The 14th CDB Meeting "EPC Biology Conference"
Program

10:30~10:35 Opening Remarks by Takayuki Asahara

Session 1: EPC Biology 1
Moderator: Takayuki Asahara

10:35~11:15 **Potential contribution of circulating progenitors to vascular healing and remodeling** (30+10)
Masataka Sata
The University of Tokyo, Japan

11:15~11:45 **Blood vessel maturation by hematopoietic stem cell population** (20+10)
Nobuyuki Takakura
Cancer Research Institute, Kanazawa University, Japan

11:45~12:25 **Mobilization of bone marrow-derived tissue progenitor cells promote tissue regeneration** (30+10)
Koichi Hattori
Institute of Medical Science, University of Tokyo, Japan

12:25~13:00 Lunch

13:00~14:10 Poster Session 1 Moderators: Masataka Sata and Nobuyuki Takakura
5 min. Presentation and 2 min. Discussion X 10

Session 2: EPC Biology 2
Moderator: Toyoaki Murohara

14:10~14:50 **New Insight into EPC Biology** (30+10)
Han-Mo Yang
Seoul National University Hospital, Korea

14:50~15:30 **Establishment of Endothelial Progenitor Cells Colony Assay** (30+10)
Takayuki Asahara
RIKEN Center for Developmental Biology, Institute of Biomedical Research and Innovation, Kobe, Tokai University, Japan

15:30~16:20 **Human EPCs: Functional characterisation** (40+10)
Stefanie Dimmeler
University Frankfurt, Germany

16:20~17:25 Coffee and Poster Session 2 Moderator: Masaaki Miyamoto
5 min. Presentation and 2 min. Discussion X 9

Session 3: EPC Therapy
Moderator: Yoshiki Sawa

17:25~18:05 **EPC therapeutic potency - mechanisms and clinical trial** (30+10)
Hiromichi Hamada and Douglas W Losordo
Cardiovascular Research, St. Elizabeth's Medical Center of Boston, Tufts University, USA

18:05~18:35 **Clinical application of endothelial progenitor cell transplantation for ischemic diseases** (20+10)
Atsuhiko Kawamoto
RIKEN Center for Developmental Biology/ Institute of Biomedical Research and Innovation, Kobe, Japan

18:35~19:25 **Bone marrow and blood derived progenitor cells for clinical cell therapy** (40+10)
Andreas M. Zeiher
University Frankfurt, Germany

19:25~21:00 Reception & Final discussion

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Poster Program

Poster Session 1 (13:00 – 14:10)
Moderators: Masataka Sata and Nobuyuki Takakura

1. New Insight into EPC Biology: Role of T cells in Differentiation of EPCs
Jin Hur
Seoul National University Hospital, Korea

2. Distinctive Characters of Endothelial Progenitor Cells in Human Umbilical Cord Blood
Tomoya Kitamura, Nobukazu Watanabe, Takahisa Kondo, Hiromitsu Nakauchi, Toyoaki Murohara
Department of Cardiology, Graduate School of Medicine, Nagoya University

3. The homeobox gene Hex regulates proliferation and differentiation of hemangioblasts and endothelial cells during ES cell differentiation
Atsushi Kubo[1,2], Vincent Chen[2], Marion Kennedy[2], Elizabeth Zahradka[2], Yoshihiko Saito[1] & Gordon Keller[2]
[1]First Department of Internal Medicine, Nara Medical University, 840 Shijo, Kashihara, Nara 634-8521, Japan, [2]The Department of Gene and Cell Medicine, Mount Sinai School of Medicine, New York 10029, USA

4. Pivotal roles of Lnk signals for EPC-mediated vascularization
Sangmo Kwon
Tokai University School of Medicine, Regenerative Medicine Scheince

5.Distinct Notch signals for EPC-mediated vascularization
Sangmo Kwon
Tokai University School of Medicine, Regenerative Medicine Scheince

6. Separation of stem cells with different surfacemarker densities using antibody-immobilized column
Atsushi Mahara, Tetsuji Yamaoka
Department of Biomedical Engineering, Advanced Medical Engineering Center, National Cardiovascular Center Research

7. Leukemia inhibitory factor induces differentiation of cardaic Sca-1+ stem cells into endothelail cells
Tomomi Mohri, Yasushi Fujio, Makiko Maeda, Takashi Ito, Tomohiko Iwakura, Yoriko Uozumi and Junichi Azuma
Department of Clinical Pharmacology and Pharmacogenomics, Graduate School of Pharmaceutical Sciences, Osaka University

8. Isolation and Characterization of "Side Population" Progenitor Cells from Arteries of Adult Mice under Physiological and Pathological Conditions

