

The 73rd Annual Meeting of
the Japanese Association for
Laboratory Animal Science

Program

Program

The 73rd Annual Meeting of the Japanese Association for Laboratory Animal Science
May 28 (Thu) 13:30-15:30 1st Hall: Theater

Chairperson: Atsuo Ogura (RIKEN BioResource Research Center)

■ Ando-Tajima Award

L-1 Advancing neurological disease models and optimizing supporting animal housing environments

○ Eiki Takahashi

Department of Biomedicine, Graduate School of Medical Sciences, Kyushu University

■ Encouragement Award

L-2 Establishment of the *Hspa8* mutant rat as a novel neuroaxonal dystrophy model

○ Miyuu Tanaka

Laboratory of Veterinary Pathology, Graduate School of Veterinary Science, Osaka Metropolitan University

L-3 Establishment of mouse models and a technical platform for *in vivo* protein–protein interaction analysis

○ Kazuya Murata

Center for One Medicine Innovative Translational Research (COMIT), Institute for Advanced Study, Gifu University

■ 2025 Best Paper Award of Experimental Animals

Identification of gene mutations associated with the phenotype of short-limb mice emerging from a foundation colony of severely immunodeficient mice

○ Yui Kaneko, Kayo Tomiyama, Masahiko Yasuda, Yuji Komaki, Tomoyuki Ogura, Riichi Takahashi, Masafumi Yamamoto

Trophectoderm-specific gene manipulation using adeno-associated viral vectors

○ Tatsuya Nakagawa, Chihiro Emori, Masahito Ikawa

Loss of non-canonical translation initiation factors impairs perinatal cardiac function in mice

○ Takehiro Asai, Ryota Tochinai, Yoshiharu Tsuru, Marie Sekiguchi, Atsushi Minami, Wataru Fujii, Shigeru Kyuwa, Tetsuhiro Ogawa, Shigeru Kakuta

Plenary Lecture 1

May 27 (Wed) 11:40-12:40
1st Hall: Theater

Chairperson: Makoto Suzuki (Okinawa Institute of Science and Technology)

PL-1 Integration of behavioral learning theory and large-scale brain data

○ Kenji Doya

Okinawa Institute of Science and Technology Graduate University

Plenary Lecture 2

May 28 (Thu) 11:10-12:10
1st Hall: Theater

Chairperson: Keiji Miyata (Veterinary Education Support Organization in Japan)

PL-2 Using physiology and behavior to assess animal welfare

○ Debra Hickman

AAALAC International

Plenary Lecture 3

May 29 (Fri) 11:40-12:40
1st Hall: Theater

Chairperson: Ikuo Horii (Tokyo University of Science)

PL-3 Development and social implementation of Microphysiological Systems (MPS) based on on-chip vascular networks

○ Ryuji Yokokawa

Kyoto University

Symposium 1

May 27 (Wed) 9:00-11:30
1st Hall: Theater

Applying Clinical Anesthetic Approaches to Research Animal Anesthesia: Beginning with the Science of Anesthesiology

Chairperson: Kazumasu Sasaki (Department of Anesthesiology, Akita Cerebrospinal and Cardiovascular Center)

S1-1 Pharmacokinetics and pharmacodynamics of IV anesthetics: key considerations in clinical anesthesia for humans

○ Shinju Obara

Department of Anesthesiology, Fukushima Medical University School of Medicine

S1-2 Harmonizing clinical and laboratory anesthesia: towards consistent standards of care

○ Yuan-Ji Day

Anesthesiology and Pain Service, Tung's Taichung MetroHarbor Hospital

S1-3 Bridging clinical and research animal anesthesia: a veterinary approach

○ Kazumasu Sasaki

Department of Anesthesiology, Akita Cerebrospinal and Cardiovascular Center

Crossroads between “Laboratory Animal Science” and “Stem Cell Biology”

Chairpersons: Yasuhiro Kazuki (Tottori University)

