

The 13th International Symposium of the Institute Network for Biomedical Sciences joint with the 3rd Symposium of the Inter-University Research Network for Trans-Omics Medicine and the 28th Hot Spring Harbor Symposium

= Biomedical Sciences in the Era of Big Data =

Medical Institute of Bioregulation, Kyushu University

October 18 - 19, 2018

Main Hall, Centennial Hall Kyushu University School of Medicine
in the Hospital Campus of Kyushu University, Fukuoka

Thursday, October 18, 2018

09:30 - 09:35 Opening Remarks:
Yusaku Nakabeppu (Director of Medical Institute of Bioregulation,
Kyushu University)

Session 1: Epigenetics

*Chairs: Mitsuyoshi Nakao (Institute of Molecular Embryology and Genetics, Kumamoto University)
 Hiroyuki Sasaki (Medical Institute of Bioregulation, Kyushu University)*

09:35-10:00 S-01 : **Toyomasa Katagiri** (Institute of Advanced Medical Sciences,
Tokushima University)
Comprehensive molecular features of triple negative breast cancers

10:00-10:15 Y-01 : **Norifumi Shioda** (Institute of Molecular Embryology and Genetics,
Kumamoto University)
G-quadruplexes as a therapeutic target for ATR-X syndrome

10:15-10:40 S-02 : **Takeshi Inagaki** (Institute for Molecular and Cellular Regulation,
Gunma University)
Epigenetic regulation of adipocyte function

10:40-10:55 Y-02 : **Sumiyo Morita** (Institute for Molecular and Cellular Regulation,
Gunma University)
Epigenome editing: Manipulating DNA methylation of specific DNA loci
using CRISPR/Cas9 and a repeating peptide array- based amplification

10:55-11:10 Y-03 : **Kazumitsu Maehara** (Medical Institute of Bioregulation, Kyushu
University)
Low-input Epigenomic Profiling Technology Toward the Identification of
Myogenic Chromatin Structure

11:10-11:25 Coffee break

Special Lecture 1

Chair: Yasuyuki Ohkawa (Medical Institute of Bioregulation, Kyushu University)

11:25-12:05 **Suhas Rao** (Stanford University, USA)
Cohesin Loss Eliminates All Loop Domains

12:05-12:15 Photo Session

12:15-13:15 Lunch (meeting invited members only)

13:15-14:15 Poster Session-1

Session 2: Cancer and immune system

Chairs: Sho Yamasaki (Research Institute for Microbial Diseases, Osaka University)

Yoshihiro Baba (Medical Institute of Bioregulation, Kyushu University)

14:15-14:40 S-03 : **Toru Kondo** (Institute for Genetic Medicine, Hokkaido University)
A novel tumor suppressor Ecr4 acts as an immunosurveillance factor

14:40-15:05 S-04 : **Seiya Imoto** (Institute of Medical Science, The University of Tokyo)
Immuno-genomic pancancer landscape reveals diverse immune escape mechanisms and immuno-editing histories

15:05-15:30 S-05 : **Shumpei Ishikawa** (Medical Research Institute, Tokyo Medical and Dental University)
Genomic and Immunogenomics of Diffuse-type Gastric Carcinoma

15:30-15:45 Coffee break

Special Lecture 2

Chair: Mikita Suyama (Medical Institute of Bioregulation, Kyushu University)

15:45-16:25 **Peer Bork** (European Molecular Biology Laboratory, Germany)
Systemic analysis of the human gut microbiome and beyond

Session 3: Structure and drug discover

Chairs: Toshifumi Takao (Institute for Protein Research, Osaka University)

Daisuke Kohda (Medical Institute of Bioregulation, Kyushu University)

- 16:25-16:50 S-06 : **Daron M. Standley** (Research Institute for Microbial Diseases, Osaka University)
High-throughput modeling of lymphocyte receptors and their antigens
- 16:50-17:05 Y-04 : **Yusuke Kato** (Institute of Advanced Medical Sciences, Tokushima University)
Combined approach of computation and enzymology to investigate novel D-amino acid oxidase inhibitors
- 17:05-17:20 Y-05 : **Toshiki Takei** (Institute for Protein Research, Osaka University)
Development and Application of One-Pot Four-Segment Ligation Method Using Selenoester: Chemical synthesis of Superoxide Dismutase
- 17:20-18:20 Poster Session-2
- 18:20-18:30 Break
- 18:30-20:30 Mixer

