

**The 1st Day : Friday, May 20**

2F Main Hall	
8:00	
9:00	
10:00	
11:00	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: auto;"> <p>10:30~12:30 4F 405</p> <p><b>幹細胞若手の会 (つくしの会)</b></p> </div>
12:00	
13:00	<p>13:00~13:10 <b>Opening Remarks</b></p> <p>13:10~15:05 ▶P.3</p> <p><b>Session 1</b>  <b>Hematopoietic Stem Cells</b>                      O-1~O-5                      Chair : Mineo Kurokawa                      Atsushi Iwama</p>
14:00	
15:00	<p>15:05~15:25 <b>Coffee Break</b></p> <p>15:25~17:20 ▶P.3</p> <p><b>Session 2</b>  <b>Tissue Stem Cells</b>                      O-6~O-10                      Chair : Tetsuya Taga                      Emi Nishimura</p>
16:00	
17:00	<p>17:20~17:30 <b>Coffee Break</b></p> <p>17:30~18:15 ▶P.4</p> <p><b>Special Lecture 1</b>  <b>Hideyuki Okano</b>                      S-1                      Chair : Yukiko Gotoh</p>
18:00	
19:00	<p>18:45~</p> <p><b>Poster Session and Reception</b>                      (2F Reception Hall)</p>
20:00	

**The 2nd Day : Saturday, May 21**

2F Main Hall	
8:00	
9:00	<p>8:30~9:50 ▶P.5</p> <p><b>Session 3</b>  <b>Leukemia Stem Cells</b>                      O-11~O-14                      Chair : Shigeru Chiba                      Yoshihiro Takihara</p>
10:00	<p>9:50~10:05 <b>Coffee Break</b></p> <p>10:05~11:35 ▶P.5</p> <p><b>Session 4</b>  <b>Differentiation and Malignancy</b>                      O-15~O-18                      Chair : Issay Kitabayashi                      Yohei Shimono</p>
11:00	
12:00	<p>11:35~11:45 <b>Coffee Break</b></p> <p>11:45~12:30 ▶P.6</p> <p><b>Special Lecture 2</b>  <b>John R. McCarrey</b>                      S-2                      Chair : Takashi Shinohara</p>
13:00	<p>12:30~13:30 <b>Lunch Time</b></p>
14:00	<p>13:30~13:40 <b>General Meeting</b></p> <p>13:40~15:30 ▶P.7</p> <p><b>Session 5</b>  <b>Pluripotent Stem Cells</b>                      O-19~O-23                      Chair : Koji Eto                      Shinji Masui</p>
15:00	
16:00	<p>15:30~15:40 <b>Closing Remarks</b></p>
17:00	
18:00	
19:00	
20:00	

## Friday, May 20. The 1st Day

**Opening Remarks Organizer Atsushi Hirao** 13:00~13:10  
(Cancer Research Institute, Kanazawa University)

**Session 1: Hematopoietic Stem Cells** 13:10~15:05

**Chair Mineo Kurokawa**

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

**Atsushi Iwama**

(Department of Cellular and Molecular Medicine, Chiba University)

**O-1 Standard medium leads to high reproducible results of HSCs via removal of non-scientific factors.**

Satoshi Yamazaki

(Laboratory of Stem Cell Therapy, Center for Experimental Medicine, The Institute of Medical Science, the University of Tokyo)

**O-2 TGF-beta-induced intracellular PAI-1 is a critical regulator of hematopoietic stem cell localization in the niche**

Takashi Yahata<sup>1</sup>, Abd Aziz Ibrahim<sup>1</sup>, Yukari Muguruma<sup>1</sup>, Satoko Kaneko<sup>1</sup>, Toshio Miyata<sup>2</sup>, Kiyoshi Ando<sup>1</sup>

<sup>1</sup>Research Center for Regenerative Medicine, Tokai University School of Medicine, <sup>2</sup>Molecular Medicine and Therapy, Tohoku University Graduate School of Medicine)

**O-3 A metabolic signal that awakens resting hematopoietic stem/progenitor cells**

Keiyo Takubo

(Department of Stem Cell Biology, Research Institute, National Center for Global Health and Medicine)

**O-4 Enhancer for Runx1, eRI: a powerful tool in stem cell and cancer biology**

Motomi Osato<sup>1,2</sup>, Cai Ping Koh<sup>1</sup>, Tomomasa Yokomizo<sup>2</sup>

<sup>1</sup>Cancer Science Institute, National University of Singapore, <sup>2</sup>International Research Center for Medical Sciences, Kumamoto University)

**O-5 Pot1 maintains hematopoietic stem cell activity under stress**

Fumio Arai

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

**Coffee Break** 15:05~15:25

**Session 2: Tissue Stem Cells** 15:25~17:20

**Chair Tetsuya Taga**

(Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University (TMDU))

**Emi Nishimura**

(Department of Stem Cell Biology, Medical Research Institute, Tokyo Medical and Dental University)