Toshihiro Kobayashi (National Institute for Physiological Sciences)

S2-1 Establishment of a cell fate conversion method using hepatocyte plasticity

- Shizuka Miura, Kenichi Horisawa, Atsushi Suzuki
Medical Institute of Bioregulation, Kyushu University

S2-2 Molecular regulation of skeletal muscle plasticity and regeneration

- Yusuke Ono^{1,2)}
¹⁾Department of Muscle Development and Regeneration, Institute of Molecular Embryology and Genetics, Kumamoto University,
²⁾Muscle Biology Laboratory, Tokyo Metropolitan Institute for Geriatrics and Gerontology (TMIG)

S2-3 Optogenetic dissection of novel transcriptional regulatory mechanisms in neural stem cells

- Itaru Imayoshi^{1,2)}
¹⁾The Graduate School of Biostudies, Kyoto University,
²⁾Institute for Life and Medical Sciences, Kyoto University

S2-4 No animal experiments, no hematopoietic stem cells

- Satoshi Yamazaki
IMSUT, The University of Tokyo

S2-5 *In vitro* gametogenesis: creating reproductive organs in a dish

- Katsuhiko Hayashi
Department of Genome Biology, Graduate School of Medicine, Osaka University

Effective Decontamination in Laboratory Animal Facilities: Strategic Use of Disinfectants and Gas SterilizationChairpersons: Ichiro Miyoshi (Tohoku University)
Eiki Takahashi (Kyushu University)**S3-1 Current microbiological status of mice and rats in domestic laboratory animal facilities**

- Nobuhito Hayashimoto
ICLAS Monitoring Center, Central Institute for Experimental Medicine and Life Science

S3-2 Application of weakly acidic hypochlorous acid solution at animal research facility

- Emi Kamiya, Takeshi Hiroe, Nobuaki Takahashi, Midori Yamanaka, Hiroki Inahashi,
Mitsuko Kubota, Kazutoshi Nishijima
Center for Animal Resources and Collaborative Study, National Institute for Physiological Sciences

S3-3 Preparing for infection control in the pandemic era: the potential of on-demand generated MA-T technology

○ Tsuyoshi Inoue

The University of Osaka

S3-4 Characteristics of chlorine dioxide gas and complex decontamination in breeding facilities

○ Makoto Watanabe

IKARI STERIFIRM Co., Ltd.

S3-5 Innovative high-level decontamination system using gas-phase nucleic acid degradation technology

○ Noboru Ogiso

Aichi Shukutoku University

Symposium 4

May 28 (Thu) 9:00-11:00
1st Hall: Theater

Learning Animal Welfare from AAALAC International Accredited Institute

Chairpersons: Dewi K. Rowland (The University of Hong Kong)
Mayu Uchihashi (Medtronic Japan Co., Ltd.)

S4-1 Embedding AAALAC Position Statements to build a culture of care at The University of Hong Kong

○ Dewi K. Rowlands

Centre for Comparative Medicine Research, Li Ka Shing Faculty of Medicine, The University of Hong Kong

S4-2 Improving animal welfare through veterinary care: getting a clue from the AAALAC Position Statement

○ Mayu Uchihashi

Medtronic Japan Co., Ltd.

Infectious Diseases in Invertebrates, Fishes, Amphibians, and Reptiles

Chairpersons: Fumio Ike (RIKEN BioResource Research Center)
Shinichiro Nakamura (Azabu University)

Under Japanese National laws and documents, “laboratory animals” are defined as mammals, birds, and reptiles that used for scientific experiments and kept in laboratory animal facilities. Among these animals, several species in mammals are major laboratory animals. Thus, our microbiological management efforts should be exclusively focused on mammalian microorganisms. However, recent trends for replacement policy of 3Rs have led to the increasing use of diverse animal species such as reptiles, amphibians, fishes, and invertebrates. This current situation means that knowledge of infectious diseases affecting those animal species is also required for microbiological management.

