Opening Remarks

September 11th (Sat.) 9:00~9:10

Naoki Mochizuki
Chairperson
The 5th JCS Council Forum on Basic CardioVascular Research (BCVR2021)
Director General, National Cerebral and Cardiovascular Center Research Institute

Kinya Otsu
President
National Cerebral and Cardiovascular Center

Plenary Lecture

September 11th (Sat.) 16:45~17:35

Chairperson: Ichiro Shiojima (Department of Medicine II, Kansai Medical University, Japan)

PL-1 Cardiac progenitor cells of the Second Heart Field - from 2001 to 2021
Margaret Buckingham (Department of Developmental and Stem Cell Biology, Pasteur Institute, France)

Keynote Lecture

September 11th (Sat.) 16:00~16:40

Chairperson: Issei Komuro (Department of Cardiovascular Medicine, Graduate School of Medicine, The University of Tokyo, Japan)

KL-1 A Vegfc-Emilin2a-Cxcl8a signaling axis required for zebrafish cardiac regeneration
Didier Stainier (Developmental Genetics, Max Planck Institute for Heart and Lung Research, Germany)

Keynote Lecture 2

September 12th (Sun.) 11:30~12:10

Chairperson: Toyoaki Murohara (Department of Cardiology, Nagoya University Graduate School of Medicine, Japan)

KL-2 Remote injury responses during zebrafish heart regeneration
Kenneth Poss (Duke Regeneration Center and Department of Cell Biology, Duke University School of Medicine, USA)
Special Lecture

September 11th (Sat.) 17:40~18:40

Chairperson: Naoki Mochizuki (National Cerebral and Cardiovascular Center Research Institute, Japan)

SL-1 Explore the possibilities
Speaker: Tadao Ando
Architect / Distinguished Professor, The University of Tokyo

Symposium 1

September 11th (Sat.) 9:15~10:35

Tissue regeneration and rejuvenation

Chairperson: Masaki Ieda (Department of Cardiology, Faculty of Medicine, University of Tsukuba, Japan)
Kazu Kikuchi (Department of Regenerative Medicine and Tissue Engineering, National Cerebral and Cardiovascular Center, Japan)

SY1-1 Cardiac vasculature during development and injury repair
Kristy Red-Horse (Department of Biology, Stanford University, USA)

SY1-2 Klf1-induced mechanisms for adult cardiomyocyte renewal
Kazu Kikuchi (Department of Regenerative Medicine and Tissue Engineering, National Cerebral and Cardiovascular Center, Japan)

SY1-3 Senolysis: a potential therapeutic target for anti-aging
Makoto Nakanishi (Division of Cancer Cell Biology, Institute of Medical Science, University of Tokyo, Japan)

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Symposium 2

September 11th (Sat.) 10:50~12:10

Bioenergetics

Chairperson: Satoaki Matoba (Department of Cardiovascular Medicine, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan)
Yasunori Shintani (Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center, Japan)

SY2-1 Roles of mitochondrial dynamics in health and disease
Naotada Ishihara (Department of Biological Sciences, Graduate School of Science, Osaka University, Japan)

SY2-2 Arf1/PI(4)KIII β -generated PI(4)P drives mitochondrial division
Shun Nagashima (Tokyo University of Pharmacy and Life Sciences, Japan)
SY2-3  Imaging of ATP dynamics inside living and dying cells
Hiromi Imamura (Graduate School of Biostudies, Kyoto University, Japan)

Symposium 3  September 11th (Sat.) 13:30~14:50
Cardiovascular development and disease

Chairperson: Hiroki Kurihara (Department of Physiological Chemistry and Metabolism, Graduate School of Medicine, The University of Tokyo, Japan)
Osamu Nakagawa (Department of Molecular Physiology, National Cerebral and Cardiovascular Center Research Institute, Japan)

SY3-1  A new regulator of lymphatic vascular growth and proliferation in early development from zebrafish genetics
Benjamin Hogan (Peter MacCallum Cancer Centre, Department of Anatomy and Physiology, University of Melbourne, Australia)

SY3-2  4D imaging and quantitative analysis of tissue deformation and collective cell motion during initial heart looping
Yoshihiro Morishita (RIKEN Center for Biosystems Dynamics Research, Japan)