- O-6 Hair follicle aging is driven by COL17A1 proteolysis**  
Hiroyuki Matsumura<sup>1</sup>, Yasuaki Mohri<sup>1</sup>, Hironobu Morinaga<sup>1</sup>,  
Makoto Fukuda<sup>1</sup>, Sotaro Kurata<sup>2</sup>, Emi K. Nishimura<sup>1</sup>  
(<sup>1</sup>Department of Stem Cell Biology, Medical Research Institute, Tokyo Medical  
and Dental University, <sup>2</sup>Beppu Garden-Hill Clinic, Kurata Clinic, Beppu city, Oita)
- O-7 Locus-specific expansion of Polycomb domain determines the temporal  
repression of the neurogenic genes in neocortical development**  
Yusuke Kishi<sup>1</sup>, Yusuke Hirabayashi<sup>2</sup>, Kelsey Tyssowski<sup>2</sup>, Haruhiko Koseki<sup>3</sup>,  
Yutaka Suzuki<sup>4</sup>, Yukiko Gotoh<sup>1</sup>  
(<sup>1</sup>Graduate School of Pharmaceutical Sciences, the University of Tokyo, <sup>2</sup>Institute  
of Molecular and Cellular Biosciences, the University of Tokyo, <sup>3</sup>RIKEN Center  
for Allergy and Immunology, <sup>4</sup>Department of Medical Genome Sciences, the  
University of Tokyo)
- O-8 Oscillatory Control of Determination Factors for Multipotency versus Fate  
Choice in Neural Stem Cells**  
Itaru Imayoshi  
(Institute for Virus Research, Kyoto University)
- O-9 Alternative cell fate selection and following directed cell migration coordinate  
epithelial pattern of branching airways**  
Mitsuru Morimoto  
(RIKEN Center for Developmental Biology)
- O-10 Regulation of stem cell properties in liver development**  
Atsushi Suzuki  
(Division of Organogenesis and Regeneration, Medical Institute of Bioregulation,  
Kyushu University)

**Coffee Break** 17:20~17:30

**Special Lecture 1** 17:30~18:15

**Chair Yukiko Gotoh**

(Laboratory of Molecular Biology, Graduate School of Pharmaceutical Sciences, The  
University of Tokyo)

**S-1 “Regenerative Medicine and Disease Modeling with iPS cells  
technologies”.**

Hideyuki Okano

(Keio University School of Medicine)

**Poster Session and Reception** 18:45~

## Saturday, May 21. The 2nd Day

### Session 3: Leukemia Stem Cells

8:30~9:50

#### Chair Shigeru Chiba

(Department of Hematology, Faculty of Medicine, University of Tsukuba)

#### Yoshihiro Takihara

(Department of Stem Cell Biology, Research Institute for Radiation Biology and Medicine, Hiroshima University)

#### O-11 Nutrient Supply Essential for the Maintenance of CML Stem Cells

Kazuhito Naka<sup>1</sup>, Yoshihiro Takihara<sup>1</sup>, Yukio Kato<sup>2</sup>, Hiromitsu Nakauchi<sup>3,4</sup>, Akira Ooshima<sup>5</sup>, Seong-Jin Kim<sup>5</sup>

(<sup>1</sup>Department of Stem Cell Biology, Research Institute for Radiation Biology and Medicine, Hiroshima University, <sup>2</sup>Faculty of Pharmacy, Institute of Medical, Pharmaceutical and Health Sciences, Kakuma-machi, Kanazawa University, <sup>3</sup>Division of Stem Cell Therapy, Center for Stem Cell Biology and Regeneration Medicine, Institute of Medical Science, University of Tokyo, <sup>4</sup>Institute for Stem Cell Biology & Regenerative Medicine, Stanford University School of Medicine, CA, USA., <sup>5</sup>CHA Cancer Institute and Department of Biomedical Science, CHA University, Republic of Korea.)

#### O-12 NANOG expression as a responsive biomarker during treatment with Hedgehog signal inhibitor in acute myeloid leukemia

Yosuke Minami<sup>1</sup>, Seiji Kakiuchi<sup>2</sup>, Nobuaki Fukushima<sup>3</sup>

(<sup>1</sup>Kobe Univ Hospital, Dept of Transfusion Med and Cell Therapy, <sup>2</sup>Kobe Univ Hospital, Dept of Medical Oncology and Hematology, <sup>3</sup>Japanese Red Cross Nagoya the 1st Hospital, Dept of Hematology)

#### O-13 The role of Runx-F2r pathway in myeloid leukemia stem cells

Susumu Goyama<sup>1</sup>, Toshio Kitamura<sup>1</sup>, Joseph S. Palumbo<sup>2</sup>, James C. Mulloy<sup>2</sup>

(<sup>1</sup>Division of Cellular Therapy, The Institute of Medical Science, The University of Tokyo, <sup>2</sup>Cancer and Blood Diseases Institute, Cincinnati Children's Hospital Medical Center)

#### O-14 Identification of TIM-3 as a functional leukemic stem cell surface molecule in primary human myeloid leukemia

Yoshikane Kikushige, Koichi Akashi

(Medicine and Biosystemic Science, Kyushu University Graduate School of Medical Sciences)

### Coffee Break

9:50~10:05

### Session 4: Differentiation and Malignancy

10:05~11:35

#### Chair Issay Kitabayashi

(Division of Hematological Malignancy, National Cancer Center Research Institute)

