

# **The 9<sup>th</sup> Stem Cell Research Symposium**

## **Program**

**Date : May 13 (Fri) - 14(Sat), 2011**

**Venue : Izumi Garden Gallery**

**Director : Mineo Kurokawa**

**Department of Hematology and Oncology, Graduate School of  
Medicine, University of Tokyo**

**Organizer : Stem Cell Research Symposium**

**Cosponsor : Tokyo University Global COE Program**

**Comprehensive center of education and research for  
chemical biology of the diseases**

## Friday, May 13. The First Day

**Registration • Exhibit posters**

**9:00~9:50**

**Opening Remarks Director Mineo Kurokawa**

**9:50~10:00**

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

**Session 1 : ES cells/iPS cells (I)**

**10:00~11:20**

**Chair Atsushi Miyajima**

(Institute of Molecular and Cellular Biosciences, The University of  
Tokyo)

O-1 Induction of primordial germ cell-like cells from mouse embryonic stem cells  
by manipulation of signaling pathways

Tohru Kimura<sup>1</sup>, Mitinori Saitou<sup>2</sup>, Takashi Shinohara<sup>3</sup>, Toru Nakano<sup>2</sup>

(<sup>1</sup> Gradual School of Frontier Biosciences, Department of Pathology, Medical  
School, Osaka University , <sup>2</sup> Department of Anatomy and Cell Biology, <sup>3</sup>  
Department of Molecular Genetics, Graduate School of Medicine, Kyoto  
University)

O-2 Involvement of nuclear hormone receptors Dax1 and Esrrb in the  
maintenance of self-renewal in ES cells

Kousuke Uranishi, Tadayuki Akagi, Chuanhai Sun, Hiroshi Koide,  
Takashi Yokota

(Department of Stem Cell Biology, Graduate School of Medical Science,  
Kanazawa University)

O-3 LIF/STAT3 signaling is regulated by LacdiNAc (GalNAc $\beta$ 1-4GlcNAc) glycan  
structures on mouse embryonic stem cells

Norihiko Sasaki, Kazumi Hirano, Shoko Nishihara

(Laboratory of Cell Biology, Department of Bioinformatics, Faculty of  
Engineering, Soka University)

O-4 Generation of induced pluripotent stem cells from primary hematological  
malignancies and search for the novel targeted therapy

Keiki Kumano, Shunya Arai, Masataka Hosoi, Kazuki Taoka, Koki  
Ueda, Kumi Nakazaki, Yasuhiko Kamikubo, and Mineo Kurokawa.

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

**Coffee Break**

**11:20~11:40**

- Special Lecture 1** **11:40~12:20**  
**Chair Keiya Ozawa**  
(Division of Hematology, Department of Medicine, Jichi Medical University)
- Role of an RNA binding protein Musashi in stem cells and cancer development**  
**Takahiro Ito<sup>1,2</sup>, Tannishtha Reya<sup>1</sup>**  
(<sup>1</sup>Department of Pharmacology, University of California San Diego;  
<sup>2</sup>Interdisciplinary Stem Cell Training Program, California Institute of Regenerative Medicine)
- Lunch time** **12:20~13:40**  
**(Secretary society)** **12:20~13:40)**
- Poster Session** **13:40~14:40**
- Coffee Break** **14:40~15:00**
- Session 2: Somatic stem cells** **15:00~16:00**  
**Chair Tetsuya Taga**  
(Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University)
- O-5 Tsukushi is involved in the neuronal stem/progenitor cells proliferation as a Wnt signalling inhibitor  
Kunimasa Ohta<sup>1</sup>, Ayako Ito<sup>1,2</sup>, Yohei Shinmyo<sup>1</sup>, Naoko Kaneko<sup>3</sup>, Yuki Hirota<sup>3</sup>, Masahiro Yamaguchi<sup>4</sup>, Kazunobu Sawamoto<sup>3</sup>, Hideaki Tanaka<sup>1,2</sup>  
(<sup>1</sup>Graduate School of Medical Sciences, Kumamoto University, <sup>2</sup>Global COE, Kumamoto University, Institute of Molecular Medicine, <sup>3</sup>Nagoya City University Graduate School of Medical Sciences, <sup>4</sup>Graduate School of Medical science, University of Tokyo,)
- O-6 FGF<sup>7</sup> is a functional niche signal required for stimulation of adult liver progenitor cells that support liver regeneration  
Tohru Itoh, Hinako Takase, and Atsushi Miyajima  
(Institute of Molecular and Cellular Biosciences, The University of Tokyo)
- O-7 Identification of eccrine gland melanocyte stem cells in mouse acral skin as a potential source of acral melanoma  
Natsuko Okamoto<sup>1</sup>, Takahiro Aoto<sup>2</sup>, Yoshiki Miyachi<sup>1</sup>, Emi K. Nishimura<sup>2</sup>  
(<sup>1</sup>Department of Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan. <sup>2</sup>Department of Stem Cell Biology, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan)