SY3-3  Diversity within the neural crest lineage contributing cardiac development revealed by transcriptomic analysis
Hiroki Kurihara (Department of Physiological Chemistry and Metabolism, Graduate School of Medicine, The University of Tokyo, Japan)

Symposium 4  September 12th (Sun.) 10:05~11:25
Microbiome and Cardiovascular Diseases

Chairperson: Ken-ichi Hirata (Cardiovascular Medicine, Kobe University Graduate School of Medicine, Japan)
Yoshikazu Nakaoka (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute, Japan)

SY4-1  Mining the gut microbiota and identifying effector microbes that causally affect the host physiology
Kenya Honda (Department of Microbiology and Immunology, Keio University School of Medicine, Japan)

SY4-2  Aryl hydrocarbon receptor and gut microbiome in the pathogenesis of pulmonary arterial hypertension
Yoshikazu Nakaoka (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute, Japan)

SY4-3  Microbiome and Coronary Artery Disease
Tomoya Yamashita (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine, Japan)
Symposium 5  
September 12th (Sun.) 13:10~14:30

**Multi-layer Cardiovascular Simulation**  
~ Science based development and Application ~

Chairperson: Koichiro Kinugawa (The Second Department of Internal Medicine, University of Toyama, Japan)  
Kenya Kusunose (Department of Cardiovascular Medicine, Tokushima University Hospital, Japan)

**SY5-1**  
Development of the world’s most popular CV simulator: “Harvi”  
Daniel Burkhoff (Cardiovascular Research Foundation, USA)

**SY5-2**  
Multi-scale, multi-physics heart simulator ‘UT-Heart’ for basic and clinical researches in cardiology  
Seiryo Sugiura (UT-Heart Inc., Japan)

**SY5-3**  
Topological Definition of Vortex Flow Structures inside the Left Ventricle  
Keiichi Itatani (Department of Cardiovascular Surgery, Osaka City University, Japan)

**SY5-4**  
Development of hemodynamics visualizing simulator “SimArthur”  
Keita Saku (Department of Cardiovascular Dynamics, National Cerebral and Cardiovascular Center Research Institute, Japan)

**SY5-5**  
Precision Cardiology and Bio Digital Twin Creation  
Joe Alexander (Medical and Health Informatics Laboratories, NTT Research, Inc., USA)

Sponsored by Neuroceuticals Inc.
Progress Report for Basic Research

September 11th (Sat.)  14:55~15:55

Chairperson: Yasushi Sakata  (Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine, Japan)
Yasuko K. Bando  (Department of Cardiology, Nagoya University Graduate School of Medicine, Japan)

PB-1  Exploring drug candidates for LMNA-mutant dilated cardiomyopathy
Masamichi Ito  (Department of Cardiovascular Disease, Graduate School of Medicine, the University of Tokyo, Japan)

PB-2  Implication of Hormonal and Mechanical Regulation in Maturation of Cardiomyocytes Derived from Pluripotent Stem Cells.
Hideki Uosaki  (Division of Regenerative Medicine, Center for Molecular Medicine, Jichi Medical University, Japan)

PB-3  Anti-inflammatory approach targeting calcium/calmodulin-dependent protein kinase II delta
as a novel therapeutic strategy to the heart failure
Takeshi Suetomi  (Division of Cardiology, Department of Medicine and Clinical Sciences, Yamaguchi University Graduate School of Medicine, Japan)

PB-4  The analysis of dynamic brain changes responding to heart stress
Junichi Sugita  (The University of Tokyo, Japan)

PB-5  Impact of gut microbial LPS on cardiovascular diseases
Naofumi Yoshida  (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine, Japan)
Grant Session in Basic Research

September 12th (Sun.) 9:00～10:00

Chairperson: Koji Maemura (Department of Cardiovascular Medicine, Nagasaki University Graduate School of Biomedical Sciences, Japan)
Ken-ichi Hirata (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine, Japan)

GB-1 Gut microbiota dependent monopoiesis induced by high fat diet is a target for cardiovascular diseases.
Takuo Emoto (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University School of Medicine, Japan)

GB-2 Investigation of the mechanism of microvessel remodeling in pulmonary hypertension using spatiotemporal multi-scale imaging system
Takayuki Fujiwara (The University of Tokyo Hospital, Japan)

GB-3 Cell fate conversion by epigenome editing
Hisayuki Hashimoto (Keio University School of Medicine, Japan)