#### Yohei Shimono

(Division of Molecular and Cellular Biology, Kobe University Graduate School of Medicine)

**O-15 Double inactivation of *Tet2* and *Tet3* induces hypomethylating agent-sensitive acute myeloid leukemia**

Koichiro Maie<sup>1</sup>, Mamiko Sakata-Yanagimoto<sup>1</sup>, Motohiko Ohshima<sup>2</sup>, Takayasu Kato<sup>1</sup>, Hideharu Muto<sup>1</sup>, Atsushi Iwama<sup>2</sup>, Shigeru Chiba<sup>1</sup>  
(<sup>1</sup>Department of Hematology, University of Tsukuba, <sup>2</sup>Department of Cellular and Molecular Medicine, Graduate School of Medicine, Chiba University)

**O-16 Ezh2 loss in hematopoietic stem cells predisposes mice to develop heterogeneous malignancies in an Ezh1-dependent manner**

Makiko Mochizuki-Kashio<sup>1,2</sup>, Kazumasa Aoyama<sup>3</sup>, Goro Sashida<sup>4</sup>, Motohiko Oshima<sup>3</sup>, Changshan Wang<sup>5</sup>, Atsushi Iwama<sup>3</sup>  
(<sup>1</sup>Laboratory of Chromatin Metabolism and Epigenetics, Graduate school of Science, <sup>2</sup> Department of Cellular and Molecular Medicine, Graduate school of Medicine, Chiba University, <sup>3</sup>Department of Cellular and Molecular Medicine, Graduate school of Medicine, Chiba University, <sup>4</sup>International Research Center for Medical Sciences, Kumamoto University, <sup>5</sup>College of Life Sciences, Inner Mongolia University, China)

**O-17 Therapeutic strategies for osteosarcoma stem cells by regulating adipocyte differentiation based on actin dynamics**

Hiroyuki Nobusue<sup>1</sup>, Nobuhiro Takahashi<sup>1</sup>, Nobuyuki Onishi<sup>1</sup>, Takatsune Shimizu<sup>2</sup>, Eiji Sugihara<sup>1</sup>, Yoshinao Oki<sup>3</sup>, Tatsuyuki Chiyoda<sup>1</sup>, Koichi Akashi<sup>4</sup>, Koichiro Kano<sup>3</sup>, Hideyuki Saya<sup>1</sup>  
(<sup>1</sup>Division of Gene Regulation, Institute for Advanced Medical Research, Keio University School of Medicine, <sup>2</sup>Department of Pathophysiology, Hoshi University, <sup>3</sup>Laboratory of Cell and Tissue Biology, College of Bioresource Sciences, Nihon University, <sup>4</sup>Department of Medicine and Biosystemic Science, Kyushu University Graduate School of Medical Science)

**O-18 DISSECTING CANCER BIOLOGY WITH iPSC TECHNOLOGY**

Yasuhiro Yamada  
(Laboratory of Stem Cell Oncology, Department of Life Science Frontiers, Center for iPS Cell Research and Application, Kyoto University)

**Coffee Break**

**11:35~11:45**

**Special Lecture 2**

**11:45~12:30**

**Chair Takashi Shinohara**

(Department of Molecular Genetics, Graduate School of Medicine, Kyoto University)

**S-2 The Case for Predetermination of Spermatogonial Stem Cells**

John R. McCarrey<sup>1</sup>, Christopher B. Geyer<sup>2</sup>, Jon M. Oatley<sup>3</sup>, Brian P. Hermann<sup>1</sup>

(<sup>1</sup>Department of Biology, University of Texas at San Antonio, San Antonio, TX, USA, <sup>2</sup>Department of Anatomy and Cell Biology, East Carolina University, Greenville, NC, USA, <sup>3</sup>School of Molecular Biosciences, Washington State University, Pullman, WA, USA)

**Lunch Time**

**12:30~13:30**

**General Meeting**

**13:30~13:40**

**Chief Director Koichi Akashi**

(Department of Medicine and Biosystemic Science, Faculty of Medicine, Kyushu University)

**Session 5: Pluripotent Stem Cells**

**13:40~15:30**

**Chair Koji Eto**

(Department of Clinical Application, Center for iPS Cell Research and Application, Kyoto University)

**Shinji Masui**

(CiRA, Kyoto University)

**O-19 Overlapped function of Klf family members to maintain pluripotency of mouse embryonic stem cells**

Hitoshi Niwa

(Institute of Molecular Embryology and Genetics, Kumamoto University)