**Coffee Break**

**16:00~16:20**

**Session 3: Hematopoietic stem cells (I)**

**16:20~17:20**

**Chair Kiyoshi Ando**

(Division of Hematology/Oncology, Department of Internal Medicine, Tokai University School of Medicine)

- O-8 Characterization of Runx1+ lateral mesodermal progenitors in the early mouse embryo

Yosuke Tanaka, Shin-ichi Nishikawa  
(RIKEN CDB Laboratory for Stem Cell Biology)

- O-9 A new immunodeficient mouse model introduced with defined Sirpa polymorphism for human hematopoietic stem cell assay

Takuji Yamauchi<sup>1</sup>, Shingo Urata<sup>1</sup>, Katsuto Takenaka<sup>1</sup>, Yoshikane Kikushige<sup>1</sup>, Toshihiro Miyamoto<sup>1</sup>, Koichi Akashi<sup>1,2</sup>

(<sup>1</sup>Department of Medicine and Biosystemic Science, Kyushu University Graduate School of Medical Sciences, Fukuoka, <sup>2</sup>Centre for Cellular and Molecular Medicine, Kyushu University Hospital, Fukuoka, Japan)

- O-10 Dependency on the polycomb gene Ezh2 distinguishes fetal from adult hematopoietic stem cells

Makiko Mochizuki-Kashio, Atsushi Iwama  
(Department of Cellular and Molecular Medicine, Graduate School of Medicine, Chiba University)

**General Meeting**

**Chief Director**

**Toshio Suda 17:20~17:40**

(Department of Cell Differentiation, Keio University School of Medicine)

## Saturday, May 14. The Second Day

### Session 4: Cancer stem cell

9:00~10:40

Chair **Atushi Hirao**

(Division of Molecular Genetics, Cancer and Stem Cell Research Program, Cancer Research Institute, Kanazawa University)

- O-11 Fibrotic tissues in human primary myelofibrosis are derived from malignant hematopoietic stem cells

Takahiro Shima<sup>1</sup>, Noriyuki Saito<sup>1</sup>, Takuji Yamauchi<sup>1</sup>, Yoshikane Kikushige<sup>1</sup>, Fumihiko Ishikawa<sup>2</sup>, Koichi Akashi<sup>1</sup>

(<sup>1</sup>Medicine and Biosystemic Science, Kyushu University, <sup>2</sup>Research Unit for Human Disease Models, RIKEN Research Center for Allergy and Immunology)

- O-12 Bone marrow-derived myofibroblasts contribute to the mesenchymal stem cell niche and promote tumor growth.

Shigeo Takaishi<sup>1,2</sup>, Quante Michael<sup>3</sup>, Shuiping Tu<sup>3</sup>, Hiroyuki Tomita<sup>3</sup>, Tamas Gonda<sup>3</sup>, Wataru Shibata<sup>3</sup>, Sophie S.W. Wang<sup>3</sup>, Gwang Ho Baik<sup>3</sup>, Kelly S. Betz<sup>3</sup>, Benjamin Tycko<sup>3</sup>, Timothy C. Wang<sup>3</sup>, Koichi Akashi<sup>1,2</sup>.

