

The 8th Stem Cell Research Symposium

Program

Date : May 13 (Thu) - 15(Sat), 2010

**Venue : The Awaji Yumebutai
International Conference Center**

Director : Koichi Akashi
Department of Medicine and Biosystemic Science,
Graduate School of Medical Sciences, Kyushu University

Organizer : Stem Cell Research Symposium
Cosponsor : Kyushu University Global COE Program
Cell-fate Decision:Function and Dysfunction in Homeostasis

Thursday, May 13. The First Day

Registration • Exhibit posters

12:00~

Opening Remarks Director Koichi Akashi

13:20~13:30

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

Session 1 : Neural stem cell

13:30~14:50

Chair Tetsuya Taga

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

- O-1 Neurogenesis-to-gliogenesis switch of neural stem cells
Hayato Naka-Kaneda¹, Shiho Nakamura¹, Takuya Shimazaki¹, Hideyuki Okano¹
(¹ Department of Physiology, School of Medicine, Keio University)
- O-2 Roles of p57 (kip2) in acquirement and maintenance of adult mouse neural stem cell quiescence
Shohei Furutachi¹, Yusuke Hirabayashi¹, Akinobu Matsumoto², Keiichi Nakayama² and Yukiko Gotoh¹
(¹ Institute of Molecular and Cellular Biosciences, University of Tokyo, Tokyo, Japan ² Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu University, Fukuoka, Japan)
- O-3 Tsukushi is a Frizzled ligand that regulates the proliferation of neuronal stem/progenitor cells
Kunimasa Ohta¹, Ayako Ito^{1,2}, Yohei Shinmyo¹, Naoko Kaneko³, Yuki Hirota³, Masahiro Yamaguchi⁴, Kazunobu Sawamoto³, Hideaki Tanaka^{1,2}
(¹Graduate School of Medical Sciences, Kumamoto University, ²Global COE, Kumamoto University, Institute of Molecular Medicine, ³Nagoya City University Graduate School of Medical Sciences, ⁴Graduate School of Medical science, University of Tokyo)
- O-4 shRNA library screening reveals a novel mechanism involved in oligodendrocyte differentiation
Nobuko Tsuchida-Straeten¹, Keiko Miwa¹, Yuki Kujuro and Toru Kondo¹
(¹Laboratory for Cell Lineage Modulation, Center for Developmental Biology, RIKEN, Kobe 650-0047, Japan)

Coffee Break

14:50~15:10

Session 2 : Hematopoietic stem cell (I)

15:10~16:50

Chair Toshio Kitamura

(Division of Stem cell signaling, Stem cell Therapy Center, Institute of Medical Science, University of Tokyo)

- O-5 High resolution purification and functional characterization of primitive human cord blood-derived CD34–negative SRCs
Yutaka Sasaki, Mari Murakami, Yoshikazu Matsuoka, Masaya Takahashi,

Ryusuke Nakatsuka, Yasushi Uemura, Yoshiaki Sonoda
(Department of Stem Cell Biology and Regenerative Medicine, Graduate School of Medical Science, Kansai Medical University)

- O-6 Prospective isolation and functional characterization of human hematopoietic stem cell-supportive mesenchymal stromal cells
Yoshikazu Matsuoka^{1,2}, Yutaka Sasaki¹, Masaya Takahashi¹, Ryusuke Nakatsuka¹, Yasushi Uemura¹, Yoshiaki Sonoda¹
(¹Department of Stem Cell Biology and Regenerative Medicine, Graduate School of Medical Science, Kansai Medical University, ²Department of Cancer Immunology, Graduate School of Medicine, Osaka University)
- O-7 A new-type Sendai virus vector expressing HoxB4 allows safe and efficient expansion of human HSC in a sheep in utero transplant model
Shigeo Masuda¹, Tomoyuki Abe¹⁻³, Hiroshi Ban⁴, Satoshi Hayashi⁵, Hironori Takahashi^{1,5}, Makoto Inoue⁴, Mamoru Hasegawa⁴, Yoshikazu Nagao^{2,3}, Yutaka Hanazono¹
(¹ Division of Regenerative Medicine, Center for Molecular Medicine, Jichi Medical University, ² Department of Agriculture, Utsunomiya University, ³ United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology, ⁴ DनावेC Corporation, ⁵ Department of Obstetrics and Gynecology, National Center for Child Health and Development)
- O-8 *Ex vivo* enhancement of repopulating and self-renewal potentials in hematopoietic stem cells by a minimal combination of cytokines
Jun Ooehara, Hiromitsu Nakauchi, Hideo Ema
(Division of Stem Cell Therapy, Center for Stem Cell Biology and Regenerative Medicine, Institute of Medical Science, University of Tokyo)
- O-9 Requirement of Etv-2 for the specification of the hemangioblastic mesoderm
Hiroshi Kataoka
(Stem Cell Biology RIKEN CDB)