**O-20 Large-scaled transgene activation on human embryonic stem cells**

Yuhki Nakatake<sup>1</sup>, Nana Nohtomi-Chikazawa<sup>1</sup>, Miyako Murakami<sup>1</sup>, Chiaki Ookura<sup>1</sup>, Miki Sakota<sup>1</sup>, Shunichi Wakabayashi<sup>1</sup>, Siu San Mak<sup>1</sup>, Martin Jakt<sup>1</sup>, Tomoo Ueno<sup>1</sup>, Misako Matsushita<sup>1</sup>, Mayumi Oda<sup>1</sup>, Noriko Utsumi<sup>2</sup>, Madoka Hirayama-Ishikawa<sup>3</sup>, Noriko Itoh<sup>3</sup>, Motohiko Tanino<sup>3</sup>, Yukari Ikeda<sup>3</sup>, Hiroshi Iijima<sup>3</sup>, Takumi Miura<sup>4</sup>, Masakazu Machida<sup>4</sup>, Kahori Minami<sup>4</sup>, Shigeru Ko<sup>1</sup>, Hiroyuki Nishimura<sup>5</sup>, Ryo Matoba<sup>3</sup>, Hidenori Akutsu<sup>4</sup>, Osamu Ohara<sup>2</sup>, Minoru Ko<sup>1</sup>  
(<sup>1</sup>Department of Systems Medicine, Mitsunada Sakaguchi Laboratory, Keio University School of Medicine, <sup>2</sup>Kazusa DNA Research Institute, <sup>3</sup>DNA Chip Research Inc., <sup>4</sup>Department of Reproductive Biology, National Center for Child Health and Development, <sup>5</sup>Xcoo, Inc.)

**O-21 Toward understanding the immortal trait of human embryonic stem cells**

Masatoshi Ohgushi

(RIKEN CDB, Laboratory for in vitro Histogenesis)

**O-22 Identifying the biphasic role of Calcineurin/NFAT signaling pathway enables successfully to replace sox2 in somatic cell reprogramming.**

Sherif Khodeer, Takumi Era

(Department of Cell Modulation, Institute of Molecular Embryology and Genetics, Kumamoto University)

**O-23 Ribosomes convert human fibroblasts into multipotent cells**

Kunimasa Ohta

(Department of Developmental Neurobiology, Kumamoto University Graduate School of Life Sciences)

**Closing Remarks**

**15:30~15:40**

**Next Organizer Atsushi Iwama**

(Department of Cellular and Molecular Medicine, Graduate School of Medicine, Chiba University)

## Poster Session

- P-1 Endothelial antigen ESAM is a human HSC marker associated with a subset of human leukemias**  
Tomohiko Ishibashi<sup>1</sup>, Takafumi Yokota<sup>1</sup>, Hirokazu Tanaka<sup>2</sup>, Michiko Ichii<sup>1</sup>, Takao Sudo<sup>1</sup>, Yusuke Satoh<sup>1,3</sup>, Yukiko Doi<sup>1</sup>, Tomoaki Ueda<sup>1</sup>, Akira Tanimura<sup>1</sup>, Yuri Hamanaka<sup>1</sup>, Sachiko Ezoe<sup>1</sup>, Hirohiko Shibayama<sup>1</sup>, Kenji Oritani<sup>1</sup>, Yuzuru Kanakura<sup>1</sup>  
(<sup>1</sup>Department of Hematology and Oncology, Osaka University Graduate School of Medicine, <sup>2</sup>Department of Hematology and Rheumatology, Kinki University Faculty of Medicine, <sup>3</sup>Department of Lifestyle Studies, Kobe Shoin Women's University)
- P-2 Disruption of Tsukushi leads to hydrocephalus by aberrant neurogenesis.**  
Naofumi Ito<sup>1</sup>, Riyadh Asrafuzzaman<sup>1</sup>, Ayako Ito<sup>1</sup>, Yohei Shinmyo<sup>2</sup>, Athary Felemban<sup>1</sup>, Jun Hatakeyama<sup>3</sup>, Kenji Shimamura<sup>3</sup>, Kazunobu Sawamoto<sup>4</sup>, Kunimasa Ohta<sup>1</sup>  
(<sup>1</sup>Department of Developmental Neurobiology, Kumamoto University, <sup>2</sup>Department of Biophysical Genetics, Kanazawa University, <sup>3</sup>Department of Brain Morphogenesis, Kumamoto University, <sup>4</sup>Department of Developmental and Regenerative Biology, Nagoya City University)
- P-3 A single miRNA rescues EBF1 deficiency in B cell development though TGF- $\beta$  pathway**  
Ryutaro Kotaki<sup>1</sup>, Ai Kotani<sup>1,2</sup>  
(<sup>1</sup>Division of Hematological Malignancy, Institute of Medical Science, Tokai University, <sup>2</sup>Department of Hematology/Oncology, School of Medicine, Tokai University)
- P-4 Mechanism of epidermal aging**  
Nan Liu, Hiroyuki Matsumura, Makoto Fukuda, Aki Takada, Daisuke Nanba, Emi K Nishimura  
(Department of Stem Cell Biology, Medical Research Institute, Tokyo Medical and Dental University)
- P-5 Kinetic analysis and modeling for understanding human keratinocyte stem/progenitor cell behavior in epidermal sheet formation**  
Daisuke Nanba<sup>1</sup>, Fujio Toki<sup>1</sup>, Hiroshi Toki<sup>2</sup>, Emi K. Nishimura<sup>1</sup>  
(<sup>1</sup>Department of Stem Cell Biology, Medical Research Institute, Tokyo Medical and Dental University, <sup>2</sup>Research Center for Nuclear Physics, Osaka University)
- P-6 Human bone marrow-derived CD271<sup>+</sup>SSEA-4<sup>+</sup> mesenchymal stromal cells support hematopoietic stem/progenitor cells through the cell-cell contact**  
Yoshikazu Matsuoka<sup>1</sup>, Keisuke Sumide<sup>1</sup>, Hiroshi Kawamura<sup>1,2</sup>, Ryusuke Nakatsuka<sup>1</sup>, Tatsuya Fujioka<sup>1</sup>, Yutaka Sasaki<sup>1</sup>, Yoshiaki Sonoda<sup>1</sup>  
(<sup>1</sup>Department of Stem Cell Biology and Regenerative Medicine, Kansai Medical University, <sup>2</sup>Department of Orthopedic Surgery, Kansai Medical University)
- P-7 G0 phase analysis of hematopoietic stem cells in mVenus-p27K mice**  
Tsuyoshi Fukushima  
(The Institute of Medical Science Division of cell therapy)
- P-8 Regulation of physical environment for stem cell fate determination during brain development**  
Yoichi Kosodo, Misato Iwashita  
(Korea Brain Research Institute)

