CiRA 2023 International Symposium

シン・CiRA ～The voyage of discovery by having new eyes ～

November 29（Wed）～ November 30 (Thu), 2023

Program

Date : November 29 ~ 30

Schedule : Day 1 / Wednesday, November 29

10:00 ~ 10:05 Opening Remarks

10:05 ~ 11:05 Keynote Lecture 1 (On-line)

13:05 ~ 14:05 Keynote Lecture 2

14:20 ~ 15:50 Session 1

16:00 ~ 16:30 Editor's Talk

16:35 ~ 17:45 Poster Session 1 (Odd Numbers)

Schedule : Day 2 / Thursday, November 30

 9:30 ~ 10:30   Keynote Lecture 3

10:40 ~ 12:20 Session 2

12:20 ~ 13:35 Social Reception
　　　　　　　　　　*Only for pre-registered applicants
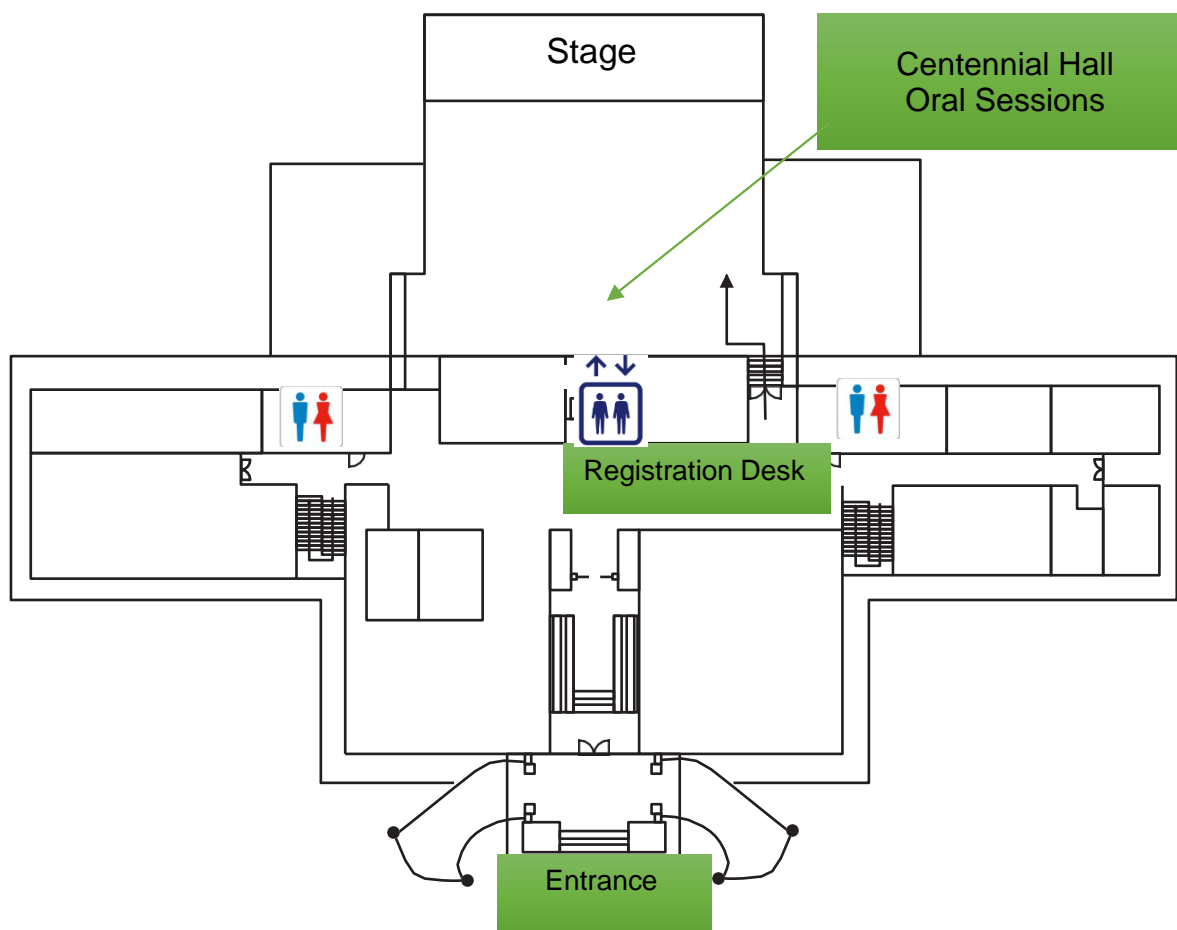
13:35 ~ 14:45 Poster Session 2 (Even Numbers)