GB-4 Elucidation of the molecular mechanism underlying amyloid fibril deposition in ATTR amyloidosis
Hidenori Moriyama (Department of Cardiology, Keio University School of Medicine, Japan)

GB-5 RNF213-associated vascular disease; a novel concept unifying various vasculopathies
Takahiro Hiraide (Keio University School of Medicine, Japan)
Luncheon Seminar

Luncheon Seminar September 11th (Sat.) 12:40~13:25

S-1  New concept of salt and significance for MR inhibition.
Chairperson: Yasushi Sakata (Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine, Japan)
Speaker : Akira Nishiyama (Department of Pharmacology, Kagawa University Medical School)

Sponsored by DAIICHI SANKYO COMPANY, LIMITED

S-3  Biology of LipoQuality: Advanced lipidomics technology and its application in biology
Chairperson: Toyoaki Murohara (Department of Cardiology, Nagoya University Graduate School of Medicine, Japan)
Speaker : Makoto Arita (Division of Physiological Chemistry and Metabolism, Keio University Faculty of Pharmacy, Japan)

Sponsored by Takeda Pharmaceutical Company Limited

S-4  Molecular Pathogenesis and Treatment Strategy of Takayasu Arteritis
Chairperson: Tomohito Ohtani (Department of Cardiovascular Medicine Osaka University Graduate School of Medicine, Japan)
Speaker : Yoshikazu Nakaoka (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute, Japan)

Sponsored by CHUGAI PHARMACEUTICAL CO., LTD.

S-5  Exploring Novel Therapeutic Strategies toward PAH: Perspectives from Pediatric Cardiology
Chairperson: Keiko Takihara (Health and Counseling Center, Osaka University, Japan)
Speaker : Yoshihide Mitani (Perinatal Care Center, Mie University Hospital, Japan)

Sponsored by Janssen Pharmaceutical K.K.
Luncheon Seminar

**C-1 Development of Artificial Intelligence (AI)-Analysis of Wearable Cardiac Monitor for the Detection of Subclinical Arrhythmias**
Chairperson: Ichiro Sakuma (Biomedical Precision Engineering Laboratory, The University of Tokyo, Japan)
Speaker: Kengo Kusano (Department of Cardiovascular, National Cerebral and Cardiovascular Center)
Sponsored by JSR Corporation

**C-2 Shall we draw PV loop?**
Chairperson: Keita Saku (National Cerebral and Cardiovascular Center)
Speaker: Taro Kariya (Department of Anesthesiology, Graduate School of Medicine, The University of Tokyo, Japan)
Speaker: Ryo Inuzuka (Department of Pediatrics, Graduate School of Medicine, The University of Tokyo, Japan)
Sponsored by Taisho Biomed Instruments Co., Ltd.

**C-3 Treatment of dyslipidemia to prevent cardiovascular events**
Chairperson: Ken-ichi Hirata (Division of Cardiovascular Medicine, Department of Internal Medicine Kobe University Graduate School of Medicine)
Speaker: Masataka Sata (Department of Cardiovascular Medicine Tokushima University Graduate School of Biomedical Sciences)
Sponsored by Takeda Pharmaceutical Company Limited

**C-4 Novel Development of cGMP Therapies for Heart Failure: Lessons from VICTORIA Study**
Chairperson: Shungo Hikoso (Department of Cardiology Osaka University Graduate School of Medicine)
Speaker: Hitoshi Nakagawa (Cardiovascular Medicine Nara Medical University)
Sponsored by Bayer Yakuhin, Ltd.

**C-5 Machine learning technology for cardiovascular research**
Chairperson: Koichiro Kuwahara (Department of Cardiovascular Medicine, Shinshu University School of Medicine, Japan)
Speaker: Shinsuke Yuasa (Department of Cardiology, Keio University School of Medicine, Japan)
Sponsored by TOA EIYO LTD.
Award Session

Award Session  September 12th (Sun.) 16:30~17:20
Chairperson: Yoshihiko Saito (Department of Cardiovascular Medicine, Nara Medical University, Japan)
Satoaki Matoba (Department of Cardiovascular Medicine, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan)

Award AS-1  PGC-1α mediated angiogenesis ameliorates pulmonary hypertension in mice
Takayuki Fujiwara (Department of Cardiovascular Medicine, the University of Tokyo Hospital / Center for Molecular Medicine, Jichi Medical University)

