

The 8th Japan-Sino-Korea Mouse Resource Workshop

“Precision Modelling of Human Diseases in Mice and Cell Resources”

Date: August 26(Mon) – 28(Wed), 2019

Venue: Moriwaki Hall, RIKEN BioResource Research Center (BRC)
3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Japan

Language: English

Website: <https://brc.riken.jp/en/mouse-ws-8th>

Day 1, August 26 (Mon)

9:00-9:30 Registration at Moriwaki Hall Lobby (BioResource Main building 1F)

9:30-9:40 Opening Remarks:
Yuichi Obata, Senior Advisor, RIKEN BRC

9:40-10:40 **Laboratory mouse genetics**
“Is JF1/Ms extant “Neanderthal/Denisovan”?”

Toshihiko Shiroishi (RIKEN BRC)

“History of mouse research”

Xiang Gao (MARC Nanjing University, GemPharmatech)

10:40-11:00 Coffee Break

11:00-11:30 **Human disease models I**
“Gut microbiome and metabolic homeostasis”

Sungsoon Fang (Yonsei University)

11:30-12:20 **Keynote lecture I**
“Mouse model of human female infertility”
Masami Kanai (Tokyo Medical and Dental University)

12:20-13:10 **Luncheon seminar I**
“The Leading Edge of Bioimaging Technology, Bioluminescence Imaging and Multiphoton Imaging”
Takashi Sugiyama & Mitsuru Araki (Olympus Corporation)

13:10-14:40 **Mouse resource, genetic manipulation and phenotyping**

“Reproductive techniques to support the maintenance of mouse models”

Kimiko Inoue (RIKEN BRC)

“Highly efficient RNA-guided base editing”

Kyoungmi Kim (Korea University)

“Regulation of pluripotency in mouse embryonic stem cells”

Ho Lee (National Cancer Center Korea)

14:40-15:00 Coffee Break

15:00-16:00 **Neuroscience research using mice**

“Fundamental Strategies Using Mouse Resources in Neuroscience Research”

Toshiaki Nakashiba (RIKEN BRC)

“Synaptic Glutamate Receptors and Behaviors in Animal and Human”

Yun Stone Shi (MARC Nanjing University)

16:00-16:50 **Keynote lecture II**

“Studying the mechanism of motor control using mouse model for Parkinson's disease”

Toshikuni Sasaoka (Niigata University)

16:50-17:30 Open discussion

17:30-18:00 Group photo

18:00-19:00 Dinner at JICA Tsukuba Center Restaurant

19:00-20:30 **Poster presentation and discussion**

Best Poster & Discussant Awards Committee: co-chaired by Yuichi Obata and Toshihiko Shiroishi with Committee members of all lecturers and invited speakers.

Day 2, August 27 (Tue)

8:50-9:50 **Imaging technique and informatics**

“Data integration of phenotype and disease”

Hiroshi Masuya (RIKEN BRC)

“Visualization of mouse embryos with the X-ray computed tomography (CT)”

Masaru Tamura (RIKEN BRC)

9:50-10:40 **Keynote lecture III**
 “Non-invasive imaging of diseases in living mice”
 Yoshihiro Miwa (University of Tsukuba)

10:40-11:00 Coffee Break

11:00-12:30 **Human disease models II**
 “Systemic Mouse Pathology for Defining Gene Function”
 Ki Taek Nam (Yonsei University)
 “Smooth Muscle Function and Pathology”
 Min-Sheng Zhu (MARC Nanjing University)
 “Single cell transcriptome analysis of brown adipogenesis in mouse model”
 Je Kyung Seong (Seoul National University & Korea Mouse Phenotyping Center (KMPC))

12:30-13:20 **Luncheon seminar II**
 “Mouse genome editing through zygote electroporation”
 Shinya Ayabe (RIKEN BRC)
 “GONAD: Simple Method for Genome-editing in Mice and Rats”
 Makoto Matsuyama (Shigei Medical Research Institute)

13:20-14:10 **Keynote lecture IV**
 “Modelling the complex inheritance pattern of Holoprosencephaly using mouse experimental genetics”
 Ruth Arkell (The Australian National University)

14:10-15:00 **Human iPS cell resource for disease research**
 “Studies using patient-derived iPS cells deposited in RIKEN cell bank”
 Yohei Hayashi (RIKEN BRC)
 “Modelling human diseases using disease iPSC resources”
 Mika Suga (RIKEN BRC)

15:00-15:20 Coffee Break

15:20-16:50 **Human disease models III**
 “Tumor-associated myeloid cells and their therapeutic implications”
 Jianghuai Liu (MARC Nanjing University)

“Embryo phenotyping of knockout mice with vascular defects”

Young Jae Lee (Gachon University)

“Mouse models of human deafness: disease mechanisms and therapeutics”

Guoqiang Wan (MARC Nanjing University)

16:50-17:00 Break

17:00-18:00 **Models and techniques for metabolic disease research**

“The role of transcription factor Ets-1 in regulating pancreatic β -cell dedifferentiation and transdifferentiation in Type 2 Diabetes Mellitus”

Xiao Han (Nanjing Medical University)

“The metabolic reprogram regulated by protein prenylation”

Chaojun Li (MARC and Medical School, Nanjing University)

18:00-18:30 Open discussion

18:30-18:50 Diploma and Award presentation

18:50-19:00 Closing remarks

19:00-20:30 Dinner at Moriwaki Hall Lobby

Day 3, August 28 (Wed)

8:30-9:00 Institutional procedure for attending animal experiment (Video lecture)

Notice: it is mandatory for everyone to attend this video lecture to join practical training course.

9:00-12:00 **Practical trainings and demos**

- 1. Open Field test & Japan Mouse Clinic lab tour**
- 2. Embryo manipulation**
- 3. RIKEN BRC Cell Bank lab tour**
- 4. Overview of web-based tools for mouse informatics and genome editing**

Everyone can attend two or three courses, 1 or 1.5 hour for each program depending on the number of applicants.

12:00-13:00 Lunch