

East Asia Joint Symposium 2015 Program

Participant Institutes

Institute of Biochemistry and Molecular Biology, National Taiwan University (IBMB, NTU)

Institute of Molecular Biology and Genetics, Seoul National University (IMBG, SNU)

Institute of Medical Science, University of Tokyo (IMSUT)

Institute for Virus Research, Kyoto University (IVR, Kyoto Univ.)

Okinawa Institute of Science and Technology Graduate University (OIST)

Samsung Biomedical Research Institute, Sungkyunkwan University (SBRI, SKKU)

Shanghai Institute of Biochemistry and Molecular Biology, Chinese Academy of Sciences (SIBMB, CAS)

Soonchunhyang Institute of Medi-bio Science, Soonchunhyang University (SIMS, SCHU)

Venue: OIST campus, B250

November 10 (Tue)

Arrivals

November 11 (Wed)

9:00-9:10 Opening remark: Dean of Research (George Iwama)

9:10-9:20 Information by Ichiro Masai

Session “Developmental Biology, signaling and disease model” Chair: Ichiro Masai

9:20–9:45 Lecture 1 Ichiro Masai (OIST)

Cell division and cadherin-mediated cell adhesion regulate lens epithelial cell movement in zebrafish

9:45–10:10 Lecture 2 Chan-Yen Ou (IBMB, NTU)

Cyclin-dependent kinases pathways regulate synapse formation in motor neurons

10:10–10:30 Break 20 min

10:30–10:55 Lecture 3 Yen-Shou Lin (IBMB, NTU)

Herbal medicines for ameliorating the A β -induced depolarization in primary cortical neurons

10:55–11:20 Lecture 4 Hsiu-Mei Hsieh (IBMB, NTU)

Identification of nature products to ameliorate learning memory deficit in streptozotocin-induced Alzheimer mouse model

11:20–11:45 Lecture 5 Jun-ichiro Inoue (IMSUT)

Regulation of the TRAF6-NF- κ B and the Calcineurin-NFATc1 pathways in RANK signal-induced osteoclastogenesis

12:00–13:30 Lunch

12:00–13:00 DIRECTOR MEETING (C016, Lab1)

Session “Gene regulation and genetics, ecology” Chair: Hidetoshi Saze

13:30–13:55 Lecture 6 Jeong Hoon Kim (SBRI, SKKU)

DBC1, a master regulator of β -catenin-PROX1 signaling axis

13:55–14:20 Lecture 7 Masaki Takahashi (IMSUT)

Development of an efficient Cell-SELEX using engineered isogenic cell lines to generate RNA aptamers against a cell surface protein of interest

14:20–14:45 Lecture 8 Yu-Feng Hsu (IBMB, NTU)

Diversity of phytophagous insects associated with *Fagus hayatae* forest

14:45–14:55 Break 10 min

Session “Structural Biology” Chair: Matthias Wolf

14:55–15:20 Lecture 9 Matthias Wolf (OIST)

Cryo-EM imaging with the Volta Phase Plate

15:20–15:45 Lecture 10 Bo OuYang (SIBCB, CAS)

NMR applications on mitochondrial carrier machinery

15:45–16:00 Break 15 min

Young investigator talk: Chair: Matthias Wolf, Ichiro Masai

“Developmental Biology and signaling”

16:00–16:10 short talk 1 (P-1) Kumiko Kobayashi (IVR, Kyoto Univ.)

Single-cell analysis of mouse segmentation clock

16:10–16:20 short talk 2 (P-2) Yi-Jyun Luo (OIST)

The Lingula genome and the patterning of BMP-chordin axis in brachiopods

16:20–16:30 short talk 3 (P-3) Shin Jeon (IMBG, SNU)

Anteroposterior limb skeletal patterning requires the bifurcating function of SWI/SNF chromatin remodeling complex in Hedgehog pathway

16:30–16:40 short talk 4 (P-4) Young-Eun Leem (SBRI, SKKU)

PRMT7 deficiency enhances adipogenesis leading to obesity-related phenotypes in mice