This symposium is designed to focus the foundational knowledge of microbiology of reptiles, amphibians, fishes, and invertebrates, because it is thought that we are unfamiliar such animal species. Therefore, experts of microbiology in those animals will give lectures overviews covering the characteristics of microorganisms and their pathomechanism infecting each animal group, host defense responses, and countermeasures (prevention methods, disinfectious agents, equipment, etc.). This will be helpful for the novel insights of microbiological management in laboratory animals.

S5-1 Infectious diseases in insects: a focus on silkworm viruses

○ Masashi Iwanaga

Department of Innovative Science of Bioproduction, School of Agriculture, Utsunomiya University

S5-2 Infectious diseases in marine aquaculture fish: current status and future challenges

○ Shin-Ichi Kitamura

Graduate School of Bioresources, Mie University

S5-3 Infectious diseases in captive amphibians and reptiles

○ Yumi Une

Animal Disease Research and Support Association

**New Perspectives to Explore Animal Welfare: Part 3
—Considering Contributions to Animal Welfare from Various Fields Involved in
laboratory Animal Technology—**

Chairpersons: Haruko Hirayama (Okayama University)
Sayaka Ohba (CLEA Japan Inc.)

Technologies for laboratory animals have advanced significantly since 2000, and as a result, various scientific techniques and methods have been developed to scientifically assess the condition of animals and improve their welfare. Ensuring the physical and psychological well-being of laboratory animals is essential for guaranteeing the accuracy and reproducibility of animal experiments. Meanwhile, the World Organization for Animal Health (WOAH; formerly OIE) defines animal welfare as “the physical and mental state of an animal in relation to the conditions in which it lives and dies” and emphasizes the need for its objective assessment. This aligns precisely with the considerations required for the proper conduct of animal experiments, as mentioned above. Internationally, the “Five Freedoms” have been proposed as a fundamental framework for evaluating animal welfare, and in Japan, more than ten years have passed since this concept was incorporated into the Act on Welfare and Management of Animals in 2012. In settings where animal experiments are conducted or laboratory animals are housed, how have people sought to view conditions from the animals’ perspective, scientifically understand their situation, and work to improve their well-being?

This symposium aims to provide an opportunity to learn about the importance of scientifically evaluating initiatives that contribute to animal well-being. We will introduce concrete examples of improvement efforts from various fields that address the Five Freedoms to ensure animal welfare.

S6-1 Research support that advances animal welfare: an overview of initiatives at OIST

○Chen-chi Wang

Okinawa Institute of Science and Technology

**S6-2 Contributing to animal welfare through equipment and people
—a equipment manufacturer’s perspective—**

○Chikako Natsume

Nazme Co., Ltd.

S6-3 Contributing to animal welfare through facility management and environmental control

○Kazunori Watanabe

RABICS, LTD.

The Intersection of Animal Testing and Alternative Methods: Outcomes from Liver Studies

Chairpersons: Hiroshi Kitamura (Tohoku University)
Masaki Nishikawa (The University of Tokyo)

S7-1 Liver-derived extracellular vesicles mediate multi-organ damage induced by chronic liver disease

○ Akiko Eguchi^{1,2)}

¹⁾Department of Gastroenterology and Hepatology, Mie University,

²⁾Department fo Biobank Center, Mie University Hospital

S7-2 Liver modeling and applications informed by physiological energy metabolism

○ Masaki Nishikawa¹⁾, Hiroki Kikukawa¹⁾, Masatake Yamazaki¹⁾, Gaku Shimodaira¹⁾, Fumiya Tokito¹⁾, Takeshi Katsuda¹⁾, Takao Inoue²⁾, Tohru Sugahara³⁾, Katsuhiko Esashika⁴⁾, Jingjing Yang⁴⁾, Satoshi Yamasaki⁴⁾, Shotaro Uehara⁵⁾, Nao Yoneda⁵⁾, Yuichiro Higuchi⁵⁾, Hiroshi Suemizu⁵⁾, Junichi Shindoh⁶⁾, Yasuyuki Sakai¹⁾