Award AS-2  Keap1-NRF2 pathway attenuates fibroblast activation
Toshiyuki Nishiji (Department of Cardiovascular Medicine, Kyoto Prefectural University of Medicine)

Award AS-3  Endogenous ketone body ameliorate the pathogenesis of obesity related heart failure with preserved ejection fraction.
Toshihiro Yamada (Kumamoto University)

Award AS-4  Identification of a novel origin of endothelial cells in zebrafish
Hiroyuki Nakajima (National Cerebral and Cardiovascular Center Research Institute)

Award AS-5  The role of endoplasmic reticulum (ER)-selective autophagy in response to ER stress-mediated myocardial injury
Shun Nakagama (Tokyo Medical and Dental University)
Abstract Session

1: Vasucular biology  
September 12th (Sun.) 14:40-16:20

Chairperson: Tetsuya Matoba  
(Department of Cardiovascular Medicine, Kyushu University Graduate School of Medical Sciences, Japan)

Mikito Takefuji  
(Department of Cardiology, Nagoya University School of Medicine, Japan)

AbstractAS1-1  
PGC-1a mediated angiogenesis ameliorates pulmonary hypertension in mice  
Takayuki Fujiwara  
(Department of Cardiovascular Medicine, the University of Tokyo Hospital / Center for Molecular Medicine, Jichi Medical University)

AbstractAS1-2  
Endothelial Extracellular signal-regulated kinase 2 contributed to the development of pulmonary arterial hypertension in mice through the impairment of eNOS function  
Yusuke Yumita  
(Division of Cardiovascular Medicine, National Defense Medical College)

AbstractAS1-3  
Cigarette smoke extract-induced nuclear and mitochondrial DNA damage evokes an innate immune response  
Keitaro Ueda  
(Hiroshima University-Department of Cardiovascular Physiology and Medicine Graduate School of Biomedical and Health Sciences)

AbstractAS1-4  
Identification of a novel origin of endothelial cells in zebrafish  
Hiroyuki Nakajima  
(National Cerebral and Cardiovascular Center Research Institute)

AbstractAS1-5  
withdraw

AbstractAS1-6  
Therapeutic Lymphangiogenesis by Diallyl Trisulfide for Secondary Lymphedema in a Murine Model  
Junya Suzuki  
(Nagoya University)

AbstractAS1-7  
Implantation of adipose-derived regenerative cells promotes coordinated lymphangiogenesis in angiogenesis  
Zhongyue Pu  
(Cardiology department of Nagoya University)

AbstractAS1-8  
The role of Streptococcus mutans expressing collagen binding protein Cnm in the development of Intracerebral hemorrhage  
Shuichi Tonomura  
(Department of Vascular Physiology, National Cerebral and Cardiovascular Center / Department of Neurology, National Cerebral and Cardiovascular Center)

AbstractAS1-9  
Sirt7 Deficiency Attenuates Neointimal Formation Following Vascular Injury by Modulating Vascular Smooth Muscle Cell Proliferation  
Yuichi Kimura  
(National Hospital Organization Kumamoto Medical Center)
AbstractAS1-10  Cysteine42 oxidation in cyclic GMP dependent protein kinase 1α phosphorylates tyrosine hydroxylase and exacerbates salt sensitivity through sympathetic nervous overactivation
Nobuyuki Tokunaga (Department of Cardiovascular Medicine, Graduate School of Medical Sciences, Kumamoto University, Kumamoto, Japan)

AbstractAS1-11  The role of aryl hydrocarbon receptor signaling pathway in pulmonary arterial hypertension
Makoto Okazawa (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute)

AbstractAS1-12  The role of gp130-mediated IL-6 signaling in the CD4⁺ lymphocytes for the pathogenesis of pulmonary arterial hypertension
Tomohiko Ishibashi (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute)

AbstractAS1-13  Canonical Wnt signaling pathway-activated cardiomyocytes at the atrioventricular canal regulate coronary vessel formation in zebrafish
Ayano Chiba (Department of Cell Biology, National Cerebral and Cardiovascular Center Research Institute)

AbstractAS1-14  Novel mechanical regulation of wound angiogenesis by intraluminal pressure
Shinya Yuge (Dept. Mol. Pathophysiol., I-AMS, Nippon Med. Sch.)