16:40–16:50 short talk 5 (P-5) Sang A Lee (SIMS, SCHU)

miR-31/SDHA axis regulates reprogramming efficiency through mitochondrial metabolism

16:50–17:05 Break 15min

17:05–17:15 short talk-6 (P-6) Se-Hyuk Kim (SBRI, SKKU)

SSU72 functions as a gatekeeper monitoring for chromosome integrity

17:15–17:25 short talk 7 (P-7) Chia-Wei Lin (IBMB, NTU)

Investigation of the molecular pathogenesis for SCA17 through transgenic mouse model

17:25–17:35 short talk-8 (P-8) Sungho Hong (OIST)

GABA-mediated phase repulsive coupling and seasonal time coding in the suprachiasmatic nucleus

“Structural biology”

17:35–17:45 short-talk 9 (P-9) Yohiko Sugita (OIST)

Cryo-electron microscopic analysis of influenza virus ribonucleoprotein complex during transcription

17:45–17:55 short talk 10 (P-10) Hong-Wen Chen (SIBCB, CAS)

Structural Basis of Telomerase Recruitment in Yeast

17:55–18:10 Break 15min

“Gene regulation and genetics, ecology”

18:10–18:20 short talk 11 (P-11) Eun Ji Yu (SBRI, SKKU)

Positive regulation of β -catenin-PROX1 signaling axis by DBC1 in colon cancer progression

18:20–18:30 short talk 12 (P-12) Imchang Lee (IMBG, SNU)

OrthoANI: An improved algorithm and software for genome-based species definition of Bacteria and Archaea

18:30–18:40 short talk 13 (P13) Jia-Yuan Liang (IBMB, NTU)

Systematics and Biology of Clearwing Moths - The Synanthedonini Tribe in Taiwan

“Cancer biology”

18:40–18:50 short talk 14 (P-14) Yukino Machida (IMSUT)

Maintenance of stemness of breast cancer by FRS2beta, a feedback inhibitor for HER, during tumorigenesis

18:50–19:00 short talk 15 (P-15) Zhixin Qiu (SIBCB, CAS)

Modeling liver cancer using cancer cell lines to guide the precision medicine for liver cancer

19:00–19:10 short talk 16 (P-16) Shuto Hayashi (IMSUT)

A Bayesian Method for HLA genotyping from Whole Genome Sequencing Data

19:30–21:30 Dinner + Poster session (Cafeteria level B)

November 12 (Thu)

Session “Cell Biology” Chair: Tadashi Yamamoto

9:00–9:25 Lecture 11 Jae Bum Kim (IMBG, SNU)

Fat Tissue Dysregulation and Insulin Resistance in Obesity

9:25–9:50 Lecture 12 Jaeseok Han (SIMS, SCHU)

Disturbance of ER homeostasis and oxidative stress synergizes to cause cell death

9:50–10:15 Lecture 13 Tadashi Yamamoto (OIST)

mRNA decay machinery and its physiological roles

10:15–10:35 Break 20 min

10:35–11:00 Lecture 14 Yuri Shibata (IMSUT)

The role of polyubiquitin chains in HTLV-1 Tax-induced IKK activation

11:00–11:25 Lecture 15 Yong Tae Kwon (IMBG, SNU)

Modulation of autophagy by the N-end rule proteolytic system: its role in protein quality control and innate immunity

11:25–11:50 Lecture 16 Gang Wang (SIBCB, CAS)

The Mediator subunit MED23 couples H2B mono-ubiquitination to transcriptional control and cell fate determination

12:00–13:30 Lunch

Chair by Hidetoshi Saze

13:30–13:55 Lecture 17 Jeong Kyo Yoon (SIMS, SCHU)

Regulatory role of R-spondin-LGR4 signaling in skeletal muscle stem cell and myogenic differentiation

Session “Virology and Immunology-1” Chair: Hiroki Ishiwaka

13:55–14:20 Lecture 18 Ping Hu (SIBCB, CAS)

Acute inflammation is required for muscle regeneration

14:20–14:45 Lecture 19 Kae Won Cho (SIMS, SCHU)

Adipose Tissue Immune cells: Key players in metabolic syndromes

14:45–15:10 Lecture 20 Tae Jin Kim (SBRI, SKKU)

Development of Putative B-1 helper T cells

15:10–15:30 Break 20 min

Young investigator talk: Chair: Hiroki Ishiwaka, Hidetoshi Saze

“Cell Biology”

15:30–15:40 short talk 17 (P-17) Koichiro Akiyama (IVR, Kyoto Univ.)