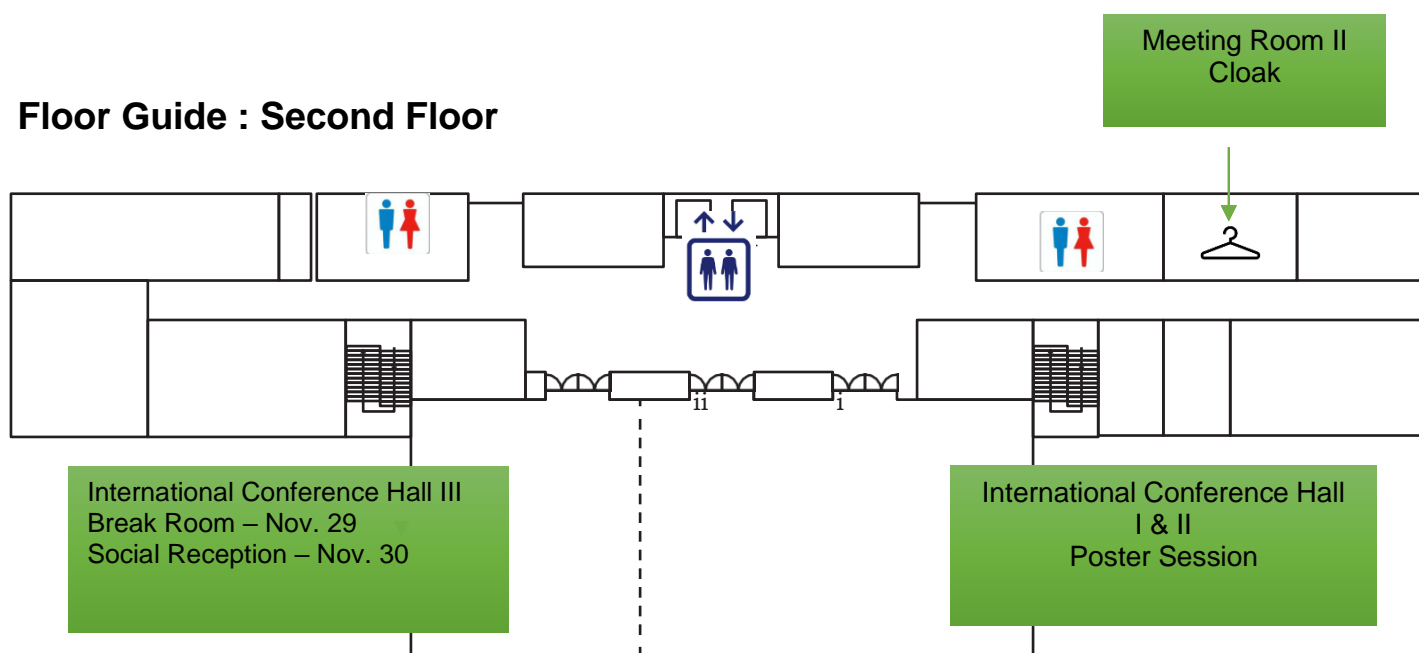14:55 ~ 15:55 Keynote Lecture 4

16:05 ~ 17:35 Session 3

17:45 ~ 18:00 Poster Presentation Award Ceremony & Closing Remarks

Venue: Kyoto University Clock Tower Centennial Hall
Floor Guide : First Floor

Stage

Centennial Hall
Oral Sessions

Registration Desk

Entrance

Floor Guide : Second Floor

Meeting Room II
Cloak

International Conference Hall III
Break Room – Nov. 29
Social Reception – Nov. 30

International Conference Hall
I & II
Poster Session

General Information

Venue
All sessions will be held in the Centennial Hall, 1st floor.

Registration
Registration is located in front of Centennial Hall, 1st floor.
Open Hours:
Wednesday, November 29 9:00 ~ 18:00
Thursday, November 30   9:00 ~ 16:00

Cloak
Cloakroom is available in the Meeting Room II, 2nd floor.
Open Hours:
Wednesday, November 29 9:30 ~ 18:00
Thursday, November 30   9:10 ~ 18:00

Poster Sessions
Poster sessions will be held in the International Conference Hall I & II, 2nd floor.