Coffee Break

16:50~17:10

Special Lecture 1

17:10~18:10

Chair Toshio Kitamura

Molecular functions of cyclins in mouse development

Peter Sicinski, M.D. Ph.D.

(Department of Cancer Biology, Dana-Farber Cancer Institute and Department of Pathology, Harvard Medical School)

Poster Session

18:30~

Friday, May 14. The Second Day

Session 3 : Multipotent stem cell (I)

8:30~9:30

Chair Atsushi Iwama

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

- O-10 Long-term repopulation of adult hematopoiesis by *in vitro* differentiated blood cells from ESCs/iPSCs by LIM homeobox transcription factor, Lhx2
Kenji Kitajima¹, Jie Zheng², Ken-ichi Minehata¹, Toru Nakano³, Takahiko Hara¹
(¹Stem Cell Project, The Tokyo Metropolitan Institute of Medical Science, ²Molecular & Cellular Biology, Sunnybrook Health Sciences Centre, University of Toronto, ³Graduate School of Frontier Biosciences, Osaka University)
- O-11 Linkage between histone modification and DNA methylation in early embryogenesis
Toshinobu Nakamura¹, Yu-Jung Liu², Hiroyuki Nakashima², Makoto Tachibana³, Yoichi Shinkai³, Toru Nakano^{1,2}
(¹ Graduate School of Medicine, ² Graduate School of Frontier Biosciences, Osaka University, ³ Institute for Virus Research, Kyoto University)
- O-12 Guidance of monoclonal T lineage lymphocytes from human induced pluripotent stem cells originating from a single peripheral T lymphocyte
Toshinobu Nishimura, Shin Kaneko, Haruo Gotoh, Hiromitsu Nakauchi
(Division of Stem Cell Therapy, Center for Stem Cell Biology and Regenerative Medicine, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan)

Coffee Break

9:30~9:50

Session 4 : Multipotent stem cell (II)

9:50~10:50

Chair Shigeru Chiba

(Department of Clinical and Experimental Hematology, Graduate School of Comprehensive Human Sciences, University of Tsukuba)

- O-13 High efficient experimental model of reprogramming in primordial germ cells leads to the prospective analysis in generation of pluripotency
Takeo Kosaka¹, Go Nagamatsu², Keiyo Takubo², Mototsugu Oya¹, Toshio Suda²
(¹ Department of Urology, ² The Sakaguchi Laboratory of Developmental Biology, Keio University School of Medicine)
- O-14 A novel *in vivo* differentiation system of transplantable HSCs from iPSCs through teratoma formation
Nao Suzuki^{1,2}, Satoshi Yamazaki¹, Tomoyuki Yamaguchi^{1,2}, Hiromitsu Nakauchi^{1,2}
(¹ Division of Stem Cell Therapy, Center for Stem Cell Biology and Regenerative Medicine, Institute of Medical Science, University of Tokyo, ² Nakauchi Stem Cell and Organ Regeneration Project, ERATO, JST)
- O-15 Sulfation contributes to the maintenance of mouse embryonic stem cells, the differentiation of the embryoid body and the progression of neurogenesis
Norihiko Sasaki¹, Takuya Hirano¹, Tomomi Ichimiya¹, Masahiro Wakao², Kazumi Hirano¹, Akiko Kinoshita-Toyoda³, Hidenao Toyoda³, Yasuo Suda², Shoko Nishihara¹
(¹ Laboratory of Cell Biology, Department of Bioinformatics, Faculty of Engineering, Soka University, ² Department of Nanostructure and Advanced

Materials, Graduate School of Science and Engineering, Kagoshima University,
³ Laboratory of Bio-analytical Chemistry, College of Pharmaceutical Sciences,
Ritsumeikan University)

Coffee Break **10:50~11:10**

Special Lecture 2 **11:10~12:10**

Chair **Shigeru Chiba**

Factors modulating reprogramming somatic cells to pluripotent Stem cells

Bing Lim, M.D. Ph.D
(Genome Institute of Singapore)