Analysis of the conserved membrane-reentrant loop of RseP, an intramembrane-cleaving protease

15:40–15:50 short talk 18 (P-18) Megumi Ikeda (IVR, Kyoto Univ.)

Dormant cells emerging from Embryonic Stem Cells sustain pluripotency in differentiation condition

15:50–16:00 short talk 19 (P-19) Shibin Hu (SIBCB, CAS)

Protein arginine methyltransferase CARM1 attenuates the paraspeckle mediated nuclear retention of mRNAs containing IRAlus

16:00–16:10 short talk 20 (P-20) Lidya Kristiani (SIMS, SCHU)

Development of High Sensitive (HS) Hi-C Method through Adaptor-Mediated Ligation and Low Density DNA Digestion

16:10–16:20 short talk 21 (P-21) Jiho Park (IMBG, SNU)

Study on the function of BubR1 in zebrafish model system

16:20-16:35 Break 15 min

16:35–16:45 short talk 22 (P-22) Moe Matsushita (IMSUT)

Identification of a novel redox-sensor that mediates activation of stress-responsive MAPK pathways

16:45–16:55 short talk 23 (P-23) Debojyoti De (SBRI, SKKU)

Developing an efficient and selective strategy for differentiating pluripotent stem cells

“Virology and Immunology”

16:55–17:05 short talk 24 (P-24) Taku Kureha (OIST)

CNOT3 is important for thymocyte development through the regulation of TCR-mediated cell death signaling

17:05–17:15 short talk 25 (P-25) Dongming Zhao (IMSUT)

Characterization of a reporter-expressing H5N1 influenza A virus in vitro and in vivo

17:15–17:25 short talk 26 (P-26) Xiangpeng Sheng (SIBCB, CAS)

An Escherichia coli O157:H7 effector inhibits host inflammation response by ubiquitylating TRAFs family

17:25-17:40 Break 15 min

“Developmental biology and Disease model”

17:40–17:50 short talk 27 (P-27) Ji Hye Park (SBRI, SKKU)

Protein kinase B/Akt phosphorylates Histone 2A, controlling neuronal apoptosis under oxidative stress

17:50–18:00 short talk 28 (P-28) Jie Yin (SIBCB, CAS)

A secreted protein plays a key role in regulating aging related muscle atrophy

18:00–18:10 short talk 29 (P-29) Lesly Puspita (SIMS, SCHU)

In vitro disease modeling study with patient iPSc suggested metabolic impairment of Parkinson disease

18:10–18:20 short talk 30 (P-30) Mona Fendereski (SIMS, SCHU)

Directed in vitro myogenesis of human embryonic stem cells and their in vivo delivery using biomimetic

materials

18:20-18:35 Break 15 min

18:35–18:45 short talk 31 (P-31) Altanbyek Volodya (SIMS, SCHU)

The imbalance of mitochondrial dynamics in ALS

18:45–18:55 short talk 32 (P-32) Su Jin Ham (IMBG, SNU)

Regulation of Parkin E3 ligase by its own UBL domain

18:55–19:05 short talk 33 (P-33) He-Pei Yu (IBMB, NTU)

Identifying a novel compound NCT016 as an anti-Alzheimer's disease agent

19:30–21:30 Dinner + Poster session (Cafeteria level B)

November 13 (Fri)

Session “Virology and Immunology-2” Chair: Hiroki Ishikawa

9:00–9:25 Lecture 21 Hiroki Ishikawa (OIST)

HLX1 regulates differentiation and function of CD4 T helper cells

9:25–9:50 Lecture 22 Ichiro Taniguchi (IVR, Kyoto Univ.)