AbstractAS1-15  Physiological importance of ALK1 signaling for organotypic vascular formation in zebrafish
Akihiro Urasaki (Department of Molecular Physiology, National Cerebral and Cardiovascular Center, Research Institute)

AbstractAS1-16  Replicative stress induces endothelial cell senescence for heart failure
Manami Katoh (Genome Science Division, Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan)

2: Genomics and Regeneration  September 12th(Sun.) 14:40-16:20
Chairperson: Yoshihiro Asano (Department of Internal Medicine and Therapeutics, Osaka University Graduate School of Medicine, Japan)
Ichiro Manabe (Department of Disease Biology and Molecular Medicine, Graduate School of Medicine, Chiba University, Japan)

AbstractAS2-1  Age-dependent alternative splicing (ADAS) establishes juvenile transcriptome of cardiovascular systems
Masaki Mori (National Cerebral and Cardiovascular Center)

AbstractAS2-2  Cardiac ion channel remodelling underlies exercise-induced atrioventricular block in large and small animal models
Shu Nakao (University of Manchester / Ritsumeikan University)
AbstractAS2-3  Function and transcriptional regulation of Hey transcription factors during cardiovascular development
Yusuke Watanabe (Department of Molecular Physiology, National Cerebral and Cardiovascular Center Research Institute)

AbstractAS2-4  Identification of biomolecular fingerprints specific for thoracic aortic aneurysms by Raman microspectroscopy and imaging combined with multivariate data analysis
Kaori Sugiyama (Research Institute for Science and Engineering, Waseda University / Institute for Advanced Research of Biosystem Dynamics, Research Institute for Science and Engineering, Waseda University / Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba / Department of Biomedical Engineering, Eberhard Karls University, Tuebingen, Germany)

AbstractAS2-5  pH-dependent PIP2 translocation is essential for vascular development
Keisuke Sako (National Cerebral and Cardiovascular Center Research Institute)

AbstractAS2-6  Paroxetine improves right ventricular-pulmonary artery coupling in a rat model of pulmonary hypertension
Mark T Waddingham (National Cerebral and Cardiovascular Center, Suita, Osaka, Japan)

AbstractAS2-7  Carbon-ion irradiation-driven p53-phlda3 signaling Regulates Cardiac Hypertrophic Response in Pressure-Overload mice.
Nozomi Furukawa (Department of Integrated Health Sciences, Nagoya University Graduate School of Medicine)

AbstractAS2-8  Activation of aryl hydrocarbon receptor is essential for the development and progression of the severe pulmonary hypertension in rats
Takeshi Masaki (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute)

AbstractAS2-9  Cardioprotective effect of Esaxerenone, a novel selective mineralocorticoid receptor blocker, in experimental myocardial infarction
Naoto Kuyama (Department of Cardiovascular Medicine, Graduate School of Medical Sciences, Kumamoto University)

AbstractAS2-10  A novel role of endothelial cell senescence in cancer hematogenous metastasis through CLEC1b-Podoplanin interaction
Ekura Yamazaki (Department of Cardiology, Kyoto Prefectural University of Medicine)

AbstractAS2-11  GPNMB is crucially involved in the crosstalk between adipocyte and macrophages for protection against obesity-related metabolic disorders
Adam Prabata (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine)

AbstractAS2-12  Possibility of L862, a novel TRPC3/6 inhibitor, as a novel therapeutic agent for pulmonary arterial hypertension
Kenji Moriuchi (Department of Cardiovascular Medicine, Graduate School of Medicine, Kyoto University)
AbstractAS2-13  Efficient induction and expansion of endothelial cells induced from human iPSC and the diversity of the growth among iPSC cell lines
Miki Yoshioka (CiRA, Kyoto University)

AbstractAS2-14  Zinc deficiency impairs ischemia-induced revascularization
Takuya Tsuruoka (Division of Vascular and Endovascular Surgery, Department of Surgery, Nagoya University Graduate School of Medicine)

3: Heart failure  September 12th (Sun.) 14:40-16:20
Chairperson: Osamu Yamaguchi (Department of Cardiology, Pulmonology, Hypertension, and Nephrology, Ehime University Graduate School of Medicine, Japan)
Kenji Onoue (Department of Cardiovascular Medicine, Nara Medical University, Japan)