- P-9 Functional recovery of age-related disorders in multiple tissues by upregulation of a regenerative factor derived from MSCs**  
Hayato Naka-Kaneda<sup>1</sup>, Daisuke Hisamatsu<sup>1,2</sup>, Shiho Nakamura<sup>1</sup>,  
 Yo Mabuchi<sup>3</sup>  
 (<sup>1</sup>RIKEN IMS Laboratory for Stem Cell Competency, <sup>2</sup> Keio University School of Medicine, <sup>3</sup>Tokyo Medical and Dental University)
- P-10 Effect of low dose-rate irradiation on the hematopoietic system**  
Yoshinori Ohno<sup>1</sup>, Kyoko Suzuki-Takedachi<sup>1</sup>, Mimoko Santo<sup>1</sup>, Yun Guo<sup>2</sup>,  
 Masamoto Kanno<sup>2</sup>, Shin'ichiro Yasunaga<sup>3</sup>, Motoaki Ohtsubo<sup>4</sup>,  
 Kazuhito Naka<sup>1</sup>, Yoshihiro Takihara<sup>1</sup>  
 (<sup>1</sup>Dept. Stem Cell Biol., RIRBM, Hiroshima Univ., <sup>2</sup>Dept. Immunol., Grad. Sch. Biomed. Sci., Hiroshima Univ., <sup>3</sup>Dept. Biochem., Facul. Med., Fukuoka Univ., <sup>4</sup>Dept. Food and Ferment. Sci., Beppu Univ.)
- P-11 The transcription factor Klf5 regulates biliary epithelial tissue growth in liver regeneration upon cholestatic injury**  
Hajime Okada<sup>1</sup>, Tohru Itoh<sup>1</sup>, Kota Kaneko<sup>1</sup>, Kenji Kamimoto<sup>1</sup>,  
 Len Katsumata<sup>1</sup>, Minami Yamada<sup>1</sup>, Cindy Kok<sup>1</sup>, Masatsugu Ema<sup>2</sup>,  
 Atsushi Miyajima<sup>1</sup>  
 (<sup>1</sup>Laboratory of Cell Growth and Differentiation, Institute of Molecular and Cellular Biosciences, The University of Tokyo, <sup>2</sup>Department of Stem Cells and Human Disease Models, Research Center for Animal Life Science, Shiga University of Medical Science)
- P-12 The analyses of Notch signaling in mouse testis.**  
Ryu Okada, Megumi Fujimagari, Tomohisa Watanabe, Akiko Kumano,  
 Yukio Nishina  
 (Laboratory of Molecular Embryology, Yokohama City University)
- P-13 The DGCR8 gene, a candidate gene for 22q11.2 deletion-associated schizophrenia, regulates adult hippocampal neurogenesis and cognition**  
Yasuo Ouchi  
 (Division of Innate Immune Regulation, International Research and Development center for Mucosal Vaccine The Institute of Medical Science, The University of Tokyo)
- P-14 Mechanism of maintaining hematopoietic stem and progenitor cell phenotype of intra-aortic cell clusters in the AGM region through the Sox17-Notch1-Hes1 axis**  
Kiyoka Saito, Ikuo Nobuhisa, Maha Anani, Kaho Harada,  
 Satomi Takahashi, Tetsuya Taga  
 (Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University (TMDU))
- P-15 MicroRNA-153 Regulates the Acquisition of Gliogenic Competence by Neural StemCells**  
Jun Tsuyama<sup>1</sup>, Jens Bunt<sup>2</sup>, Linda Richards<sup>2</sup>, Hiroko Iwanari<sup>3</sup>,  
 Yasuhiro Mochizuki<sup>3</sup>, Takao Hamakubo<sup>3</sup>, Takuya Shimazaki<sup>1</sup>,  
 Hideyuki Okano<sup>1</sup>  
 (<sup>1</sup>Department of Physiology, Keio University School of Medicine, <sup>2</sup>Queensland Brain Institute, The University of Queensland, <sup>3</sup>Department of Quantitative Biology and Medicine, Research Center for Advanced Science and Technology, The University of Tokyo)