HIV-1 Rev protein specifies the viral RNA export pathway by suppressing TAP/NXF1 recruitment

9:50–10:15 Lecture 23 Fajian Hou (SIBCB, CAS)

An autoinhibitory mechanism modulates MAVS activity in antiviral innate immune response

10:15–10:45 Break 30 min

10:45–11:10 Lecture 24 Satoshi Fukuyama (IMSUT)

Generation of Color-flu for in vivo imaging of influenza virus infection

11:10–11:35 Lecture 25 Jun-ichirou Yasunaga (IVR, Kyoto Univ.)

Multimodal functions of HTLV-1 bZIP factor as RNA and protein on proliferation and survival of CD4+ T cells

11:40–12:00 Group Photo

12:00– 13:30 Lunch

“Session “Cancer Biology” Chair: Sumiko Watanabe

13:30–13:55 Lecture 26 Seiya Imoto (IMSUT)

Challenges for genomic big data analysis in IMSUT

13:55–14:20 Lecture 27 Seongho Ryu (SIMS, SCHU)

The role of PRC2 in cancer stem cell maintenance

14:20-14:45 Lecture 28 Chin Ha Chung (IMBG, SNU)

UFM1 in the Control of Breast Cancer Development

14:45-15:00 Break 15 min

15:00–15:25 Lecture 29 Hyeon Ho Kim (SBRI, SKKU)

Neurofibromin 2 (NF2) controls the invasiveness of glioblastoma

15:25–15:50 Lecture 30 Susumu Goyama (IMSUT)

The role of thrombin-Par-1 pathway in myeloid leukemia stem cells

15:50-16:05 Break 15min

16:05–16:30 Lecture 31 Kyeong Kyu Kim (SBRI, SKKU)

Ubiquitin and deubiquitinating enzymes: implication in cancer

16:30–16:55 Lecture 32 Junho Lee (IMBG, SNU)

Telomere maintenance through recruitment of internal genomic regions

17:00-19:00 Campus tour

19:00–21:30 Dinner + Best presentation awards

Outline of special workshop

November 14 (Sat)

9:00–9:05 Opening remark by Drs. Ecomono/ Yazaki-Sugiyama

Session “Evolution and Ecology” Chair: Dr. Evan Ecomono

9:10–9:50 S-Lecture 1 (Evan Ecomono, OIST)

Global patterns of diversity and diversification rate in ants

9:50–10:40 S-Lecture 2 (Kenji Matsuura, Kyoto Univ)

Evolution of reproductive systems and pheromone communication in termites

10:40–11:00 Break 20 min

11:00–11:50 S-Lecture 3 (Yoh Iwasa, Kyusyu Univ)

Rate of species creation by geographic isolation and recurrent migration

12:00– 13:30 Lunch

Session “Neuroscience” Chair: Dr. Yoko Yazaki-Sugiyama

13:30–14:10 S-Lecture 4 (Yoko Yazaki-Sugiyama, OIST)

Memory formation of auditory experience for vocal learning in early developmental period in zebra finch

14:10–15:00 S-Lecture 5 Minmin Luo (NIBS, Beijing, China)

Reward Processing by the Dorsal Raphe

15:00-15:20 Break 20 min

15:20–16:10 S-Lecture 6 Yumiko Yoshimura (NIPS, Japan)

Experience-dependent maturation of fine-scale networks and feature-selective synchronization in visual cortex

16:10–17:00 S-Lecture 7 Tomoyuki Takahashi (OIST)

Strength and precision of neurotransmission at mammalian presynaptic terminals and their postnatal developmental changes

17:00–17:10 Closing remark by Dr. Yamamoto

18:00–18:30 Move to the Seaside house

19:00–21:30 Farewell party (the Seaside house)

November 15 (Sun)

Departure (Optional Excursion to Shuri Castle)