AbstractAS3-1  Cardiomyocyte proliferative capacity is restricted in mice with Lmna mutation
Kenji Onoue (Cardiovascular Medicine, Nara Medical University)

AbstractAS3-2  Zerumbone Suppureses Pressure Overload-Induced Cardiac Dysfunction by Inhibiting Cardiac Hypertrophy and Fibrosis
Mikuto Tojima (Division of Molecular Medicine, School of Pharmaceutical Sciences, Japan)

AbstractAS3-3  Chrysanthemum morifolium extract improves doxorubicin-induced cardiac dysfunction by suppressing apoptosis in mouse heart
Masaya Ono (Division of Molecular Medicine, School of Pharmaceutical Sciences, University of Shizuoka)

AbstractAS3-4  Molecular control of endocardial cell fate in response to mechanical forces during cardiac valve formation
Hajime Fukui (Dept. of Cell Biology, NCVC / IGBMC)

AbstractAS3-5  Compound A, a Ginger Extract, Significantly Suppresses Pressure Overload-induced Contractile Dysfunction in Mice
Yuto Kawase (Division of Molecular Medicine, School of Pharmaceutical Sciences, University of Shizuoka)

AbstractAS3-6  Keap1-NRF2 pathway attenuates fibroblast activation
Toshiyuki Nishiji (Department of Cardiovascular Medicine, Kyoto Prefectural University of Medicine)

AbstractAS3-7  SM22alpha-Cre Driven Extracellular Signal-Regulated Kinase 2 Knockout Mice Causes Cardiac Failure and Vascular Dysfunction
kazuki kagami (Division of Cardiovascular Medicine, National Defense Medical College)

AbstractAS3-8  Beta-arrestin-bias AT1 receptor agonists are ideal therapeutics for pediatric heart failure
AbstractAS3-9 Adjoining myofibroblasts delay impulse propagation between cardiomyocytes via hetero-cellular gap junctional coupling
Yumika Tsuji (Department of Cardiovascular Medicine, Kyoto Prefectural University of Medicine Graduate School of Medical Science / Department of Pathology and Cell Regulation, Kyoto Prefectural University of Medicine Graduate School of Medical Science)

AbstractAS3-10 Effects of ivabradine on vagal heart rate control under muscarinic potassium channel blockade
Toru Kawada (Department of Cardiovascular Dynamics, National Cerebral and Cardiovascular Center)

AbstractAS3-11 Optogenetic termination of atrial fibrillation delivered by brief pulse illumination in mice
Motoki Nakao (Hokkaido University Department of Cardiovascular Medicine)

AbstractAS3-12 Modeling Novel Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT)-Associated Calmodulin Mutation CALM2-E46K using iPS cells
Jingshan Gao (Department of Cardiovascular Medicine, Kyoto University Graduate School of Medicine, Kyoto, Japan)

AbstractAS3-13 The effects of Sacubitril/Valsartan on electrophysiological properties of atria in murine hearts with pressure overload
Satoshi Iwamiya (Department of Cardiovascular Medicine, Tokyo Medical and Dental University)

AbstractAS3-14 Exploring the mechanism underlying the connection between heart and great vessels
Moe Fukumoto (National Cerebral and Cardiovascular Center Dept. of Cell Biol.)

AbstractAS3-15 Identification and functional analysis of a novel substrate of AMPK at the intercalated disc
Yusuke Takahashi (Department of Molecular Pharmacology National Cerebral and Cardiovascular Center)

AbstractAS3-16 In vitro arrhythmia model of ventricular fibrillation with 3D human iPS cell-engineered heart tissue
Masahide Kawatou (Department of Cell Growth and Differentiation, Center for iPS Cell Research and Application (CIRA), Kyoto University / Department of Cardiovascular Surgery, Kyoto University Graduate School of Medicine)
4: Inflammation and Cell signaling  
September 12th (Sun.) 14:40-16:20

Chairperson: Takuya Kishi  
(Department of Graduate School of Medicine (Cardiology), International University of Health and Welfare, Japan)

Yumiko Oishi  
(Department of Biochemistry and Molecular Biology, Nippon Medical School, Japan)

AbstractAS4-1  
Unappreciated mechanisms of fatty acid uptake in the kidney: Fatty acids are taken up from both basolateral and apical side
Ryo Kawakami  
(Gunma University Graduate School of Medicine)