Julie SAINZ[1)], Masataka SATA[1)], Antoine LAFONT[2)]
[1)] Department of Cardiovascular Medicine, Graduate School of Medicine, University of Tokyo
[2)] INSERM E-0016, Faculte de Medecine Paris V, Universite Rene Descartes

9. HDL stimulates EPC differentiation and enhances ischemia-induced angiogenesis

Makoto Sumi, Masataka Sata, Yasunobu Hirata, Ryozo Nagai
Department of Cardiovascular Medicine, University of Tokyo Graduate School of Medicine

10. Establishment of a Novel Hierarchical Clonogenic Assay on the Proliferation and Differentiation of Endothelial Progenitor Cells

Mica Wada
Tokai University School of Medicine, Regenerative Medicine Science

Poster Session 2 (16:20 – 17:25)
Moderator: Masaaki Miyamoto

11. Combined Treatment of Sustained-release Basic Fibroblast Growth Factor and Prostaglandin E1 Enhances the neovascularization in the Rabbit Hindlimb Ischemic Model

Shyamal Chandra Bir1), Akira Marui 1), Keiichi Hirose 1), Yoshio Arai 1), Hitoshi Sakaguchi 1), Yuhong Huang 1), Tadashi Ikeda 1), Yasuhiko Tabata 2), Masashi Komeda 1)
1) Department of Cardiovascular Surgery, Kyoto University Graduate School of Medicine
2) Department of Biomaterials, Institute for Frontier Medical Sciences, Kyoto University

12. Assessment of ex vivo expanded and no expanded endothelial progenitor cell transplantations on therapeutic effect for myocardial ischemia

Masanori Eguchi
Tokai University School of Medicine, Regenerative Medicine Science

13. Tissue angiotensin II-induced oxidation regulates EPC function in hypertension

Noboru Fukuda, Taro Matsumoto, Hideo Mugishima
Advanced Medicine Division of Cell Regeneration and Transplantation, Nihon University School of Medicine, Ooyaguchi-kami 30-1, Itabashi-ku, Tokyo 173-8610, Japan

14. Therapeutic Myoangiogenesis by Direct Intramyocardial Gene Transfer of Naked DNA Encoding Placental Growth Factor in Acute Myocardial Infarction

Hiroto Iwasaki 1,2, Atsuhiko Kawamoto 1, Hayashi Saeko 1, Akira Oyamada 1, Takahiro Suzuki 1, Miki Horii 1, Shigefumi Suehiro2,
Peter Carmeliet3, Takayuki Asahara1,4
1Stem Cell Translational Research, Kobe Institute of Biomedical Research and Innovation / RIKEN Center for Developmental Biology
2Department of Cardiovascular Surgery, Osaka City University Graduate School of Medicine
3The Center for Transgene Technology and Gene Therapy, Flanders Interuniversity Institute for Biotechnology
4Department of Regenerative Medicine Science, Tokai University School of Medicine

15. Withdraw

16. Combination of in vivo angiopoietin-1 gene transfer and autologous bone marrow cell implantation for functional therapeutic angiogenes

Koichi Kobayashi
Departments of Cardiology, Nagoya University Graduate School of Medicine, Nagoya, Japan

17. Important Role of Endogenous Erythropoietin System in Angiogenic Responses to Hindlimb Ischemia in Mice

Kimio Satoh, Makoto Nakano, Yoshitaka Ito, Yutaka Kagaya, Hiroaki Shimokawa
Department of Cardiovascular Medicine, Tohoku University Graduate School of Medicine, Sendai, Japan

18. PTD-FNK (super anti-cell death protein) inhibits cell death of bone marrow mononuclear cells and promotes to form a blood-vessel like structure

Shuhei Tara [1)] , Masaaki Miyamoto [1)], Sadamitsu Asoh [2)], Norie Ishii [2)], Masahiro Yasutake [1)], Hitoshi Takano [1)], Gen Takagi [1)], Shigeo Ohta [2)] and Teruo Takano [1)]
[1)] The First Department of Internal Medicine, Nippon Medical School, Sendagi, Bunkyo-ku, Tokyo, 113-8603, Japan, [2)] Department of Biochemistry and Cell Biology, Institute of Development and Aging Sciences, Graduate School of Medicine, Nippon Medical School, Kawasaki, Kanagawa 211-8533, Japan

19. Systemic hypoxia without ischemic organ damage can mobilize endothelial progenitor cells in human peripheral blood by increased levels of VEGF, MCP-1 and SDF-1: a novel insight of hypoxic preconditioning

Chang-Hwan Yoon
Seoul National University Hospital, Korea