¹⁾The University of Tokyo, ²⁾Yamaguchi University, ³⁾Kyoto Institute of Technology, ⁴⁾Mitsui Chemicals, Inc.,

⁵⁾Central Institute for Experimental Medicine and Life Science (CIEM), ⁶⁾Toranomon Hospital

S7-3 Achievements obtained using humanized liver chimeric mice

○ Chise Tateno^{1,2,3)}

¹⁾PhoenixBio Co., Ltd., ²⁾Graduate School of Biomedical and Health Sciences, Hiroshima University,

³⁾Wakayama Medical University

S7-4 Hepatotoxicity prediction based on chemical structural information and experimental data

○ Kouichi Yoshinari

School of Pharmaceutical Sciences, University of Shizuoka

Animal Behavior

Chairpersons: Kimie Niimi (RIKEN Center for Brain Sciences)
Haruko Hirayama (Okayama University)

S8-1 Mouse behavioral phenotyping platform at the RIKEN BRC

○ Tamio Furuse, Ikuko Yamada, Masaru Tamura

Mouse Phenomics Division, RIKEN BRC

S8-2 Vocal development in a common marmoset model of Rett syndrome

○ Moe Nakanishi, Junko Okahara, Erina Kubo, Noriyuki Kishi, Hideyuki Okano, Tomomi Shimogori

RIKEN CBS

S8-3 How to understand and interact with the behavior of companion animals — from the perspective of behavioral medicine —

○ Yumi Ochiai

Gifu Animal Behavior Clinic

S8-4 Mechanisms underlying voluntary approach behaviour towards humans in a mouse model of domestication

○ Tsuyoshi Koide

Mouse Genomics Resource Laboratory, National Institute of Genetics

LAS Seminar 1

May 27 (Wed) 9:00-11:00

2nd Hall: Conference Room A1 (Conference Building A 1F)

Utilization of Fish and Amphibians in Research and Animal Welfare

Chairpersons: Ryuichi Miura (The University of Tokyo)

Ayako Isotani (Nara Institute of Science and Technology)

Chie Naruse (Mie University)

Under the “Guidelines for Proper Conduct of Animal Experiments,” established in 2006, “Laboratory animal” is defined as “Animal of mammalian, avian or reptilian species used in animal experiments.” Accordingly, among vertebrates, amphibians and fish have traditionally been excluded from the scope of these guidelines.

However, with recent advances in research technologies, studies using amphibians and fish have become increasingly common, and some institutions have independently revised their experimental protocols to incorporate the principles of the 3Rs (Replacement, Reduction, and Refinement) in research involving amphibians and fish.

In response to increasing public scrutiny and criticism regarding animal welfare, it is expected that future animal research will require experimental planning that also includes amphibians and fish.

In this seminar, four speakers who conduct research using amphibians and/or fish will present on the effective utilization of these animals in research, as well as on experimental practices that follow standards comparable to those applied to conventional animal experimentation. We hope that this seminar will serve as a useful reference for the future utilization of amphibians and fish in research, as well as for the planning and ethical review of experimental protocols.

LAS1-1 Anesthesia and euthanasia methods for amphibians and animal welfare — a case study of the iberian ribbed newt —

○ Tetsuya Ohbayashi

Tottori University

LAS1-2 Husbandry and research methods for zebrafish and animal welfare

○ Takaaki Matsui

Nara Institute of Science and Technology

LAS1-3 Education and research involving fish and amphibians at universities: implications for animal welfare

○ Hirotake Ichise

Dokkyo Medical University

LAS1-4 Scientific investigations and animal welfare at the Okinawa Churaumi Aquarium

○ Keiichi Sato

Okinawa Churaumi Aquarium

LAS Seminar 2

May 28 (Thu) 9:00-11:00

Sponsored by the Committee for Education and Training, the Japanese Society for Genome Editing

2nd Hall: Conference Room A1 (Conference Building A 1F)

Application of Advanced Genetic Manipulation Technologies in Life Science Research

Chairpersons: Manabu Ozawa (Institute of Medical Science, The University of Tokyo)
Hiroshi Kiyonari (RIKEN BDR)

Recent advances in genome editing technologies have brought about a major transformation in genetic manipulation approaches in life science research. This seminar brings together leading researchers in the field to provide a coherent and up-to-date overview of advanced genetic manipulation technologies and their application to life science studies.