Lunch **12:10~13:40**

Secretary society Room304 **12:20~13:20**

Session 5 : Cancer stem cell (I) **13:40~15:00**

Chair Atsushi Hirao
(Division of Molecular Genetics, Cancer Research Institute, Kanazawa University)

- O-16 Defined factors induce reprogramming of gastrointestinal cancer cells
Hiromitsu Hoshino¹, Hideshi Ishii^{1,2}, Norikatsu Miyoshi¹, Ken-ichi Nagai¹,
Dyah Laksmi Dewi¹, Hidekazu Takahashi¹, Hisanori Hatano¹, Daisuke
Takiuchi¹, Koshi Mimori², Fumiaki Tanaka², Hiroaki Nagano¹, Mitsugu
Sekimoto¹, Yuichiro Doki¹, Masaki Mori^{1,2}
(¹ Department of Gastroenterological Surgery, Osaka University Graduate
School of Medicine, ² Department of Molecular and Cellular Biology, Division of
Molecular and Surgical Oncology, Medical Institute of Bioregulation, Kyushu
University)
- O-17 CD13 is a novel dormant cancer stem cell marker of liver and has a potency as a
novel therapeutic target
Daisuke Takiuchi, Hideshi Ishii, Naotsugu Haraguchi, Hisanori Hatano,
Hidekazu Takahashi, Hiromitsu Hoshino, Norikatsu Miyoshi, Dyah Laksmi
Dewi, Hiroshi Wada, Shougo Kobayashi, Shigeru Marubashi, Hidetoshi Eguchi,
Yutaka Takeda, Masanori Tanemura, Hiroaki Nagano, Yuichiro Doki, Masaki
Mori
(Department of Gastroenterological Surgery, Graduate school of medicine,
Osaka University)
- O-18 Endometrial cancer side-population cells show prominent migration and have a
potential to differentiate into the mesenchymal cell lineage
Kiyoko Kato¹, Ayumi Kuboyama¹, Tomoka Takao², Norio Wake²
(¹Department of Obstetrics and Gynecology, Faculty of Medicine, Juntendo
University, ²Department of Obstetrics and Gynecology, School of Medicine,
Kyushu University)
- O-19 Potential roles of NF-kappa B pathways in breast cancer-initiating cells
Kunihiko Hinohara¹, Michiko Murohashi¹, Takayuki Isagawa², Shingo Tsuji²,
Kazuo Umezawa³, Hiroyuki Aburatani², Noriko Gotoh¹

(¹ Division of Systems Biomedical Technology, Institute of Medical Science, University of Tokyo, ²Genome Science Division, Research Center of Advanced Science and Technology, University of Tokyo, ³Department of Applied Chemistry, Faculty of Science and Technology, Keio University)

Coffee Break

15:00~15:20

Session 6 : Cancer stem cell (II)

15:20~16:40

Chair Issay Kitabayashi

(Division of Molecular Oncology, National Cancer Center Research Institute)

- O-20 Regulation of stem cells in MOZ and other leukemias
Haruko Shima¹, Yukiko Aikawa¹, Kumiko Yamanaka¹, Takuo Katsumoto¹, Mika Shino¹, Akihiko Koseki², Issay Kitabayashi¹
(¹Division of Molecular Oncology, National Cancer Center Research Institute, ²Research Center for Allergy and Immunology, RIKEN)
- O-21 Treatment with mTOR inhibitor, everolimus (RAD001) overcomes resistance to imatinib in Ph-leukemia quiescent or T315I-mutated cells
Yosuke Minami¹, Yachiyo Kuwatsuka¹, Miho Minami¹, Ryohei Tanizaki¹ and Tomoki Naoe¹
(¹Department of Hematology and Oncology, Nagoya University Graduate School of Medicine)
- O-22 Hematopoietic stem cells are primarily involved in pathogenesis of chronic lymphocytic leukemia
Yoshikane Kikushige¹, Toshihiro Miyamoto¹, Fumihiko Ishikawa², Koichi Akashi¹
(¹Medicine and Biosystemic Science, Kyushu University, ²Research Unit for Human Disease Model, RIKEN Center for Allergy and Immunology)
- O-23 Identification and targeting of multiple myeloma progenitor cells
Naoki Hosen, Satoshi Kishida, Yoshikazu Matsuoka, Haruo Sugiyama
(Department of Functional Diagnostic Science, Osaka University Graduate School of Medicine)

Coffee Break

16:40~17:00

Special Lecture 3

17:00~18:00

Chair Issay Kitabayashi

Regulation of normal and leukemic hematopoietic stem cells by myeloid transcription factors

Daniel G. Tenen, M.D.