Date & Time
Wednesday, November 29   16:35 ~ 17:45 : Odd Numbers
Thursday, November 30   13:35 ~ 14:45 : Even Numbers

Poster Mounting
Wednesday, November 29   9:30 ~ 16:00

Poster Dismantling
Thursday, November 30   15:00 ~ 17:30

Social Reception
The Social Reception will be held in the International Conference Hall III, 2nd floor (also accessible from International Conference Hall II).
*Only for pre-registered applicants.

Date & Time
Thursday, November 30   12:20 ~ 13:35

Break Room
International Hall III, 2nd floor is available as a break room on November 29

Internet Access

No free Wi-Fi is available on campus. Wi-Fi account and password will be provided to each person at the reception desk. Please ask the details.

Recording Policy

Still photography, video and/or audio taping of the sessions, presentations and posters at this symposium are strictly prohibited.

Sessions

November 29

- Keynote Lecture 1

- Keynote Lecture 2

- Session 1 (Basic Science)

- Editor's Talk

- Poster Session 1

November 30

- Keynote Lecture 3

- Session 2 (New Approaches)

- Keynote Lecture 4

- Session 3 (Regenerative Medicine)

- Poster Session 2

Keynote Lecture 1

Developing mRNA for therapy

Chair :
Junya Toguchida (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)
Misao Fujita (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Katalin Karikó

University of Pennsylvania, Perelman School of Medicine, USA
University of Szeged, Hungary

Katalin Karikó is a Professor at the University of Szeged, Hungary, and an Adjunct Professor of Neurosurgery at the Perelman School of Medicine, University of Pennsylvania, United States, where she worked for 24 years. She is the former Senior Vice President at BioNTech SE in Mainz, Germany, where she worked between 2013-2022. She received her Ph.D. in biochemistry from the University of Szeged, Hungary. For four decades, her research has been focusing on RNA-mediated mechanisms with the ultimate goal of developing in vitro-transcribed mRNA for protein therapy. She investigated RNA-mediated immune activation and co-discovered that nucleoside modifications suppress RNA immunogenicity, which widened the therapeutic potentials of mRNA. Her patents, co-invented with Drew Weissman on nucleoside-modified uridines in mRNA, were used to create the FDA-approved COVID-19 mRNA vaccines by BioNTech/Pfizer and Moderna to fight the recent pandemic. She recently won the 2023 Nobel Prize in Physiology or Medicine for her pioneering work on nucleoside modifications that paved the way for mRNA-based vaccines against COVID-19.

Keynote Lecture 2

iPSC applications to advance novel therapies at Mayo Clinic

Chair :
Koji Eto (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)
Megumu Saito (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Yi Lin

Mayo Clinic, USA

Yi Lin is a Professor, the Associate Medical Director of the Center for Regenerative Biotherapeutics, the Medical Director of the Immune Effector Cell Program, and the Enterprise Leader of Cancer Regenerative Biotherapeutics of the Comprehensive Cancer Center at the Mayo Clinic, United States. She received her M.D. from Northwestern University and Ph.D. from the University of Minnesota. In addition to her medical practice in lymphoma and myeloma, she has an NIH-funded laboratory and clinical research program in biomarkers and immunotherapy. She is the PI and co-PI of multiple clinical trials testing novel dendritic cell vaccine combination immunotherapy and CAR-T therapy.
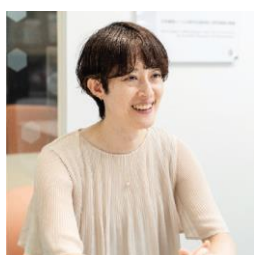
Session 1 : Basic Science

Chair :

Yoko Hamazaki (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Hirohide Saito (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Session 1-1

Post-transcriptionally regulated genes are essential for human pluripotent stem cells

Mio Iwasaki

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan

Mio Iwasaki is a Junior Associate Professor at the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan. She obtained her Ph.D. from Kyoto University, Japan, under the guidance of Dr. Yasushi Ishihama. Before being promoted to her current position in 2022, she received postdoctoral training and was an assistant professor at CiRA. Her current research focus is on developing new proteomics technologies and applying them to stem cell research. She is particularly interested in post-transcriptional events using trans-omics technologies and the importance of genes differentially regulated at the RNA and protein levels. She also heads the Protein Analysis Group at CiRA, driving collaborative omics research on iPS cells.