The program covers a broad range of topics, including current trends in state-of-the-art genome editing technologies such as prime editing, functional screening using CRISPR libraries in cultured cells, the deployment of genome editing technologies across diverse animal species, and next-generation *in vivo* spatiotemporal gene expression control technologies that do not rely on genome editing. Together, these lectures address genetic manipulation strategies spanning from cell-based systems to whole-organism studies.

This seminar is designed to support researchers and technical staff who are planning to adopt genetic manipulation technologies by strengthening their fundamental understanding, while also offering valuable perspectives for experienced researchers seeking to refine and expand their future research strategies.

LAS2-1 Advancement and further growth of diversified genome editing technologies

○ Tetsushi Sakuma

Kyoto University

LAS2-2 Development and applications of CRISPR-KO screening

○ Kosuke Yusa

Kyoto University

LAS2-3 Development of genome editing technologies in diversifying animal models

○ Takaya Abe

RIKEN BDR

LAS2-4 Optimization of spatiotemporal gene expression control using the Tet-ON/OFF system in mice

○ Jumpei Taguchi

The University of Tokyo

New Eyes on Animal Welfare

Chairpersons: Takashi Inoue (Okayama University of Science)
Terumi Yurimoto (Central Institute for Experimental Medicine and Life Science)
Erika Sasaki (Central Institute for Experimental Medicine and Life Science)

Animal welfare is an indispensable concept for ensuring the humane handling of laboratory animals and for obtaining scientifically valid and reproducible data. However, the scope of this concept is vast, and identifying a clear, concrete approach can be a significant challenge. In this seminar, we move beyond the specific framework of laboratory animals to explore the current state and global trends of animal welfare through three lenses: companion animals, zoo animals, and livestock. By sharing the unique challenges faced by each of these fields, we aim to provide a more holistic and multi-dimensional perspective on animal welfare. The program will conclude with an exploration of the ethical dimensions of animal “pain and suffering.” Our goal is to offer a valuable opportunity for frontline researchers, technicians, and facility managers to reassess animal welfare from a fresh perspective, distinct from their daily operations.

LAS3-1 Current issues and challenges in companion animal welfare

○ Yoshie Kakuma
Teikyo University of Science

LAS3-2 Animal welfare in zoo animals

○ Hideki Noda
Teikyo University of Science

LAS3-3 Farm animal welfare: global and domestic trends

○ Tsuyoshi Shimmura
Tokyo University of Agriculture and Technology

LAS3-4 The moral problem of animal pain and death

○ Sayuri Kubota
Nagasaki University

Best Presentation Award

May 27 (Wed) 9:00-11:30

3rd Hall: Conference Room B1 (Conference Building B 2F)

Poster presentation

May 27 (Wed) 17:50-18:50

Poster Venue: Exhibition Hall (Exhibition Hall 1F)

Chairpersons: Hiromi Miura (Tokai University)

Satohiro Nakao (Kumamoto University)

BP-01 Development of an integrated behavioral and physiological assessment for rats using a novel wearable device

○ Naoaki Matsuda¹, Aoi Koishikawa², Tamami Takano², Shin-ichi Sekizawa¹, Yusuke Okubo³, Hiroki Ota², Ryota Tochinal^{1,4}

¹Laboratory of Veterinary Pathophysiology and Animal Health, Graduate School of Agricultural and Life Science, The University of Tokyo,