Friday, October 19, 2018

Session 4: Germ cells and stem cells

*Chairs: Tatsuya Takemoto (Institute of Advanced Medical Sciences, Tokushima University)
Atsushi Suzuki (Medical Institute of Bioregulation, Kyushu University)*

- 09:00-09:25 S-07 : **Kei-ichiro Ishiguro** (Institute of Molecular Embryology and Genetics, Kumamoto University)
A novel germ cell-specific factor, MEIOSIN, recruits STRA8 to direct initiation of meiosis in mammals
- 09:25-09:40 Y-06 : **Yohei Hayashi** (Institute of Development, Aging and Cancer, Tohoku University)
Biological significance of metabolic shift in mouse germline differentiation
- 09:40-10:05 S-08 : **Atsushi Hirao** (Cancer Research Institute, Kanazawa University)
Metabolic regulation of stem cell properties in normal and malignant hematopoiesis
- 10:05-10:30 S-9 : **Junya Toguchida** (Institute for Frontier Life and Medical Sciences, Kyoto University)
Application of iPS cells for disease modeling and drug discovery
- 10:30-10:45 Coffee break

Special Lecture 3

Chair: Yusaku Nakabeppu (Medical Institute of Bioregulation, Kyushu University)

- 10:45-11:25 **Rachel Rosenthal** (University College London, UK)
Cancer evolution and immune escape: TRACERx

Session 5: Cell biology

*Chairs: Ken Sato (Institute for Molecular and Cellular Regulation, Gunma University)
Keiichi Nakayama (Medical Institute of Bioregulation, Kyushu University)*

- 11:25-11:40 Y-7 : **Tomohiro Yamazaki** (Institute for Genetic Medicine, Hokkaido University)
Functional domains of NEAT1 architectural lncRNA induce paraspeckle assembly through phase separation
- 11:40-12:05 S-10 : **Takahisa Furukawa** (Institute for Protein Research, Osaka University)
Molecular control of light-dark adaptation in retinal photoreceptor cells

12:05-12:20 Y-8 : **Kousuke Tsuchiya** (Cancer Research Institute, Kanazawa University)
Caspase-1 can initiate two different forms of cell death, pyroptosis and apoptosis, depending on the signaling context

12:20-13:20 Lunch (meeting invited members only)

Session 6: Immunology

*Chairs: Koichi Ikuta (Institute for Frontier Life and Medical Sciences, Kyoto University)
Yoshinori Fukui (Medical Institute of Bioregulation, Kyushu University)*

13:20-13:45 S-11 : **Koetsu Ogasawara** (Institute of Development, Aging and Cancer, Tohoku University)
Identification of pathogenic T cells in metal allergy

13:45-14:00 Y-9 : **Fumiji Saito** (Research Institute for Microbial Diseases, Osaka University)
Immune evasion of Plasmodium falciparum by RIFIN via inhibitory receptors

14:00-14:15 Y-10 : **Jun-ichirou Yasunaga** (Institute for Frontier Life and Medical Sciences, Kyoto University)
Molecular mechanisms of oncogenesis by human T-cell leukemia virus type 1

14:15-14:30 Coffee break

Session 7: Cancer and Genetic disorders

*Chairs: Kozo Tanaka (Institute of Development, Aging and Cancer, Tohoku University)
Hiroyuki Kubota (Medical Institute of Bioregulation, Kyushu University)*

14:30-14:55 S-12 : **Mikita Suyama** (Medical Institute of Bioregulation, Kyushu University)
Understanding gene regulation using chromosome conformation and epigenomic data

14:55-15:10 Y-11 : **Fuyuki Miya** (Medical Research Institute, Tokyo Medical and Dental University)
Beyond the limitations of exome analysis for genetic disorders

15:10-15:25 Y-12 : **Kiyoshi Yamaguchi** (Institute of Medical Science, The University of Tokyo)
Molecular features of colorectal cancer in patient with polymerase proofreading-associated polyposis

15:25-15:35 Poster Awards Ceremony

15:35-15:40 Closing Remarks:
Mikita Suyama (Medical Institute of Bioregulation, Kyushu University)