Session 1-2
Targeting senescence to improve age-related diseases

Makoto Nakanishi

Institute of Medical Science, University of Tokyo, Japan

Makoto Nakanishi is a Professor and the Dean of the Institute of Medical Science at the University of Tokyo, Japan. He received his Ph.D. from Nagoya City University, Japan. He is an expert in molecular oncology, best known for his work in cell cycle and epigenetic regulation. His recent research interest is to establish the physiological relevance of cellular senescence in cancer and various age-associated diseases, focusing on the identification and characterization of senescent cells in vivo and understanding the molecular mechanisms underlying the replication of epigenomic information, such as DNA methylation. His ultimate research goal is to develop innovative cancer therapies, prevention, and anti-aging strategies by regulating or eliminating senescent cells in vivo (senotherapy).

Session 1-3
Naive human PSCs model pre- to post-implantation development

Yasuhiro Takashima

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan

Yasuhiro Takashima is an Associate Professor at the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan. He obtained his M.D. and Ph.D. at Kobe University, Japan, under the supervision of Drs. Masato Kasuga and Shin-Ichi Nishikawa (RIKEN, Japan), and received postdoctoral training at the University of Cambridge, United Kingdom, under the guidance of Dr. Austin Smith, establishing naive human pluripotent stem cells, which are stem cells that most resemble fertilized eggs. Since starting his lab in CiRA in 2015, he has been aiming to regulate stem cells and promote human health, particularly by better understanding early human development and applying that new knowledge to regenerative medicine via pluripotent stem cells and tissue stem cells.

Editor's Talk

Publishing stem cell research at Cell Press journals

Chair :

Shimpei Gotoh (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Yukako Oda (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Chari Sheila

Cell Stem Cell, USA

Sheila Chari is the Editor-in-Chief of Cell Stem Cell and an Executive Editor at Cell Press. She received her Ph.D. from Northwestern University, United States, studying transcriptional mechanisms controlling cell fate decisions in the context of T cell development and lymphoma. Her primary responsibilities in her current role as the Editor-in-Chief of Cell Stem Cell are knowing and publishing the top stem cell discoveries, driving the journal's publishing strategy, and managing a global team of editorial staff. She travels to international scientific conferences and research institutions to be on top of the latest developments and meet with authors, reviewers, and readers. She is a proud member of the stem cell community and an ardent supporter of stem cell research.

Keynote Lecture 3

A DNA toolbox for spatial biology from imaging to sequencing

Chair :
Kenji Osafune (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)
Kazutoshi Takahashi (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Sinem K. Saka

EMBL Heidelberg, Germany

Sinem K. Saka is a Group Leader at the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany. She received her B.Sc. in Molecular Biology and Genetics at the Middle East Technical University, Turkey. Her Ph.D. at the University of Gottingen, Germany, focused on investigating nanoscale protein organization in cellular membranes with super-resolution and multi-modal imaging. She moved to the United States as an HFSP and EMBO postdoctoral fellow and developed multiplexed imaging methods at the Wyss Institute, Harvard University, United States. She established her research group at EMBL in 2021 to develop and apply new methods for spatial multi-omics to investigate the functional states and spatio-molecular organization of cells across scales.

Session 2 : New Approaches

Chair :

Yoshiya Kawaguchi (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Makoto Ikeya (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Session 2-1
Probing and manipulating genome-templated condensation of transcription factors

Shunsuke F. Shimobayashi

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan

Shunsuke Shimobayashi is an Associate Professor at the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan. He obtained his Ph.D. in physics from Kyoto University. Before joining CiRA in 2022, he received postdoctoral training at Princeton University, United States, working on liquid-liquid phase separation in living cells under the guidance of Dr. Clifford P. Brangwynne. At Princeton, he studied the nucleation principles of biomolecular condensates to understand how they form at the right time and place to mediate their biological functions. Now at CiRA, he continues to apply physical concepts and cutting-edge technologies, including super-resolution imaging and optogenetics, to iPS cell research.

Session 2-2
Cross-species approaches to understand human stem cell evolution

Mari Ohnuki

Advanced Study of Human Biology (WPI-ASHBi), Kyoto University, Japan

Mari Ohnuki is a Hakubi researcher and Program-Specific Assistant Professor at the Institute for the Advanced Study of Human Biology (WPI-ASHBi) at Kyoto University, Japan. She received her Ph.D. from Kyoto University, Japan. She was a postdoctoral researcher at CiRA and the Ludwig Maximilian University of Munich, Germany, working on human- and primate-derived iPS cells. Her current work employs iPS cells to examine the genomic and phenotypic evolution by endogenous retroviruses in primates, focusing specifically on primate-specific retrotransposon families to understand how transposable elements have driven human evolution.