AbstractAS4-2  
Urinary FABP1 is a biomarker for impaired proximal tubular protein reabsorption and is synergistically enhanced by concurrent liver injury
Ryo Kawakami  
(Gunma University Graduate School of Medicine)

AbstractAS4-3  
The effects of DHA and EPA on hemodynamics and anti-arteriosclerosis for metabolic syndrome model mice.
Hidetaka Morita  
(Department of Cardiology, Fukuoka University School of Medicine)

AbstractAS4-4  
Overexpression of human BAG3P209L in mice causes restrictive cardiomyopathy due to sarcomere disruption and protein aggregate formation
Kenichi Kimura  
(Institute of Physiology I, University of Bonn)

AbstractAS4-5  
GATA4 dimerization is important for transcriptional regulation and may be a target for heart failure therapy
Satoshi Shimizu  
(Division of Molecular Medicine, Graduate School of Pharmaceutical Sciences, University of Shizuoka / Division of Translational Research, Clinical Research Institute, Kyoto Medical Center, National Hospital Organization)

AbstractAS4-6  
Glucose-dependent insulinotropic peptide is essential for the healthy cardiac aging by prevention of myocardial steatosis.
Remina Yasheng  
(Department of Cardiology, Nagoya University)

AbstractAS4-7  
Circulating Obesity Associated Pro-Fibrotic Protein Promotes Fibrosis in Liver and Heart
Yung-Ting Hsiao  
(Department of Cardiovascular Biology and Medicine, Juntendo University Graduate School of Medicine, Tokyo, Japan)

AbstractAS4-8  
Involvement of Chronic Non- infectious Inflammation via Monocyte Chemoattractant Protein-1 in Uremic Cardiomyopathy; A Human Biopsy Study
Tomoya Nakano  
(Department of Cardiovascular Medicine, Nara Medical University / Cardiovascular Internal Medicine, Yamato-Takada Municipal Hospital)

AbstractAS4-9  
The role of cellular senescence in aortic dissection
Eichi Nakao  
(Division of Cardiovascular Medicine, Department of Internal Medicine, Kurume University School of Medicine)
AbstractAS4-10  Novel regulatory mechanism of hemogenic endocardium during cardiovascular development  
Norika Liu (Department of Medicine, Cell Physiology, The Jikei University)  

AbstractAS4-11  Anti-interleukin-21 aptamer treatment improves pathology in a rodent models of pulmonary hypertension.  
Tadakatsu Inagaki (Department of Vascular Physiology, National Cerebral and Cardiovascular Center)  

AbstractAS4-12  Aberrant postprandial glucose/triglyceride spikes promote bone marrow stem/progenitor cells senescence through H3K27me3 demethylase-mediated epigenetic regulation  
Masayoshi Iwasaki (Department of Medicine II, Kansai Medical University)  

AbstractAS4-13  The threshold for mitochondrial permeability transition is reduced by upregulated AMP deaminase in mitochondria-associated ER membranes in type 2 diabetic hearts.  
Arata Osanami  (Sapporo Medical University, Division of Cardiovascular, Renal and Metabolic Medicine)  

AbstractAS4-14  Cardiomyocyte-derived Wnt5a mediates mechanotransduction in the heart and contributes to the transition to heart failure  
Hiroshi Kishimoto (Department of Medicine II, Kansai Medical University)  

AbstractAS4-15  Protective roles of MITOL against myocardial senescence and ischemic injury partly via Drp1 regulation  
Takeshi Tokuyama (Division of Regenerative Medicine, Center for Molecular Medicine, Jichi Medical University)  

AbstractAS4-16  Identification of specific wavelengths of ultraviolet B for preventing atherosclerosis and their mechanisms of action  
Toru Tanaka (Laboratory of Medical Pharmaceutics, Kobe Pharmaceutical University)  

5: Metabolism  
September 12th (Sun.) 14:40-16:20  
Chairperson: Yasuhiro Izumiya (Department of Cardiovascular Medicine, Osaka City University Graduate School of Medicine, Japan)  
Ippei Shimizu (Department of Cardiovascular Biology and Medicine, Juntendo University Graduate School of Medicine, Japan)  