**P-16 Aging of bone marrow environments influence the functions of hematopoietic stem cells**

Yasufumi Uehara, Yuya Kunisaki  
(Center for cellular and Molecular Medicine, Kyushu University Hospital)

**P-17 Integrin  $\alpha v \beta 3$  regulates long-term repopulating activity of hematopoietic stem cells through the double-edged influences.**

Terumasa Umemoto<sup>1</sup>, Yu Matsuzaki<sup>1</sup>, Junichi Furusawa<sup>2</sup>,  
Takayuki Yoshimoto<sup>2</sup>, Masayuki Yamato<sup>3</sup>, Toshio Suda<sup>4,5</sup>  
(<sup>1</sup>International Research Center for Medical Science (IRCMS), Kumamoto University, <sup>2</sup>Institute of Medical Science, Tokyo Medical University., <sup>3</sup>Institute of Advanced Biomedical Engineering and Science, Tokyo Women's medical University., <sup>4</sup>International Research Center for Medical Science (IRCMS), Kumamoto University, <sup>5</sup> Cancer Science Institute of Singapore, National University of Singapore)

**P-18 Does hemogenic endothelium exist in the mouse embryonic head?**

Tomomasa Yokomizo<sup>1,2</sup>, Kazuhide Iizuka<sup>2</sup>, Naoki Watanabe<sup>2</sup>,  
Yosuke Tanaka<sup>3</sup>, Motomi Osato<sup>1,4</sup>, Tomoiku Takaku<sup>2</sup>, Norio Komatsu<sup>2</sup>  
(<sup>1</sup>International Research Center for Medical Sciences, Kumamoto University, <sup>2</sup>Department of Hematology, Juntendo University School of Medicine, <sup>3</sup>Center for Developmental Biology, RIKEN Kobe, <sup>4</sup>Cancer Science Institute of Singapore, National University of Singapore)

**P-19 The new BMP down-stream molecule ANKS1B is controlling Histone H3 methylation with abnormal BMP signaling in reprogramming and diseases.**

Makoto Hamasaki<sup>1</sup>, Takayuki Kiboku<sup>1</sup>, Minami Soga<sup>1</sup>, Naoki Shinojima<sup>2</sup>,  
Hirokazu Furuya<sup>3</sup>, Takumi Era<sup>1</sup>  
(<sup>1</sup>Department of Cell Modulation, Institute of Molecular Embryology and Genetics, Kumamoto University, <sup>2</sup>Department of Neurosurgery, Graduate School of Medical Sciences, Kumamoto University, <sup>3</sup>Department of Neurology, Kochi Medical School, Kochi University)

**P-20 Disease specific iPSCs mimic their disease specific phenotypes in teratomas**

Takayuki Kiboku<sup>1</sup>, Makoto Hamasaki<sup>1</sup>, Saori Ikeda<sup>1</sup>, Katsuhiko Sekimata<sup>2</sup>,  
Hirokazu Furuya<sup>3</sup>, Hashizume Yoshinobu<sup>4</sup>, Takumi Era<sup>1</sup>  
(<sup>1</sup>Department of Cell Modulation, Institute of Molecular Embryology and Genetics, Kumamoto University, <sup>2</sup>RIKEN Center for Life Science Technologies, Division of Bio-Function Dynamics Imaging, Drug Discovery Chemistry Platform Unit, <sup>3</sup>Department of Neurology, Kochi Medical School, Kochi University, <sup>4</sup>RIKEN Program for Drug Discovery and Medical Technology Platforms)

**P-21 Identification of Runx1-direct targets important for definitive hematopoiesis**

Yosuke Tanaka<sup>1,2</sup>, Vicki Moignard<sup>2</sup>, Adam Wilkinson<sup>2</sup>, Toshio Kitamura<sup>3</sup>,  
Bertie Gottgens<sup>2</sup>  
(<sup>1</sup>The University of Tokyo Institute of Medical Science Division of Cellular Therapy, <sup>2</sup>Cambridge University Department of Hematology Cambridge Institute for Medical Research, <sup>3</sup>The University of Tokyo Institute of Medical Science Division of Cellular Therapy)

**P-22 Investigation of causative genes in chronic myelomonocytic leukemia through patient-derived induced pluripotent stem cells**

Sho Yamazaki, Kazuki Taoka, Shunya Arai, Masashi Miyauchi,  
Keisuke Kataoka, Akihide Yoshimi, Mineo Kurokawa  
(Department of Hematology and Oncology, Graduate School of Medicine, The University of Tokyo)