Session 2-3
Infectious respiratory disease research using iPS cells, organoids, and microphysiological system

Kazuo Takayama

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan

Kazuo Takayama is a Junior Associate Professor at the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan. He obtained his Ph.D. from Osaka University, Japan, and was an Assistant Professor there until 2020, when he joined CiRA. His research focus is on using iPS cell-derived differentiated cells and organoids for disease modeling and drug screening. In recent years, his laboratory has expanded such efforts to develop various types of "organ-on-a-chip" to mimic the dynamic environments within the human body, including lung, intestinal, and liver.

Session 2-4
iPS Cell Research Center at Gladstone

Kiichiro Tomoda

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan
Gladstone Institutes

Kiichiro Tomoda is a Program-Specific Research Center Associate Professor the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan, and a Research Investigator at Gladstone Institutes, United States, where he has been overseeing one of the Kyoto University On-site Laboratories since 2020. He obtained his Ph.D. from the Nara Institute of Science and Technology, Japan, where he also received postdoctoral training and became an assistant professor. His recent research focus is on basic biological events inside iPS cells, such as protein translation and small organelle homeostasis. More specifically, he is interested in protein translation initiation and uses an animal model to understand similarities and differences in protein translation regulation between stem cells and differentiated cells.

Session 2-5
Prediction of epigenetic regulatory variation at single-cell level and its applications for stem cell biology

Risa K. Kawaguchi

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan

Risa K. Kawaguchi is a Junior Associate Professor at the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan. She obtained her Ph.D. from the University of Tokyo under the guidance of Dr. Hisanori Kiryu. Before joining CiRA in 2022, she received postdoctoral training at the National Institute of Advanced Industrial Science and Technology, Japan, and Cold Spring Harbor Laboratory, USA. Her current research interests encompass the application of statistical modeling and machine learning techniques for multi-omics data analysis, contributing to a better understanding of the mechanisms underlying cell fate determination.

Keynote Lecture 4

Use of brain and spinal cord subpial space for targeted cell and gene-based therapeutics delivery for treatment of neurodegenerative disorders.

Chair :

Knut Woltjen (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Haruhisa Inoue (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Martin Marsala

University of California San Diego, USA

Martin Marsala is a Professor at the Department of Anesthesiology, University of California, San Diego (UCSD), United States. He received his M.D. from the University of Kosice, Slovakia. His research interests focus on spinal ischemia-induced spastic paraplegia, chronic spinal trauma-induced motor dysfunction, chronic peripheral nerve and spinal cord injury-induced neuropathic pain, and amyotrophic lateral sclerosis (ALS). A significant element of Dr. Marsala's spinal injury investigations is focused on the development of gene therapy-based treatments to modulate the spinal excitatory system and suppress spinal trauma-induced spasticity and chronic pain. Dr. Marsala is also a member of a clinical team conducting a Phase I clinical trial to test the safety of human spinal stem cells after spinal grafting in chronic spinal trauma patients at UCSD.
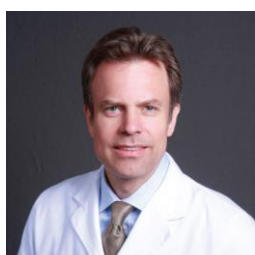
Session 3 : Regenerative Medicine

Chair :

Shin Kaneko (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Akitsu Hotta (Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan)

Session 3-1
The dawn of allogeneic hypoimmune cell therapeutics as universal medicines

Tobias Deuse

University of California San Francisco, USA

Tobias Deuse is the Julien I. E. Hoffman, M.D. Chair in Cardiac Surgery and Director of the Minimally Invasive Cardiac Surgery Program at the University of California, San Francisco (UCSF), United States. He received his M.D. from the University of Würzburg, Germany. He specializes in heart and lung transplantation and is known for his pioneering work in developing minimally invasive techniques for mitral valve repair. He is also a world-renowned stem cell scientist, spending the last decade developing immune-evasive human cells for regenerative medicine and immuno-oncology. His inventions include gene editing strategies to circumvent immune cell killing as well as antibody attacks, and he is co-founder of two biotech start-ups spun out of his lab.