(<sup>1</sup> Department of Cell Therapy and Regenerative Medicine, Center for Advanced Medical Innovation, <sup>2</sup> Department of Medicine and Systemic Bioscience, School of Medicine, Kyushu University, Fukuoka, Japan, <sup>3</sup> Division of Digestive and Liver Disease, Department of Medicine, Columbia University, New York, USA.)

- O-13 Combination of a Ptg2 inhibitor and an EGFR-signaling inhibitor prevents tumorigenesis of oligodendrocyte-lineage derived glioma-initiating cells.

Takuichiro Hide<sup>1,2</sup>, Tatsuya Takezaki<sup>1,2</sup>, Yuka Nakatani<sup>1</sup>, Hideo Nakamura<sup>2</sup>, Jun-ichi Kuratsu<sup>2</sup> and Toru Kondo<sup>1,3</sup>

(<sup>1</sup> Laboratory for Cell Lineage Modulation, Center for Developmental Biology, RIKEN, Kobe 650-0047, Japan, <sup>2</sup> Department of Neurosurgery, Kumamoto University Graduate School of Medical Science, Kumamoto 860-8556, Japan, <sup>3</sup> Department of Stem Cell Biology, Ehime University Proteo-Medicine Research Center, To-on, Ehime 791-0295, Japan.)

- O-14 Treatment with mTOR inhibitors, everolimus and BEZ235 overcomes resistance to imatinib in BCR-ABL-positive leukemia quiescent cells

Yosuke Minami, Yachiyo Kuwatsuka, Miho Minami and Tomoki Naoe

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

- O-15 EGF receptor/ ErbB-NFkB signaling for self-renewal of breast cancer stem cells

Kunihiko Hinohara<sup>1</sup>, Seiichiro Kobayashi<sup>2</sup>, Kazuo Umezawa<sup>3</sup>, Arinobu Tojo<sup>2</sup>, Jun-ichiro Inoue<sup>4</sup>, Hajime Kanauchi<sup>5</sup>, Toshihisa Ogawa<sup>6</sup>, Noriko Gotoh<sup>1</sup>

(<sup>1</sup>Division of Systems Biomedical Technology, Institute of Medical Science, University of Tokyo, <sup>2</sup>Division of Molecular Therapy, Advanced Clinical Research Center, Institute of Medical Science, University of Tokyo, <sup>3</sup>Department of Applied Chemistry, Faculty of Science and Technology, Keio University, <sup>4</sup>Division of Cellular and Molecular Biology, Institute of Medical Science, University of Tokyo, <sup>5</sup>Department of Breast and Endocrine Surgery, Showa General Hospital, <sup>6</sup>Department of Breast and Endocrine Surgery, Graduate School of Medicine, The University of Tokyo)

Coffee Break

10:40~11:00

**Special Lecture 2**

**11:00~11:40**

**Chair Yusuke Furukawa**

(Division of Stem Cell Regulation, Center for Molecular Medicine, Jichi Medical University School of Medicine, Tochigi, Japan)

**Systems Approach to Stem Cell Biology**

**Jun Seita, M.D. Ph.D.**

(Institute for Stem Cell Biology and Regenerative Medicine, Stanford University)

**Lunch time**

**11:40~13:00**

**Poster Session**

**13:00~14:00**

**Session 5: ES cells/iPS cells (II)**

**14:00~15:20**

**Chair Takumi Era**

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

O-16 Eed/Sox2 regulatory loop controls ES cell self-renewal through histone methylation and acetylation