- P-23 Development of high-efficient differentiation protocols from human iPS cells to glutamatergic or GABAergic neural progenitor cells**  
Yusuke Kubo<sup>1,2,3</sup>, Shigeru Yamada<sup>2</sup>, Takashi Inutsuka<sup>3</sup>, Yasunari Kanda<sup>2</sup>,  
 Yuko Sekino<sup>2</sup>  
 (<sup>1</sup>Japan Agency for Medical Research and Development, <sup>2</sup>National Institute of Health Sciences, <sup>3</sup>Pharmacological Evaluation Institute of Japan)
- P-24 Formation of vascular network structures in the co-culture with human inducible pluripotent stem cell-derived CD31+ cells**  
Shinako Masuda, Katsuhisa Matsuura, Mie Anazawa, Tatsuya Shimizu,  
 Teruo Okano  
 (Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University)
- P-25  $\beta$ -actin regulates reprogramming**  
Shinji Masui, Takashi Ikeda, Akitsu Hotta  
 (CiRA, Kyoto University)
- P-26 Challenge of "HLA omnipotent platelets" for overcoming allogeneic immune response using induced Pluripotent Stem Cell (iPSC) technology**  
Daisuke Suzuki<sup>1</sup>, Naoshi Sugimoto<sup>1</sup>, Norihide Yoshikawa<sup>1</sup>, Sou Nakamura<sup>1</sup>,  
 Hiroshi Endo<sup>1</sup>, Akitsu Hotta<sup>2</sup>, Koji Eto<sup>1</sup>  
 (<sup>1</sup>Department of Clinical Application, Center for iPS Cell Research and Application, Kyoto University, <sup>2</sup>Department of Life Science Frontiers, Center for iPS Cell Research and Application, Kyoto University)
- P-27 Novel tools for generation, purification, and analysis of pluripotent stem cell-derived cardiomyocytes**  
Rumi Tanaka  
 (Miltenyi Biotec K.K.)
- P-28 Elucidating the role of MPL at the branch point of Erythrocytes and Megakaryocytes lineages.**  
Akinori Yuzuriha<sup>1</sup>, Naoshi Sugimoto<sup>1,2</sup>, Koji Eto<sup>1</sup>  
 (<sup>1</sup>The Koji Eto Lab, Department of clinical application, Center for iPS Cells Research and Application, Kyoto University, <sup>2</sup> Department of Hematology and Oncology, Graduate school of Medicine, Kyoto University)
- P-29 Oligodendrocytes and macrophages contribute stem cell niche for glioblastoma in the edge of the tumor mass**  
Takuichiro Hide<sup>1</sup>, Yoshihiro Komohara<sup>2</sup>, Keishi Makino<sup>1</sup>, Hideo Nakamura<sup>1</sup>,  
 Shigetoshi Yano<sup>1</sup>, Motohiro Takeya<sup>2</sup>, Jun-ichi Kuratsu<sup>1</sup>  
 (<sup>1</sup>Department of Neurosurgery, Graduate School of Medical Sciences, Kumamoto University, <sup>2</sup>Department of Cell Pathology, Graduate School of Medical Sciences, Kumamoto University)
- P-30 Molecular characterization of dormant metastatic human breast cancer stem cells**  
Yohei Shimono<sup>1</sup>, Tatsunori Nishimura<sup>2</sup>, Junko Mukohyama<sup>1</sup>, Taichi Isobe<sup>3</sup>,  
 Toru Mukohara<sup>4</sup>, Noriko Gotoh<sup>2</sup>, Hironobu Minami<sup>4</sup>  
 (<sup>1</sup>Division of Molecular and Cellular Biology, Kobe University Graduate School of Medicine, <sup>2</sup>Division of Cancer Cell Biology, Cancer Research Institute, Kanazawa University, <sup>3</sup>Institute for Stem Cell Biology and Regenerative Medicine, Stanford University, <sup>4</sup>Division of Oncology/Hematology, Kobe University Graduate School of Medicine)

**P-31 Localization of distinct subsets of nestin-expressing cells in human bone marrow and their abnormalities in myelodysplastic syndromes**

Luan Cao Sy<sup>1</sup>, Naoshi Obara<sup>2</sup>, Tatsuhiro Sakamoto<sup>1</sup>, Takayasu Kato<sup>2</sup>,  
Hidekazu Nishikii<sup>2</sup>, Satoshi Ikeda<sup>3</sup>, Keiko Suzuki<sup>3</sup>, Shigeru Chiba<sup>2</sup>

(<sup>1</sup>Hematology, Graduate School of Comprehensive Human Sciences, University of Tsukuba, <sup>2</sup>Department of Hematology, Faculty of Medicine, University of Tsukuba, <sup>3</sup>Department of Pathology, Tsuchiura Kyodo General Hospital)

**P-32 Heterozygous Dnmt3a mutation induces expansion of hematopoietic stem cell pool in a murine model**

Takashi Higo<sup>1</sup>, Junji Koya<sup>1</sup>, Yoshiki Sumitomo<sup>2,3</sup>, Takako Tsuruta-Kishino<sup>1</sup>,  
Keisuke kataoka<sup>1</sup>, Tomohiko Sato<sup>1</sup>, Mineo Kurokawa<sup>1</sup>

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**P-33 Maintenance of stemness of breast cancer cells by FRS2beta, a feedback inhibitor for HER2-ERK pathway, during mammary tumorigenesis**

Natsuko Kimura<sup>1</sup>, Yukino Machida<sup>2</sup>, Daisuke Iejima<sup>1</sup>, Arinobu Tojo<sup>1</sup>,  
Nobuaki Yoshida<sup>3</sup>, Ko-ichi Akashi<sup>4</sup>, Hideyuki Saya<sup>5</sup>, Issay Kitabayashi<sup>2</sup>,  
Noriko Gotoh<sup>1,6</sup>