Session 3-2
Targeting of extracellular vesicle biogenesis in brain cells as a therapeutic approach of Alzheimer's disease and related disorders

Tsuneya Ikezu

Mayo Clinic, USA

Tsuneya Ikezu is a Professor at the Department of Neuroscience and Director of the Molecular NeuroTherapeutics Laboratory at the Mayo Clinic in Florida, United States. He received his M.D. and Ph.D. from the University of Tokyo, Japan. He is a pioneer in the fields of neuroimmunology and neurodegenerative diseases, best known for his ground-breaking work deciphering the role of extracellular vesicles (EVs) secreted from microglia on the progression of Alzheimer's disease (AD). His current research focus is to identify EV markers to distinguish tauopathies, which are mostly diagnosed post-mortem due to the lack of specific biomarkers. Another research focus is the replacement of pathological glial cells in neurodegenerative disease, particularly in AD, by identifying pathological target molecules in brain-derived EVs and CRISPR editing iPSC-derived glial cells for transplantation.

Session 3-3
R&D of iPS cell-based therapy for stroke

Jun Takahashi

Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan

Jun Takahashi is a Professor and the current Director of the Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan. He obtained his M.D. from Kyoto University and started his career as a neurosurgeon at Kyoto University Hospital. After earning his Ph.D. from Kyoto University, he received postdoctoral training at the Salk Institute, United States, working on neural stem cell research under the guidance of Dr. Fred Gage. After returning to Kyoto University, he became a full professor at CiRA, pursuing iPS cell-based therapies in 2012. As a physician-scientist, he laid the groundwork for the clinical application of iPS cells and started the world's first clinical trial for Parkinson's disease using iPS cell-derived dopaminergic neurons in 2018. He became the Director of CiRA in 2022.

Basic Science

P-101   Regulation of the pluripotency of hiPSCs by integrin-bFGF-FGFR ternary complex formation
Yu-Shen Cheng
Department of Life Science Frontiers, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-103   The induction of naïve state pluripotency in common marmoset embryonic stem cells
Katsunori Semi
Department of Life Science Frontiers, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-105   IRF3 survival of iPSCs
Yoshiki Nakashima
Kyoto University Center for iPS Cell Research and Application Foundation (CiRA Foundation)

P-107   Application of iPSC-derived neuronal cells for discovery of extracellular vesicle-based biomarkers
Seiko Ikezu
Department of Neuroscience, Mayo Clinic Florida

P-109   Virological characterization of the 2022 outbreak-causing Mpox virus using human keratinocytes and iPS cell-derived colon organoids
Yukio Watanabe
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-111   Modeling a cerebral tract using iPSC-derived oligodendrocytes
Satoshi Morita
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-113   Cerebral brain organoid model of benign adult familial myoclonus epilepsy for elucidating molecular pathology
Mika Suga
Department of Cell Growth and Differentiation, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-115   mRNA and chemically modified pegRNA achieve efficient Prime Editing in iPS cells
Shihoko Endo
Center for iPS Cell Research and Application (CiRA), Kyoto University

Basic Science

P-117   Enhancing Mitochondrial Function and Alleviating Disease Phenotypes in iPSC-Derived
Mitochondrial Disease Patients with the Glycolysis Inhibitor Tyrpolinamide
Nurmila Sari
Chemical Genomics Research Group, RIKEN Center for Sustainable Resource Science
(CSRS)

P-119   Muscle resident neural-crest derived PDGFRα+ mesenchymal progenitors give rise to
heterotopic ossification in mice
Chengzhu Zhao
Institute of Life Sciences, Chongqing Medical University

P-121   Mechanistic Insight and Therapeutic Strategy for Diabetes with Insulin Mutation using Human
iPSCs
Ahmed Mohamed Rashwan
Dept. Life Science Frontiers, Center for iPS Cell Research and Application (CiRA), Kyoto
University

P-123   Modeling dentatorubral pallidoluysian atrophy using patient iPSCs
Takayuki Kondo
RIKEN BioResource Research Center (BRC)

P-125   Modeling neuronal intranuclear inclusion disease with patient iPSCs
Risako Nakai
iPSC-based Drug Discovery and Development Team, RIKEN BioResource Research Center
(BRC)

P-127   hiPSC-derived macrophage for better function and cellular heterogeneity of alveolar organoids
Seok-Ho Hong
Kangwon National University

P-129   Development of non-thermal atmospheric-pressure plasma exposure microsystems aiming for
cell control
Sinya Kumagai
Dept. of Electrical and Electronic Eng., Meijo University