²Graduate School of Engineering Science, Yokohama National University,

³Center for Biological Safety and Research, National Institute of Health Sciences,

⁴Research Center for Food Safety, Graduate School of Agricultural and Life Science, The University of Tokyo

BP-02 Development of two novel humanized liver chimeric mouse models: hGH-KI and hFGF19-KI

○ Sho Morioka¹, Yuji Ishida^{1,2}, Satoko Hamamura¹, Ami Yanagi¹, Tomoji Mashimo³, Chise Tateno^{1,2,4}

¹PhoenixBio Co., Ltd., ²Graduate School of Biomedical and Health Sciences, Hiroshima University,

³The Institute of Medical Science, The University of Tokyo, ⁴Wakayama Medical University

BP-03 The influence of dog's fecal microbiota transplantation on the anxiety behavior of ex-germfree mice

○ Keita Amano¹, Ayumi Nakano¹, Wataru Suda², Hiroaki Masuoka², Chie Shindo², Maki Tanokura², Katsuji Kuba³, Hiroshi Tachikawa³, Kazuhiro Hirayama¹

¹Graduate School of Agricultural and Life Sciences, The University of Tokyo,

²RIKEN Center for Integrative Medical Sciences, ³Kitayama Labes Co., Ltd.

BP-04 Sexual experience–dependent partner preference in female mice and the role of the vasopressin 1b receptor

○ Himeka Hayashi^{1,2}, Hirotaka Sakamoto², Hiroshi Kitamura¹, Yasuhiko Kondo³

¹Tohoku University, ²Okayama University, ³Teikyo University of Science

BP-05 Establishment of a novel method for generating multiplex gene knockout mice

○ Hayate Suzuki¹, Mizuki Nishimura², Momoka Masuda², Natsuki Mikami³, Akihiro Kuno¹, Seiya Mizuno¹

¹Laboratory Animal Resource Center, Institute of Medicine, University of Tsukuba,

²Master's Program in Medical Sciences, University of Tsukuba,

³PhD Program in Human Biology, University of Tsukuba

BP-06 Intraplacental transplantation reveals ductal progenitors rescue *Pdx1*-deficient mice

○ Zeynab Javanfekr Shahri¹, Atsushi Noda¹, Chingwei Liao¹, Eugenia Elikem Abena Kumaga¹, Arata Wakimoto², Michito Hamada³, Satoru Takahashi¹

¹Laboratory of Animal Resource Center, University of Tsukuba,

²Department of Obstetrics and Gynecology, School of Medicine, University of Washington,

³Center for Medical Sciences, Ibaraki Prefectural University of Health Sciences

BP-07 Generation of knock-in hamsters via genome editing

○ Mayo Shigeta¹⁾, Ken-ichi Inoue¹⁾, Naoko Shimada¹⁾, Alisa Tobe^{1,2)}, Takaya Abe¹⁾, Hiroshi Kiyonari¹⁾

¹⁾Riken Center for Biosystems Dynamics Research, ²⁾Wildlife Research Center, Kyoto University

BP-08 Functional analyses of a GAG linker region enzyme, B3GALT6, using genome-edited mice

○ Rina Yamashita¹⁾, Shuji Mizumoto²⁾, Yoko Shiba³⁾, Kenta Nakano⁴⁾, Shuhei Yamada²⁾,
Tadashi Okamura⁴⁾, Tatsuya Furuichi¹⁾

¹⁾Faculty of Veterinary Medicine, Iwate University, ²⁾Faculty of Pharmacy, Meijo University,

³⁾Faculty of Science and Engineering, Iwate University, ⁴⁾National Center for Global Health and Medicine

BP-09 High-resolution gut microbiome profiling reveals genome-level synchronized dynamics in mice

○ Rina Kurokawa¹⁾, Rie Maskawa²⁾, Musashi Arakawa²⁾, Hiroaki Masuoka¹⁾, Yu Yoshikawa²⁾,
Tanzila Raihan²⁾, Hideki Takayasu^{1,2)}, Lena Takayasu^{1,3)}, Misako Takayasu²⁾, Wataru Suda¹⁾