(Cancer Science Institute Singapore (CSI Singapore))

General Meeting

18:00~18:10

Poster Session

18:30~

Saturday, May 15. The Third Day

Session 7 : Liver and muscle differentiation

8:30~9:30

Chair Atsushi Miyajima

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

- O-24 FGF7 induces stem/progenitor cell response in the adult mouse liver
Hinako Takase, Tohru Itoh, Atsushi Miyajima
(Institute of Molecular and Cellular Biosciences, The University of Tokyo)
- O-25 Chd2 determines myogenic cell fate
Akihito Harada¹, Yasuyuki Ohkawa^{1,2}
(¹Department of Epigenetics, SSP Stem Cell Unit, Faculty of Medicine, Kyushu University, ²Institute for Advanced Study, Kyushu University)
- O-26 BMP signalling permits population expansion by preventing premature myogenic differentiation in muscle satellite cells
Yusuke Ono^{1,2}, Frederico Calbaheu², Helge Amthor³, Takenobu Katagiri⁴ and Peter S. Zammit²
(¹Department of Molecular Therapy, National Institute of Neuroscience, National Centre of Neurology and Psychiatry, Tokyo, Japan, ²Randall Division of Cell and Molecular Biophysics, King's College London, London, UK., ³UPMC INSERM UMR S 974 / CNRS UMR 7215, Institut de Myologie, 105 bd de l'Hôpital, Paris, France., ⁴Division of Pathophysiology, Research Centre for Genomic Medicine, Saitama Medical University, Saitama, Japan)

Coffee Break

9:30~9:50

Session 8 : Hematopoietic stem cell (II)

9:50~11:30

Chair Mineo Kurokawa

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

- O-27 Molecular mechanism of HoxB4 mediated self-renewal
Mitsujiro Osawa¹, Michael Kyba²
(¹ Department of Cellular and Molecular Medicine, Chiba University, Japan, ² Department of Pediatrics, University of Minnesota, MN, USA)
- O-28 Co-repressor TIF1 β is an essential regulator of hematopoietic stem cells
Satoru MIYAGI^{1,2}, Issay KITABAYASHI³, Hitoshi ICHIKAWA⁴ and Atsushi IWAMA^{1,2}
(¹Department of Cellular and Molecular Medicine, Graduate School of Medicine, Chiba university, ²CREST, JST, ³Molecular Oncology division, National Cancer Institute, ⁴Genetics division, National Cancer Institute)
- O-29 Evil expression marks long-term repopulating hematopoietic stem cells.
Keisuke Kataoka^{1,3}, Tomohiko Sato^{1,3}, Akihito Yoshimi¹, Susumu Goyama¹, Shunya Arai¹, Yoichi Imai¹, Katsuyoshi Kumagai², Naoto Kubota², Takashi Kadowaki², Mineo Kurokawa¹
(¹Department of Hematology & Oncology, Graduate School of Medicine, University of Tokyo, ²Department of Metabolic Disease, Graduate School of Medicine, University of Tokyo, ³These authors contributed equally to this work.)
- O-30 Strict regulation of mTOR signaling is essential for hematopoietic stem cell maintenance *in vivo*

Takayuki Hoshii¹, Yuko Tadokoro¹, Kazuhito Naka¹, Takako Ooshio¹, Teruyuki Muraguchi¹, Kimi Araki², Ken-ichi Yamamura², Atsushi Hirao^{1, 3}
(¹Division of Molecular Genetics, Cancer Research Institute, Kanazawa University, ²Laboratory of Developmental Genetics, IMEG, Kumamoto University, ³CREST, JST)

O-31 Functional role of reactive oxygen species in lineage decision of myeloid progenitor cells

Akihito Shinohara¹, Yoichi Imai¹, Masahiro Nakagawa¹, Motoshi Ichikawa¹, Tsuyoshi Takahashi¹, Mineo Kurokawa^{1,2}
(¹Department of Hematology & Oncology, Graduate School of Medicine, University of Tokyo, Tokyo, Japan, ²Department of Cell Therapy and Transplantation Medicine, University of Tokyo Hospital, Tokyo, Japan)