P-131   Human iPSC-derived alveolar and airway cells can distinguish SARS-CoV-2 variants
Atsushi Masui
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-133   Thymic epithelial cell induction from iPSCs: Establishing a platform for thymus regeneration
and developmental modeling
Yann Pretemer
Center for iPS Cell Research and Application (CiRA), Kyoto University

Basic Science

P-135   Glyoxalase-1 is essential for the definitive endoderm and alveolar development of human pluripotent stem cells

Suji Jeong

Kangwon National University

P-137   Validation of environmental chemicals on brain and neuronal development using iPSC

Tatsuyuki Takada

Ritsumeikan University, Department of Pharmaceutical Sciences

P-139   Controlling the apical elimination of cancerous cells during the progression of cancer and aging

Lu Yan

Center for iPS Cell Research and Application (CiRA), Kyoto University

New Approaches

P-201   Programmable circular RNA switches that enable superior gene expression persistence

Shigetoshi Kameda

Dept. of Life Science Frontiers, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-203   RNA aptamer that drives efficient translation from mRNAs containing N1-methylpseudouridine in a capindependent manner.

Fumiya Ito

Center for iPS Cell Research and Application (CiRA), Kyoto University

P-207   Combination of engineered FnCas9 and extended gRNAs for PAM-flexible, robust and nucleobase specific editing and diagnostics

Sundaram Acharya

The Stellar Science Foundation Research Fellow

Regenerative Medicine

P-301   Novel synthetic peptide based growth factors and their application.
Kosuke Minamihata
PeptiGrowth Inc.

P-303   Enhanced chondrogenic differentiation of iPS cell-derived mesenchymal stem/stromal cells via neural crest cell induction for hyaline cartilage repair
Denise Zujur
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-305   Establishment of a human induced pluripotent stem cell derived alveolar organoid to test acute toxicity in alveolar epithelium
Jooyeon Lee
Kangwon National University

P-307   A novel iPSC-derived collecting duct cystogenesis model of ADPKD for drug discovery
Shjn-ichi Mae
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-309   Generating Human Induced Pluripotent Stem Cell-Derived dopaminergic spheres for accelerated and safe engraft in rat model of Parkinson's disease
Chia-yu Chang
Neuroscience Center, Hualien Tzu Chi Hospital

P-311   Chemically-Defined Polymer Scaffold for Automatic Culture Process of iPS cells
Yuta Nakamura
Sekisui Chmical Co., Ltd.

P-313   Novel cell therapeutic strategies for AKI and CKD using expanded human iPSC-derived nephron progenitor cells
Kosuke Toyohara
Dept. of Cell Growth and Differentiation, Osafune Laboratory, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-315   The reproduction of enzyme supplied model in vitro using iPS cells derived from Pompe disease
Yuma Hirano
Dept. of Clinical Application/Sakurai lab, Center for iPS Cell Research and Application (CiRA), Kyoto University

Basic Science

P-102　Complete suspension culture of human induced pluripotent stem cells supplemented with suppressors of spontaneous differentiation
Mami Takasaki
RIKEN BioResource Research Center

P-104　Derivation of rat epiblast stem cells capturing a pluripotent state in pre-gastrulating epiblast
Kenyu Iwatsuki
The Institute of Medical Science, The University of Tokyo

P-106　Establishment of the All-Patient iPSC Derived Neuromuscular Junction for Motor Neuron Disease Modeling
Hsiao-Chien Ting
Bioinnovation Center, Buddhist Tzu Chi Medical Foundation

P-108　Functional analysis of 2022 outbreak-causing Mpox virus A46R gene
Yoshitaka Nakata
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-110　Analysis of transmembrane protein 41B in SARS-CoV-2 infection using iPS cells and organoids
Renxing Yi
CiRA, Kyoto University

P-112　Molecular dissection of synucleinopathies using induced neurons from patient iPSCs
Hidefumi Suzuki
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-114　Elucidation of ApoE pathology by using induced pluripotent stem cells in Alzheimer's disease
Dayoung Kim
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-116　The establishment of isogenic control cell line from Dup15q-patient-derived pluripotent stem cells by chromosome elimination
Haruka Munezane
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-118　Discovery and generation of polymorphic copy number variants in human iPS cells
Xiaoyan Ren
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-120　Modelling neuroinflammation using isogenic TDP-43 hiPSC-derived microglia
Kagistia Hana Utami
Keio University

Basic Science

P-122 Unraveling the Molecular Mechanisms of Amyotrophic Lateral Sclerosis through hnRNPA1 Mutations

