25~11:50)**Significance of cancer-associated gene mutations in normal endometrium**Kosuke Yoshihara

(Niigata University Graduate School of Medical and Dental Sciences)

Lunch Seminar**12:00~12:30****Chair Koichi Akashi**

(Kyushu University)

LS

Identifying novel targets for AML therapy using functional genomic tools**Presenter Takahiro Maeda**

(Division of Precision Medicine, Kyushu University Graduate School of Medical Sciences)

Sponsored by : LSI Medience Corporation

Coffee Break**12:30~13:00**

Keynote Lecture 3

13:00~13:50

Chair Ayaka Yanagida

(Department of Veterinary Anatomy, Graduate School of Agriculture and Life Sciences,
The University of Tokyo)

KL3

Maintaining the Tissue and Organ-scale Homeostasis in mouse Spermatogenesis

Presenter Shosei Yoshida

(Division of Germ Cell Biology, National Institute for Basic Biology)

Session 5: New technologies

13:50~14:40

Chair Ayaka Yanagida

(Department of Veterinary Anatomy, Graduate School of Agriculture and Life Sciences,
The University of Tokyo)

Invited Lecture

O-18 (13:50~14:15)

Genome-wide ATAC-seq screening identifies modulators of global chromatin accessibility

Yusuke Miyanari

(Kanazawa University, NanoLSI, CRI)

Invited Lecture

O-19 (14:15~14:40)

Photo-isolation chemistry for high-resolution and deep spatial transcriptome with tissue sections

Shinya Oki

(IRDA, Kumamoto University)

Coffee Break

14:40~14:55

Keynote Lecture 4

14:55~15:45

Chair Katsuhiko Hayashi

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

KL4

Spatiotemporal heterogeneity of *in vivo* immune systems

Presenter Masaru Ishii

(Department of Immunology and Cell Biology, Osaka University Graduate School of
Medicine, Osaka University)

Award Announcement

15:45~15:55

Closing Remarks

15:55~16:00