Closing Remarks Next Director Mineo Kurokawa 11:30~11:40

Poster Session Thursday, May 13 & Friday, May 14. 18:30~

- P-1 G-CSF regulates skeletal muscle development and regeneration through myoblast-specific expression of the G-CSF receptor
Shinsuke Yuasa^{1,2}, Mie Hara¹, Keiichi Fukuda¹
 (¹Department of Cardiology, Department of Internal Medicine, ²Center for Integrated Medical Research, Keio University School of Medicine)
- P-2 Generation of Induced Pluripotent Stem (iPS) Cells from Patients with Congenital Long QT Syndrome
Tomohisa Seki¹, Shinsuke Yuasa^{1,2}, Toru Egashira¹, Keiichi Fukuda¹
 (¹Department of Cardiology, Department of Internal Medicine, ²Center for Integrated Medical Research, Keio University School of Medicine)
- P-3 Identification, isolation and characterization of HCN4-positive cardiac pacemaking cells derived from murine embryonic stem cells.
Yu Ikeuchi, Natsumi Shimizu, Shinichi Ito, Hiroshi Fujii, Kumi Morikawa, Yasuaki Shirayoshi and Ichiro Hisatome.
 (Division of Regenerative Medicine and Therapeutics, Graduate school of medical science, Tottori University)
- P-4 Global expression analysis of somatic stem cells in vitro
Satoko Yoshitake¹, Takafusa Hikichi¹, Atsushi Suzuki^{2,3}, Shinji Masui^{1,3}
 (¹Research Institute, National Center for Global Health and Medicine, ²Medical Institute of Bioregulation, Kyushu University, ³PRESTO, Japan Science and Technology Agency)
- P-5 A small molecule compound induces hepatic differentiation of human bone marrow-derived mesenchymal stem cells by inhibition of Wnt/ β -catenin signaling
Yoshiaki Matsumi, Noriko Matsumoto, An Afida Ashla, Yuta Tetsuka, Yuta Arakaki, Yoshiko Hoshikawa, Goshi Shiota
 (Division of Molecular and Genetic Medicine, Graduate School of Medicine, Tottori University)
- P-6 Establishment of mouse induced pluripotent stem cells expressing HNF3 β in a tetracycline-regulated fashion
Yuta Tetsuka¹, Yoshiaki Matsumi¹, Yoshikawa Hoshikawa¹, Satsuki Miyazaki², Jun-ichi Miyazaki², and Goshi Shiota¹
 (¹Division of Molecular and Genetic Medicine, Graduate School of Medicine, Tottori University, ²Division of Stem Cell Regulation Research, Graduate School of Medicine, Osaka University)
- P-7 Impact of age on generation of iPSCs from mdx mouse fibroblast cells
Bo Wang, Makoto Segawa, Chika Harano, Yuko Miyagoe-Suzuki, Shin'ichi Takeda
 (Department of Molecular Therapy, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan)
- P-8 The Effects of Arachidonic Acid and Docosahexaenoic Acid on Neural Stem/Progenitor Cells
Nobuyuki Sakayori¹, Noriko Osumi^{1,2,3}
 (¹Division of Developmental Neuroscience, Tohoku University Graduate School of Medicine, ²CREST, JST, ³Tohoku Neuroscience Global COE)
- P-9 Altered brain microRNA biogenesis affects neural stem cell proliferation in mouse hippocampal dentate gyrus
Yasuo Ouchi¹, Yuko Simizu¹, Mai Mizuno¹, Takashi Iwamoto¹
 (¹Dept of Biomedical science, Chubu University)
- P-10 The role of FABPs in postnatal hippocampal neurogenesis
Miho Matsumata^{1,2,3}, Motoko Maekawa⁴, Yuji Owada⁵, Takeo Yoshikawa^{3,4} and Noriko Osumi^{1,3,6}
 (¹Division of Developmental Neuroscience, Graduate School of Medicine, Tohoku University, ²Department of Molecular Genetics, Institute of Biomedical Sciences, Fukushima Medical University, ³CREST, JST, ⁴Brain Science of Institute, RIKEN, ⁵Department of Organ Anatomy, Graduate School of Medicine, Yamaguchi University, ⁶GCOE, JSPS)