Seifu Murata

Center for iPS Cell Research and Application (CiRA), Kyoto University

P-124 iMSC-mediated delivery of ACVR2B-Fc fusion protein reduces heterotopic ossification in a mouse model of fibrodysplasia ossificans progressiva

Pan Gao

Center for iPS Cell Research and Application (CiRA), Kyoto University

P-126 Screening of chemical inducers of alveolar type 1 epithelial cells using human pluripotent stem cells

Yuko Ohnishi

Center for iPS Cell Research and Application (CiRA), Kyoto University

P-128 The conditioned medium from neuromuscular junction differentiation can transform the fibroblast cells to neuron cells

Chuang-Yu Lin

Department of biomedical science and environmental biology, Kaohsiung medical university

P-130 Non-thermal atmospheric-pressure plasma for guiding differentiation of human induced pluripotent stem cells

Mime Kobayashi

Dept. of Physics, Osaka Medical and Pharmaceutical University

P-132 TP53-TAU axis regulates microtubule bundling to control alveolar stem cell-mediated regeneration

Satoshi Konish

Department of Cell Biology, Duke University School of Medicine

P-134 HSPG2 and SFRP1 have been identified as good markers for early non-invasive prediction of iPScderived muscle stem cell induction efficiency

Naoya Inoue

CiRA/Sakurai group, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-136 Derivation of human cortical organoids for investigating aquaporin-4 in neurodevelopment

Takeo Kawano

Center for iPS Cell Research and Application (CiRA), Kyoto University

Basic Science

P-138   Establishment of human peri-implantation embryo model using naïve hPSCs
Takumi Okubo
Center for iPS Cell Research & Application (CiRA), Kyoto University

P-140   Comprehensive miRNA Expression Profiling in Young and Aged Hematopoietic Stem Cells
Jung Chen
Center for iPS Cell Research and Application (CiRA), Kyoto University

New Approaches

P-202   Protein splicing enables the high target-cell specificity of a synthetic circuit composed of multiple RNA switches
Itsuki Abe
Department of Life Science Frontiers, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-204   Single-cell and spatial multiomics of the human heart
Kazumasa Kanemaru
Teichmann group, Cellular Genetics, Wellcome Sanger Institute

P-206   Engineering virus-like particles for selective genome editing of myogenic cells
Matthew John Beucler
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-208   HLA Genome Editing in iPS Cells by RNA-based CRISPR-Cas3 Method
Yusuke Kojima
Center for iPS Cell Research and Application (CiRA), Kyoto University

Regenerative Medicine

P-302   Developing coating-free culture medium for human ES/iPS cell expansion
Hong-Lin Su
National Chung Hsing University

P-304   Implantation of neural progenitor cells derived from human induced pluripotent stem cells
improves sensorineural hearing loss in mouse model
Yi-Chao Hsu
Audiology and Speech-Language Pathology, MacKay Medical College

P-306   Establishment of the brain organoid system to discover novel sleep regulator
Hiroyuki Tamiya
Kyoto Prefectural University of Medicine

P-308   Translational Research for Drug Development for ALS～from iPSC Research to Clinical Trial～

Keiko Imamura
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-310   Mesenchymal properties of iPSC-derived neural progenitors that generate undesired grafts
after transplantation
Miho Isoda
Sumitomo Pharma Co., Ltd.

P-312   Genetically engineered induced pluripotent stem cell-derived T cells with drastically improved
antitumor efficacy against solid tumor
Akihiro Ishikawa
Kaneko Laboratory, Center for iPS Cell Research and Application (CiRA), Kyoto University

P-314   RNA-based CRISPRoff silencing to target DUX4 in Facioscapulohumeral muscular dystrophy
Junjie He
Center for iPS Cell Research and Application (CiRA), Kyoto University

P-316   Next-generation cell and gene therapy
Edvinas Cerniauskas
Center for iPS Cell Research and Application (CiRA), Kyoto University

Sponsors

iPS Academia Japan, Inc.

Orizuru Therapeutics, Inc.

Axcelead, Inc.

T-CiRA Program

Program Committee

Haruhisa Inoue
   Professor, Department of Cell Growth and Differentiation, CiRA, Kyoto University
Yoko Hamazaki
   Professor, Department of Life Science Frontiers, CiRA, Kyoto University
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   Professor, Department of Cell Growth and Differentiation, CiRA, Kyoto University

Organizer

Center for iPS Cell Research and Application (CiRA), Kyoto University