Hiroshi Koide<sup>1</sup>, Hiroki Ura<sup>1</sup>, Kazuhiro Murakami<sup>2</sup>, Tadayuki Akagi<sup>1</sup>, Keita Kinoshita<sup>1</sup>, Shukuro Yamaguchi<sup>1</sup>, Shinji Masui<sup>3</sup>, Hitoshi Niwa<sup>2</sup>, Takashi Yokota<sup>1</sup>

(<sup>1</sup>Department of Stem Cell Biology, Graduate School of Medical Science, Kanazawa University, <sup>2</sup>Laboratory for Pluripotent Cell Studies, RIKEN Center for Developmental Biology, <sup>3</sup>Division of Molecular Biology and Cell Engineering, Department of Regenerative Medicine, International Medical Center of Japan)

O-17 H2A ubiquitination is an essential step to mediate PRC1 Polycomb silencing of differentiation genes in ES cells

Mitsuhiro Endoh, Haruhiko Koseki

(Laboratory for Developmental Genetics, RIKEN Research Center for Allergy and Immunology)

O-18 Ground state condition renders Myc activity redundant in ES cells for their indefinite self-renewal

Tomoaki Hishida, Akihiko Okuda

(Division of Developmental Biology, Research Center for Genomic Medicine, Saitama Medical University)

O-19 Differentiation of functionally mature eosinophils from human embryonic and induced pluripotent stem cells

Feng MA, Wenyu YANG, Yanzheng GU, Hiromitsu NAKAUCHI, Kohichiro TSUJI

(Division of Stem Cell Processing and Stem Cell Therapy, Center for Stem Cell Biology and Regenerative Medicine, Institute of Medical Science, University of Tokyo)

**Coffee Break**

**15:20~15:40**

**Session 6: Hematopoietic stem cells (II)**

**15:40~16:40**

**Chair Yoshiaki Sonoda**

(Department of Stem Cell Biology and Regenerative Medicine, Graduate School of Medical Science, Kansai Medical University)

O-20 Latexin Regulates the Abundance of Multiple Cellular Proteins in Hematopoietic Stem Cells

Kanae Mitsunaga, Jiro Kikuchi, Taeko Wada, and Yusuke Furukawa  
(Division of Stem Cell Regulation, Center for Molecular Medicine, Jichi Medical University School of Medicine, Tochigi, Japan)

O-21 A protective metabolic program in hematopoietic stem cells

Keiyo Takubo, Toshio Suda  
(Department of Cell Differentiation, The Sakaguchi Laboratory of Developmental Biology, Keio University School of Medicine)

O-22 BAALC regulates hematopoietic stem cells through p53 and promotes leukemia with impaired p53 function

Sumimasa Nagai, Keiki Kumano, Akihito Shinohara, Masahiro Nakagawa, Motoshi Ichikawa, Mineo Kurokawa  
(Department of Hematology and Oncology, Graduate School of Medicine, University of Tokyo)

**Closing Remarks Next Director Toshio Suda**

**16:40~**

(Department of Cell Differentiation, Keio University School of Medicine)