- P-11 SIF is a secreted inducer of cell senescence expressed by aged CNS precursor cells
Toru Kondo^{1,2} and Yuki Kujuro¹
 (1Laboratory for Cell Lineage Modulation, RIKEN Center for Developmental Biology,
 2Department of Stem Cell Biology, Ehime University Proteo-Medicine Research Center)
- P-12 Fbxw7a regulates the maintenance and differentiation of neural stem cells
Akinobu Matsumoto^{1,2}, Ichiro Onoyama^{1,2}, Takehiko Sunabori³, Yuki Tateishi^{1,2},
 Ryoichiro Kageyama^{2,4}, Hideyuki Okano³, Keiichi I. Nakayama^{1,2}
 (1Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu
 University, 2CREST, 3Department of Physiology, Keio University School of Medicine,
 4Institute for Virus Research, Kyoto University)
- P-13 Molecular mechanism underlying cyclin D1 mediated inhibition of astrocyte
 differentiation from neural stem/progenitor cells
Norihisa Bizen¹, Toshihiro Inoue², Takeshi Shimizu³, Tetsushi Kagawa¹, Tetsuya Taga¹
 (1Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental
 University, 2Department of Ophthalmology and Visual Science, Graduate School of Medical
 Sciences, Kumamoto University, Laboratory for Vertebrate Axis Formation, RIKEN Center for
 Developmental Biology)
- P-14 Oxygen tension can control the DNA methylation status of GFAP promoter through
 Notch signaling and allows propagation and maturation of neuronal progenitor
Tetsuji Mutoh¹, Kinichi Nakashima¹
 (1Graduate School of Biological Sciences, NARA INSTITUTE of SCIENCE and
 TECHNOLOGY.)
- P-15 The role of histone acetylation on cortical development
Berry Juliandi, Keita Tsujimura, Masahiko Abematsu, Jun Kohyama, Kinichi Nakashima
 (Laboratory of Molecular Neuroscience, Graduate School of Biological Science, Nara Institute
 of Science and Technology)
- P-16 ES specific transcription factors functions with the SWI/SNF chromatin remodeling
 factor CHD2 in Embryonic stem cells
Jun Odawara^{1,2}, Akihito Harada¹, Koichi Akashi², Yasuyuki Ohkawa¹
 (1Department of Epigenetics, Faculty of Medicine, Kyushu University, 2Medicine and
 Biosystemic Science, Kyushu University Graduate School of Medical Sciences)
- P-17 Polycomb temporally regulates trophoblast development by promoting stem cell
 differentiation
Mitsuhiro Endoh, Haruhiko Koseki
 (Developmental genetics, RIKEN RCAF)
- P-18 Appropriate expression level of Eed is required for proper differentiation of ES cells
Hiroshi Koide¹, Hiroki Ura¹, Shinji Masui², Hitoshi Niwa³, Tadayuki Akagi¹, Takashi Yokota¹
 (1Department of Stem Cell Biology, Graduate School of Medical Science, Kanazawa University,
 2Division of Molecular Biology and Cell Engineering, Department of Regenerative Medicine,
 Research Institute, International Medical Center of Japan, and 3Laboratory for Pluripotent
 Cell Studies, RIKEN, Center for Developmental Biology)
- P-19 Parameterising differentiation at the single cell level
Martin Jakt¹, Satoko Moriwaki¹, Shinichi Nishikawa¹
 (1Stem Cell Biology Group, Riken Center for Developmental Biology, Kobe)
- P-20 Functional analysis of Gli in mouse embryonic stem cells
Atsushi Ueda, Miwako Miura, Hiroki Ura, Tadayuki Akagi, Hiroshi Koide, Takashi Yokota
 (Department of Stem Cell Biology, Graduate School of Medical Science, Kanazawa University)
- P-21 Forced expression of telomerase catalytic subunit gene negatively regulates generation of
 induced pluripotent stem cells
Akira Shimamoto, Yukihiko Sera, Kazuma Zensho, Yumiko Hino, Hidetoshi Tahara
 (Department of Cellular and Molecular Biology, Hiroshima University Graduate School of
 Biomedical Sciences, Hiroshima, JAPAN)