AbstractAS5-1  Sarpogrelate, an antiplatelet agent, suppressed cardiac hypertrophy and systolic dysfunction in a 5-HT2A-independent manner  
Kana Shimizu (Division of Molecular Medicine, Graduate School of Integrated Pharmaceutical and Nutritional Sciences, University of Shizuoka / Division of Translational Research, Kyoto Medical Center, National Hospital Organization)  

AbstractAS5-2  RhoA protects senescence heart by preserving mitochondrial function via Parkin  
Joanne Ern Chi Soh (Division of Molecular Medical Biochemistry, Shiga University of Medical Science)
AbstractAS5-3  Human Epididymis Protein 4 Induces Progressive Fibrosis of Dilated Cardiomyopathy
Masahiro Yamamoto (Aso Medical center, Aso, Kumamoto, Japan / Department of Cardiovascular Medicine, Faculty of Life Sciences, Kumamoto University, Kumamoto, Japan)

AbstractAS5-4  A novel curcumin formulation, CurcuRougeTM improves the bioavailability and suppresses the development of myocardial infarction-induced heart failure in rats
Hidemichi Takai (Division of Molecular Medicine, School of Pharmaceutical Sciences, University of Shizuoka)

AbstractAS5-5  Ecklonia stolonifera Okamura extract suppressed hypertrophic responses in cardiomyocytes and development of heart failure through p300-HAT inhibition
Takahiro Katagiri (Division of Molecular Medicine, Graduate School of Integrated Pharmaceutical and Nutritional Sciences, University of Shizuoka, Shizuoka, Japan)

AbstractAS5-6  Endogenous ketone body ameliorate the pathogenesis of obesity related heart failure with preserved ejection fraction.
Toshihiro Yamada (Kumamoto University)

AbstractAS5-7  Inhibition of glutaminase1-mediated glutaminolysis ameliorates angiotensin II-induced cardiac remodeling
Sachiko Yoshikawa (Division of Cardiovascular Medicine, Kobe University Graduate School of Medicine, Kobe, Japan)

AbstractAS5-8  Aortic occlusion balloon does not effectively augment central blood pressure due to ventricular-arterial decoupling in a dog model of severe hemorrhage with systolic heart failure
Midori Kakuuchi (National Cerebral and Cardiovascular Center)

AbstractAS5-9  The role of endoplasmic reticulum (ER)-selective autophagy in response to ER stress-mediated myocardial injury
Shun Nakagama (Tokyo Medical and Dental University)

AbstractAS5-10  Chondroitin sulfate N-acetylgalactosaminyltrnsferase-2 plays a protective role in pressure overload-induced cardiac remodeling and heart failure
Andreas Haryono (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine, Kobe, Japan / Laboratory of Clinical Pharmaceutical Science, Kobe Pharmaceutical University, Kobe, Japan)

AbstractAS5-11  Cytoophidia-forming property of juvenility-associated proteins
Atsushi Tsukamura (Department of Vascular Physiology, National Cerebral and Cardiovascular Center Research Institute, Department of Pediatrics, Shiga University of Medical Science)
AbstractAS5-12  Treatment with Atrial Natriuretic Peptide Ameliorates Insulin Resistance by Attenuating Hepatic Steatosis and Activating Adipose Tissue Thermogenic Program in Diet-Induced Obesity
Haruka Kimura  (The Jikei University School of Medicine)

AbstractAS5-13  Deficiency of cardiac natriuretic peptide signaling promotes peripartum cardiomyopathy-like remodeling in the mouse heart
Kentaro Otani  (National Cerebral and Cardiovascular Center)

AbstractAS5-14  Essential Roles of Exoc3L family
Chisato Watanabe  (Shiga university of medical science)

AbstractAS5-15  New insight into the pericardium function based on the intact structure
Can Zheng  (National Cerebral and Cardiovascular Center)

AbstractAS5-16  Structural differences in bacterial LPS lead to different immune responses and progression of atherosclerotic plaque lesions in mice
Yoshihiro Saito  (Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine, Kobe, Japan)

Closing Remarks

Closing Remarks  September 12th (Sun.) 17:20～17:30
Naoki Mochizuki  
Chairperson
The 5th JCS Council Forum on Basic CardioVascular Research (BCVR2021) 
Director General, National Cerebral and Cardiovascular Center Research Institute

Ichiro Shiojima  
Chairperson
The 6th JCS Council Forum on Basic CardioVascular Research (BCVR2022) 
Professor, Department of Medicine II, Kansai Medical University