## Poster Session (Gallery B)

Friday, May 13

13:40~14:40

Saturday, May 14

13:00~14:00

- P-1 Identities arising during mesoderm differentiation  
Martin Jakt, Satoko Moriwaki, Shinichi Nishikawa  
(Stem Cell Biology Group, Riken Center for Developmental Biology, Kobe)
- P-2 Establishment of embryonic stem-like cells from bovine blastocysts in vitro  
Manabu Ozawa<sup>1,2</sup>, Nobuaki Yoshida<sup>2</sup> and Peter J. Hansen<sup>1</sup>  
(<sup>1</sup>Department of Animal Sciences, University of Florida, <sup>2</sup>Institute of Medical Science, University of Tokyo)
- P-3 Cell cycle regulation of embryonic stem cells by RNA binding protein PTB  
Satona Ohno, Masaki Shibayama, Nobuaki Yoshida  
(Center for Experimental Medicine and Systems Biology, Institute of Medical Science, Tokyo University)
- P-4 Cell cycle regulation of mouse embryonic stem cells  
Hisao Masai<sup>1</sup>, Hiroko Fujii<sup>1</sup>, Yutaka Kanoh<sup>1</sup>, Sayuri Ito<sup>1</sup>, Naoko Kakusho<sup>1</sup>, Asako Sawano<sup>2</sup>, and Atsushi Miyawaki<sup>2</sup>  
(<sup>1</sup>Genome Dynamice Project, Tokyo Metropolitan Institute of Medical Science 2-1-6 Kamikitazawa, Setagaya-ku, Tokyo156-8506; <sup>2</sup>Laboratory for Cell Function and Dynamics, Advanced Technology Development Group, Brain Science Institute, RIKEN, 2-1 Hirosawa, Wako-city, Saitama 351-0198)
- P-5 Nanog regulates anchorage-independent growth of HT1080 fibrosarcoma cells  
Yuhki Tada, Tadayuki Akagi, Takashi Yokota, Hiroshi Koide  
(Dept. of Stem Cell Biology, Grad. Sch. of Med. Sci., Kanazawa Univ.)
- P-6 Hematopoietic differentiation of human iPS cells induced by forced expression of hematopoietic key regulators.  
Mitsujiro Osawa<sup>1,2</sup>, Yaeko Nakajima<sup>1,2</sup>, Motohiko Oshima<sup>1,2</sup>, Haruna Takagi<sup>1</sup>, Atsushi Iwama<sup>1,2</sup>  
(<sup>1</sup>Department of Cellular and Molecular Medicine, Graduate School of Medicine, Chiba University, <sup>2</sup>JST/CREST)
- P-7 *In vivo* analyses of mouse iPSC-derived HSC-like cells generated by enforced expression of LIM-homeobox transcription factor *Lhx2*.  
Kenji Kitajima, Takahiko Hara  
(Stem Cell Project, Tokyo Metropolitan Institute of Medical Science)
- P-8 Establishment of mouse induced pluripotent stem cells expressing HNF3 $\beta$  in a tetracycline-regulated fashion to induce hepatic differentiation  
Yuta Tetsuka<sup>1</sup>, Gana Adyaksa<sup>1</sup>, Yoshiaki Matsumi<sup>1</sup>, Yoshiko Hoshikawa<sup>1</sup>, Satsuki Miyazaki<sup>2</sup>, Jun-ichi Miyazaki<sup>2</sup>, and Goshi Shiota<sup>1</sup>  
(<sup>1</sup>Division of Molecular and Genetic Medicine, Graduate School of Medicine, Tottori University, <sup>2</sup>Division of Stem Cell Regulation Research, Graduate School of Medicine, Osaka University)