- P-22 **Functional analysis of TERT and ATM in adult somatic cell reprogramming**
Taisuke Kinoshita¹, Go Nagamatsu¹, Takeo Kosaka^{1,2}, Akitsu Hotta^{3,4}, James Ellis^{3,5}, Toshio Suda¹
 (1)Department of Cell Differentiation, The Sakaguchi Laboratory, (2)Department of Urology, School of Medicine, Keio University, (3)Developmental and Stem Cell Biology Program and (4)Ontario Human iPS Cell Facility, SickKids, (5)Department of Molecular Genetics, University of Toronto)
- P-23 **Metastable primordial germ cell-like state induced from mouse embryonic stem cells by Akt activation**
Tohru Kimura¹, Noriko Yamano¹, Takashi Shinohara³, Toru Nakano^{1,2}
 (1)Graduate School of Frontier Biosciences, (2)Medical School, Osaka University, (3)Graduate School of Medicine, Kyoto University)
- P-24 **Mechanisms of primitive endoderm specification - from ES cells to preimplantation mouse development**
Julien Bouissac¹, Naoko Yoshioka¹, Shin-Ichi Nishikawa¹
 (1)Laboratory for Stem Cell Biology, RIKEN CDB)
- P-25 **Screening of surface antigens on iPS cells with SST-REX**
Toshihiko Oki¹, Toshio Kitamura¹
 (1)Division of Stem cell signaling, Stem cell Therapy Center, Institute of Medical Science, University of Tokyo)
- P-26 **Heparan sulfate contributes to self-renewal and pluripotency in mouse embryonic stem cells**
Kazumi Hirano¹, Norihiko Sasaki¹, Shoko Nishihara¹
 (1)Laboratory of Cell Biology, Department of Bioinformatics, Faculty of Engineering, Soka University, Hachioji, Japan.)
- P-27 **Direct generation of induced pluripotent stem cells from human non-mobilized blood**
Atsushi Kunisato¹, Mariko Wakatsuki¹, Haruna Shinba¹, Toshio Ota², Isao Ishida¹, Kenji Nagao¹
 (1)Frontier Laboratory, Kyowa Hakko Kirin Co., Ltd., (2)Drug Discovery Research Laboratories, Kyowa Hakko Kirin Co., Ltd.)
- P-28 **Purified mesenchymal stem cells: An efficient cell source for the iPS cells induction**
Yoshimi Kawamura¹, Kunimichi Niibe^{1,2}, Satoru Morikawa², Yo Mabuchi¹, Hideyuki Okano¹, Yumi Matsuzaki¹
 (1)Department of Physiology, (2)Department of Dentistry and Oral Surgery, School of Medicine, Keio University)
- P-29 **PROSPECTIVE CLONAL ISOLATION OF HUMAN MESENCHYMAL STEM CELLS ELUCIDATES HETEROGENEITY WITHIN THE MULTI-POTENT STEM CELL COMPARTMENT**
Yo Mabuchi, Satoru Morikawa, Sadafumi Suzuki, Lawrence Lein, Kunimichi Niibe, Yasuo Nagai, Takehiko Sunabori, Hideyuki Okano, Yumi Matsuzaki,
 (Physiology, Keio Univ School of Medicine, Tokyo, Japan)
- P-30 **Prospective isolation of mouse Sca-1+PDGFR α + dental pulp stem cells (DPSCs) existing in the tooth forming niche**
Ryusuke Nakatsuka, Yasushi Uemura, Yoshikazu Matsuoka, Yutaka Sasaki, Yoshiaki Sonoda
 (Department of Stem Cell Biology and Regenerative Medicine, Graduate School of Medical Science, Kansai Medical University)
- P-31 **CD61/ integrin β 3 ligation contributes to the thrombopoietin-mediated maintenance/expansion of mouse hematopoietic stem cells**
Terumasa Umemoto¹, Masayuki Yamato¹, Yoshiko Shiratsuchi¹, Kenji Tsukada^{1,2}, Mika Utsumi¹, Yohei Morita³, Masao Terasawa², Takehiko Shibata², Kohji Nishida⁴, Yoshiro Kobayashi², Brian Petrich⁵, Mark H. Ginsberg⁵, Hiromitsu Nakauchi³, Koji Eto³, and Teruo Okano¹
 (1)Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, (2)Division of Molecular Medicine, Department of Biomolecular Science, Toho University, (3)Stem Cell Bank & Stem Cell Therapy, Center for Stem Cell Biology, The Institute of Medical Science, The University of Tokyo, (4)Department of Ophthalmology and Visual Science, Tohoku University Graduate School of Medicine, and (5)Department of Medicine, School of Medicine, University of California)