¹⁾RIKEN, ²⁾School of Computing, Institute of Science Tokyo,

³⁾Meinig School of Biomedical Engineering, Cornell University

BP-10 TLR7-MYD88 signal negatively regulated by DCIR causes spontaneous neuroinflammation in the central nervous system

○ Atsushi Fujioka¹⁾, Yoichiro Iwakura²⁾, Akira Nakamura³⁾, Yasushi Muraki⁴⁾, Tomonori Kaifu⁴⁾

¹⁾Rakuwakai Otowa Hospital,

²⁾Laboratory of Biomedical Science, Graduate School of Agricultural and Life Sciences,
The University of Tokyo

³⁾Toyokoro Town Clinic,

⁴⁾Division of Infectious and Immunology, Department of Microbiology, Iwate Medical University

BP-11 A nonsense mutation in the *Mocos* gene induces xanthinuria, obstructive nephropathy, and anemia in rats

○ Mao Urasaki¹⁾, Kana Nagasaka¹⁾, Minoru Kido¹⁾, Kenta Hayashi¹⁾, Ayumi Watanabe¹⁾,
Takahiro Sekiguchi²⁾, Mitsuru Kuwamura²⁾, Miyuu Tanaka²⁾, Tomoji Mashimo³⁾, Kosuke Hattori³⁾,
Takashi Kuramoto¹⁾

¹⁾Laboratory of Animal Nutrition, Tokyo University of Agriculture,

²⁾Department of Veterinary Pathology, School of Veterinary Medicine, Osaka Metropolitan University,

³⁾Laboratory of Animal Genetics, Institute of Medical Science, The University of Tokyo

BP-12 Chromosome engineering-based designer biologics for inflammatory bowel disease therapy

○ Genki Hichiwa^{1,2)}, Yayan Wang^{2,3)}, Ryohei Ogihara²⁾, Kanako Kazuki²⁾, Hidetsugu Honda⁴⁾,
Satoshi Abe²⁾, Mitsuo Oshimura⁵⁾, Kazuma Tomizuka⁴⁾, Yuji Ito⁶⁾, Yasuhiro Kazuki^{1,2,7)}

¹⁾Department of Chromosome Biomedical Engineering, School of Life Science, Faculty of Medicine,
Tottori University

²⁾Chromosome Engineering Research Center, Tottori University,

³⁾Department of Chromosome Biomedical Engineering, Integrated Medical Sciences,
Graduate School of Medical Sciences, Tottori University,

⁴⁾School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, ⁵⁾Trans Chromosomics Inc.,

⁶⁾Graduate School of Science and Engineering, Kagoshima University,

⁷⁾The Exploratory Research Center on Life and Living Systems, National Institutes of Natural Sciences

Oral Presentation

Oral Presentation 1 (O-01 - O-14)

May 27 (Wed) 15:10-17:40 3rd Hall: Conference Room B1 (Conference Building B 2F)

Oral Presentation 2 (O-15 - O-23)

May 28 (Thu) 9:00-11:00 3rd Hall: Conference Room B1 (Conference Building B 2F)

Oral Presentation 3 (O-24 - O-36)

May 28 (Thu) 15:40-18:10 4th Hall: Conference Room B2 (Conference Building B 1F)

Oral Presentation 4 (O-37 - O-50)

May 29 (Fri) 9:00-11:30 3rd Hall: Conference Room B1 (Conference Building B 2F)

Poster Presentation

May 27 (Wed) 9:00 - May 29 (Fri) 11:30 Poster Venue: Exhibition Hall (Exhibition Hall 1F)

Core Time: May 27 (Wed) 14:00-15:00 (Odd numbers of P-001 - P164)

May 27 (Wed) 17:50-18:50 (Even numbers of P-001 - P164)