- P-9 The generation of porcine iPS cells with characters similar to those of mouse ES cells  
Yoshihisa Mizukami<sup>1</sup>, Shuh-hei Fujishiro<sup>1</sup>, Rikiya Ishino<sup>1</sup>, Yutaka Furukawa<sup>1</sup>, Takashi Nishimura<sup>1,2</sup>, Hitomi Matsunari<sup>3</sup>, Kazuaki Nakano<sup>3</sup>, Hiroshi Nagashima<sup>3</sup>, Yutaka Hanazono<sup>1,4</sup>  
 (1)Division of Regenerative Medicine, Center for Molecular Medicine, Jichi Medical University, (2)Fuji Micra Incorporated, (3)Department of Life Sciences, School of Agriculture, Meiji University, (4)JST, CREST)
- P-10 Generation of induced pluripotent stem cells from the patients with intractable diseases  
Tomomi Towata<sup>1</sup>, Yoshinori Yamada<sup>1</sup>, Noemi Fusaki<sup>2</sup>, Takumi Era<sup>1</sup>  
 (1)Department of Cell Modulation, Institute of Molecular Embryology and Genetics, Kumamoto University, (2)DNAVEC Corporation)
- P-11 Analysis of PTB-dependent alternative splicing switch during neural development  
Akinori Tokunaga, Takayuki Shibasaki, Shinya Masaki, Reiko Sakamoto, Nobuaki Yoshida  
 (Institute of Medical Science, University of Tokyo)
- P-12 FGF signaling inhibitor Sprouty4 modulates preference between neuronal and glial differentiation  
Taichi Kashiwagi<sup>1</sup>, Tetsushi Kagawa<sup>1</sup>, Akihiko Yoshimura<sup>2</sup>, Tetsuya Taga<sup>1</sup>  
 (1)Department of Stem Cell Regulation, Medical Research Institute Tokyo Medical and Dental University, (2)Department of Microbiology and Immunology, Keio University School of Medicine)
- P-13 Essential role of Nucleostemin in injury-induced liver regeneration  
Haruhiko Shugo<sup>1,2</sup>, Takako Ooshio<sup>1</sup>, Shuichi Kaneko<sup>2</sup>, Atsushi Hirao<sup>1</sup>  
 (1)Division of Molecular Genetics, Cancer and Stem Cell Research Program, Cancer Research Institute, Kanazawa University, (2)Department of Gastroenterology, Kanazawa University Graduate School of Medicine)
- P-14 Analysis of hepatic differentiation in conditional  $\beta$ -catenin knockout mice by using NGFR promoter  
Yoshiaki Matsumi, Keiko Shirakawa, Keita Kanki, Goshi Shiota  
 (Division of Molecular and Genetic Medicine, Graduate School of Medicine, Tottori University)
- P-15 Analysis of glial cell sub-lineages in the mouse central nervous system  
Tetsushi Kagawa<sup>1</sup>, Rieko Nomura<sup>1</sup>, Takeshi Shimizu<sup>2</sup>, Kimi Araki<sup>3</sup>, Naoki Takeda<sup>4</sup>, Naomi Nakagata<sup>5</sup>, Ikuo Nobuhisa<sup>1</sup>, Tetsuya Taga<sup>1</sup>  
 (1)Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan; (2)Department of Biological Sciences & Division of Bioengineering, Research Centre of Excellence in Mechanobiology, National University of Singapore, (3)Division of Developmental Biology, (4)Division of Transgenic Technology, and (5)Division of Reproductive Engineering, Center for Animal Resources and Development, Kumamoto University)