- P-32 Transcriptional Mediator subunit MED1/TRAP220 in stromal cells is involved in hematopoietic stem/progenitor cell support through osteopontin expression
Ruri Ishino¹, Akiko Sumitomo¹, Norinaga Urahama¹, Kana Inoue¹, Kenji Yonezawa¹, Natsumi Hasegawa¹, Chihiro Kaminaga¹, Naohiko Seki², Robert G. Roeder³, Mitsuhiro Ito^{1, 4}
 (1Laboratory of Hematology, Division of Medical Biophysics, Kobe University Graduate School of Health Sciences, 2Department of Functional Genomics, Graduate School of Medicine, Chiba University, 3Laboratory of Biochemistry and Molecular Biology, Rockefeller University, U.S.A., 4Department of Family and Community Medicine, Kobe University Graduate School of Medicine)
- P-33 Role for Geminin in hematopoietic stem cell regulation
Shin'ichiro Yasunaga, Yoshinori Ohno, Motoaki Ohtsubo, Miyuki Tsumura, Yuka Kageyama, Sayaka Mori, Yoshie Nakashima, Yoshihiro Takihara
 (Dept. Stem Cell Biol., RIRBM, Hiroshima Univ.)
- P-34 An anti-apoptotic molecule Anamorsin plays significant roles in both intrinsic and extrinsic regulation of murine fetal liver hematopoiesis
Akira Tanimura, Hirokazu Tanaka, Yuri Saito, Hirohiko Shibayama, Itaru Matsumura, and Yuzuru Kanakura
 (Department of Hematology and Oncology, Osaka University Graduate School of Medicine)
- P-35 Cells that have hematopoietic activity in the placenta of mouse embryo reside in the side population
Ahmed Ramadan^{1, 2, 3}, Ikuo Nobuhisa^{1, 2}, Shoutarou, Yamasaki¹, Tetsuya Taga^{1, 2, 3}
 (1Dept. of Cell Fate Modulation, Institute of Molecular Embryology and Genetics, Kumamoto Univ., 2Dept. of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental Univ., 3Global COE, Kumamoto Univ.)
- P-36 c-Cbl regulates interaction of immature hematopoietic cells with the bone marrow microenvironment by Rac GTPase-mediated cytoskeletal signals
Eisuke Uehara¹, Takahiro Suzuki¹, Hiroshi Okabe¹, Masuzu Ueda¹, Tadashi Nagai¹, Masashi Sanada², Seishi Ogawa², Keiya Ozawa¹.
 (1Division of Hematology, Department of Medicine, Jichi Medical University, 2Cancer Genomics Project, Graduate School of Medicine, University of Tokyo.)
- P-37 Prospective purification of the human monocyte/macrophage progenitor
Takahiro Shima¹, Toshihiro Miyamoto¹, Yoshikane Kikushige¹, Koichi Akashi¹
 (1Medicine and Biosystemic Science, Kyushu University)
- P-38 Microarray analysis of myeloid progenitors immortalized via retroviral transduction of Hes-1
Yasuyuki Miyake¹, Mamiko Sakata-Yanaigimoto¹, Takayasu Kato¹, Hideharu Muto¹, Noriko Gotoh² and Shigeru Chiba¹
 (1Department of Clinical and Experimental Hematology, Graduate School of Comprehensive Human Sciences, University of Tsukuba, 2Department of Systems Biomedical Technology, Institute of Medical Science, University of Tokyo)
- P-39 Standardized enumeration of human endothelial progenitor cells (EPCs) based on a flow cytometric assay using the MACSQuant® Analyzer
Junji Tanaka, Kathrin Pütsch, Jürgen Schmitz
 (Miltenyi Biotec GmbH, Bergisch Gladbach, Germany)
- P-40 Analysis of cancer stem cells in bone marrow metastasis by use of in vivo selection system
Tsuyoshi Shirakawa, Keita Uchino, Hitoshi Kusaba, Eishi Baba and Koichi Akashi
 (Medicine and Biosystemic Science, Kyushu University Graduate School of Medical Science)
- P-41 C6 glioma main population maintains side population
Kouichi Tabu^{1, 2}, Yasuhiro Kokubu¹, Norihisa Bizen¹, Ikuo Nobuhisa¹, Tetsushi Kagawa¹, Tetsuya Taga¹
 (1Department of Stem Cell Regulation, Medical Research Institute, Tokyo Medical and Dental University, 2JSPS Research Fellow)