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**P-34 CD74-NRGI, an oncogenic fusion gene product, leads to ErbB-NF- $\kappa$ B-IGF2 autocrine/paracrine circuit and confers cancer stem cell properties**

Takahiko Murayama<sup>1,2</sup>, Takashi Nakaoku<sup>3</sup>, Masato Enari<sup>4</sup>,  
Tatsunori Nishimura<sup>2</sup>, Kana Tominaga<sup>1</sup>, Asuka Nakata<sup>2</sup>, Arinobu Tojo<sup>1</sup>,  
Sumio Sugano<sup>5</sup>, Takashi Kohno<sup>3</sup>, Noriko Gotoh<sup>1,2</sup>

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**P-35 C6 glioma stem cell-derived extracellular vesicles promote the development of macrophages**

Yoshitaka Murota, Kouichi Tabu, Tetsuya Taga

(Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University (TMDU))

**P-36 Development of mouse brain tumor models using in vivo electroporation and piggyBac system**

Nobuyuki Onishi, Hideyuki Saya

(Division of Gene Regulation, Institute for Advanced Medical Research, Keio University School of Medicine)

**P-37 The role of mTOR complex 1 in hematopoiesis and leukemogenesis**

Hui Peng, Atsuo Kasada, Masaya Ueno, Takayuki Hoshii, Atsushi Hirao  
(Cancer Research Institute of Kanazawa University)

**P-38 GDF15 promotes tumor sphere formation in breast cancer**

Asako Sasahara<sup>1,2</sup>, Kana Tominaga<sup>3</sup>, Keiichiro Tada<sup>4</sup>, Hajime Kanauchi<sup>5</sup>,  
Yasuyuki Seto<sup>6</sup>, Arinobu Tojo<sup>3</sup>, Noriko Gotoh<sup>1,7</sup>

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Surgery, Showa General Hospital, <sup>6</sup>Department of Gastrointestinal Surgery,  
Graduate School of Medicine, University of Tokyo, <sup>7</sup>Division of Cancer Cell Biology,  
Cancer Research Institute, Kanazawa University)

**P-39 CGRP-CRLR signaling is important for leukemogenesis in AML with high EVII expression**

Akira Suekane, Yusuke Saito, Shingo Nakahata, Kazuhiro Morishita  
(Div of Tumor and Cellular Biochemistry, Dept of Medical Sci. Fac. of Med. Univ  
of Miyazaki)

**P-40 Adaptive response of rat C6 glioma stem cells to iron deprivation by which the development of tumor infiltrating macrophages is induced**

Kouichi Tabu, Yasuhiro Kokubu, Nozomi Muramatsu, Shunki Nomoto,  
Wenqian Wang, Tetsuya Taga

(Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical  
and Dental University (TMDU))

**P-41 MICAL3 regulates tumor initiating activity in human breast cancer stem cells.**

Kana Tominaga<sup>1,2</sup>, Kei-ichiro Tada<sup>3</sup>, Arinobu Tojo<sup>1</sup>, Noriko Gotoh<sup>1,4</sup>

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School of Medicine, University of Tokyo, <sup>4</sup>Division of Cancer Cell Biology, Cancer  
Research Institute, Kanazawa University)

**P-42 Resistance of glioma stem cells to 5-aminolevulinic acid (ALA)-based detection due to enhanced metabolic conversion of protoporphyrin IX**

Wenqian Wang<sup>1</sup>, Kouichi Tabu<sup>1</sup>, Yuichiro Hagiya<sup>2</sup>, Shun-ichiro Ogura<sup>2</sup>,  
Tetsuya Taga<sup>1</sup>

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**P-43 GPR56 is one of important LSC surface markers associated with poor outcome AML**

Yusuke Saito, Kazuko Kaneda, Akira Suekane, Shingo Nakahata,  
Kazuhiro Morishita

(Div of Tumor and Cellular Biochemistry, Dept of Medical Sci. Fac. of Med. Univ  
of Miyazaki)

**P-44 Functional and comprehensive investigation of microRNA targeting Notch receptors**

Ryo Nasu<sup>1</sup>, Kazuki Okuyama<sup>1</sup>, Daisuke Ohgiya<sup>2</sup>, Katsuto Hozumi<sup>3</sup>,  
Akihiko Murata<sup>4</sup>, Kiyoshi Ando<sup>2</sup>, Ai Kotani<sup>1</sup>

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Medicine, <sup>3</sup>Department of Immunology, Tokai University School of Medicine,  
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**P-45 NOTCH signaling pathway in bone marrow nestin-expressing cells controls balance of erythropoiesis between bone marrow and spleen**

Tatsuhiko Sakamoto<sup>1</sup>, Naoshi Obara<sup>2</sup>, Ryosuke Fujimura<sup>3</sup>, Takayasu Kato<sup>2</sup>, Luan Cao Sy<sup>1</sup>, Hidekazu Nishikii<sup>4,5</sup>, Mamiko Sakata-Yanagimoto<sup>2</sup>, Satoru Takahashi<sup>6</sup>, Shigeru Chiba<sup>2</sup>

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**P-46 *Nanog* alone induces germ cells in primed epiblast *in vitro* by activation of enhancers**

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