- P-16 The role of cyclin D1 in inhibition of astrocyte differentiation from neural stem/progenitor cells  
Norihisa Bizen<sup>1</sup>, Toshihiro Inoue<sup>2</sup>, Takeshi Shimizu<sup>3</sup>, Tetsushi Kagawa<sup>1</sup>, Tetsuya Taga<sup>1</sup>  
(<sup>1</sup>Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University, <sup>2</sup>Department of Ophthalmology and Visual Science, Graduate School of Medical Sciences, Kumamoto University, <sup>3</sup>Department of Biological Science & Division of Bioengineering, National University of Singapore)
- P-17 Hypoxic culture condition facilitates the proliferation and differentiation potentials of mouse dental pulp stem cells.  
Ryusuke Nakatsuka, Yoshikazu Matsuoka, Masaya Takahashi, Ryuji Iwaki, Yutaka Sasaki, Yoshiaki Sonoda  
(Department of Stem Cell Biology and Regenerative Medicine, Graduate School of Medical Science, Kansai Medical University)
- P-18 Enhanced competitive repopulation ability of hematopoietic stem cells by inhibition of Spred-1  
Yuko Tadokoro<sup>1</sup>, Atsushi Hirao<sup>1</sup>, Takayuki Hoshii<sup>1</sup>, Kazuhito Naka<sup>1</sup>, Koji Eto<sup>2</sup>, Hideo Ema<sup>2</sup>, Satoshi Yamazaki<sup>2</sup>, Reiko Kato<sup>3</sup>, Akihiko Yoshimura<sup>3,4</sup>, Hiromitsu Nakauchi<sup>2</sup>  
(<sup>1</sup>Division of Molecular Genetics, Cancer and Stem Cell Research Program, Cancer Research Institute, Kanazawa University, <sup>2</sup>Division of Stem Cell Therapy, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, <sup>3</sup>Division of Molecular and Cellular Immunology, Medical Institute of Bioregulation, Kyushu University, <sup>4</sup>Department of Microbiology and Immunology, Keio University School of Medicine)
- P-19 HOXA9 acts as an E3 ubiquitin ligase for Geminin to provide hematopoietic cells with cellular proliferation potential.  
Yoshinori Ohno, Yasunaga Shin'ichiro, Motoaki Ohtsubo, Hiroki Tetsuguchi, Takuma Furutani, Ai Kawashima, Yoshie Nakashima, Yoshihiro Takihara  
(Dept. Stem Cell Biol., RIRBM, Hiroshima Univ.)
- P-20 Histone acetyltransferase MOZ and MORF are essential for hematopoiesis and self renewal of hematopoietic stem cells  
Takuo Katsumoto, Nozomi Takahashi, Naomi Yoshida, Issay Kitabayashi  
(Hematological Malignancy Division, National Cancer Center Research Institute)
- P-21 Bmi1 Confers Stress Resistance to Self-Renewing Hematopoietic Stem Cells  
Shunsuke Nakamura, Atsushi Iwama  
(Department of Cellular and Molecular Medicine, Graduate School of Medicine, Chiba University)
- P-22 MT1-MMP plays a critical role in the modulation of hematopoiesis.  
Chiemi Nishida<sup>1</sup>, Beate Heissig<sup>2</sup>, Motoharu Seiki<sup>3</sup>, Hiromitsu Nakauchi<sup>4</sup>, Koichi Hattori<sup>1</sup>  
(<sup>1</sup>Division of Stem Cell Regulation, <sup>2</sup>Frontier Research Initiative, <sup>3</sup>Division of Cancer Cell Research, <sup>4</sup>Division of Stem Cell Therapy, The Institute of Medical Science, The University of Tokyo)

- P-23 Role of SoxF family proteins in the maintenance of immature phenotype of hematopoietic progenitors in the aorta-gonad-mesonephros region  
Ikuo Nobuhisa<sup>1,2</sup>, Yuko Kishikawa<sup>2</sup>, Uemura Mami<sup>3</sup>, Maha Anani<sup>1</sup>, Gomaa Ahmed<sup>1,2</sup>, Masami Kanai-Azuma<sup>3</sup>, Yoshiaki Kanai<sup>4</sup>, Tetsuya Taga<sup>1,2</sup>  
 (1Dept. of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental Univ., 2Dept. of Cell Fate Modulation, IMEG, Kumamoto Univ., 3Dept. of Experimental Animal Model for Human Disease, Center for Experimental Animal, Tokyo Medical and Dental Univ., 4Dept. of Veterinary Anatomy, Graduate School of Agricultural and Life Science, the Univ. of Tokyo)
- P-24 FoxO1 is required for hemangioblast development in mice  
 Ken-ichi Minehata<sup>1</sup>, Kenji Kitajima<sup>1</sup>, Michael Kyba<sup>2</sup>, Takahiko Hara<sup>1</sup>  
 (1Stem Cell Project, Tokyo Metropolitan Institute of Medical Science, 2Department of Pediatrics, University of Minnesota)
- P-25 Hematopoietic Disturbance in Iron-Overload  
Hiroshi Okabe, Takahiro Suzuki, Eisuke Uehara, Masuzu Ueda, Tadashi Nagai and Keiya Ozawa  
 (Division of Hematology, Department of Medicine, Jichi Medical University, Japan)
- P-26 Expression cloning of a reprogramming activity that induces bone marrow adherent myofibroblasts toward hematopoietic stem cells: Interleukin 1 $\beta$  promotes the expression of CD34 and cytokine receptors  
Haruko Tashiro, Ryosuke Shirasaki, Tadashi Yamamoto, Yoko Oka, Nobu Akiyama, Kazuo Kawasugi, Naoki Shirafuji  
 (Department of Hematology/Oncology, Teikyo University School of Medicine)
- P-27 Dynamics of the expression of CXCR4 on murine hematopoietic stem/progenitor cells  
Yutaka Sasaki, Yoshikazu Matsuoka, Masaya Takahashi, Ryuji Iwaki, Ryusuke Nakatsuka, Yoshiaki Sonoda  
 (Department of Stem Cell Biology and Regenerative Medicine, Graduate School of Medical Science, Kansai Medical University)
- P-28 Single Stem Cell Based Analysis of Signal Transduction Regulating Vasculogenic Fate of Umbilical Cord Blood-CD133+ cell  
Haruchika Masuda, Tomoko Shizuno, Atsuko Sato, Shotaro Obi, Asahara Takayuki  
 (Department of Regenerative Medicine, Tokai University. School of Medicine.)
- P-29 Effects of sex hormones on proliferation of breast cancer stem cells  
Yasunari Kanda, Naoya Hirata, Lin Waka, Yuko Sekino.  
 (Division of Pharmacology, National Institute of Health Sciences)
- P-30 Salinomycin inhibits proliferation and migration of endometrial cancer stem-like cells  
Soshi Kusunoki, Kiyoko Kato, Nurisimangul Yusuf, Tetsunori Inagaki, Satoru Takeda  
 (Department of Obstetrics and Gynecology, Faculty of Medicine, Juntendo University)

- P-31 Sodium butyrate inhibits the self-renewal capacity of endometrial tumor side-population cells by inducing a DNA damage response  
Kiyoko Kato<sup>1</sup>, Aya Kuhara<sup>2</sup>, Tomoko Yoneda<sup>2</sup>, Takafumi Inoue<sup>2</sup>, Tomoka Takao<sup>2</sup>, Tatsuhiro Ohgami<sup>2</sup>, Li Dan<sup>2</sup>, Ayumi Kuboyama<sup>2</sup>, Soshi Kusunoki<sup>1</sup>, Satoru Takeda<sup>1</sup>, Norio Wake<sup>2</sup>  
(<sup>1</sup>Department of Obstetrics and Gynecology, Faculty of Medicine, Juntendo University, <sup>2</sup>Department of Obstetrics and Gynecology, School of Medicine)
- P-32 Evaluation of 5-hydroxymethylcytosine in blood cells from normal subjects and patients with hematologic malignancies  
Mamiko Sakata-Yanagimoto<sup>1</sup>, Terukazu Enami<sup>1</sup>, Hideharu Muto<sup>1</sup>, Seishi Ogawa<sup>2</sup>, Shigeru Chiba<sup>1</sup>  
(<sup>1</sup>Department of Hematology, Graduate School of Comprehensive Human Sciences, University of Tokyo, <sup>2</sup>Cancer Genomics Project, University of Tokyo)
- P-33 Myofibroblasts originating from myelogenous leukemia cases form blastoma in severe combined immunodeficiency mice  
Ryosuke Shirasaki, Haruko Tashiro, Tadashi Yamamoto, Yoko Oka, Nobu Akiyama, Kazuo Kawasaki, Naoki Shirafuji  
(Department of Hematology/Oncology, Teikyo University School of Medicine)
- P-34 Immuno-editing of leukemic stem cells in MLL/ENL mouse leukemia model  
Jun Nakata<sup>1</sup>, Naoki Hosen<sup>2</sup>, Atsushi Okumura<sup>2</sup>, Yusuke Shimizu<sup>2</sup>, Minghua Guo<sup>2</sup>, Yuka Fujioka<sup>2</sup>, Hiroko Kinoshita<sup>2</sup>, Haruo Sugiyama<sup>2</sup>  
(<sup>1</sup>Department of Respiratory Medicine, Rheumatology, and Allergy, <sup>2</sup>Department of Functional Diagnostic Science, Osaka University Graduate School of Medicine)