

第9回研究所ネットワーク国際シンポジウム

Molecular Targets for Diseases and Structural Life Science

The 9th International Symposium of the Institute Network

<http://www.protein.osaka-u.ac.jp/network.pdf>

June
19 (Thu) - **20** (Fri)
2014

Ichokaikan
Osaka Univ.
(Suita)

Session

Session 1

Molecular Targets for Diseases

Session 2

Infection & Immunity

Session 3

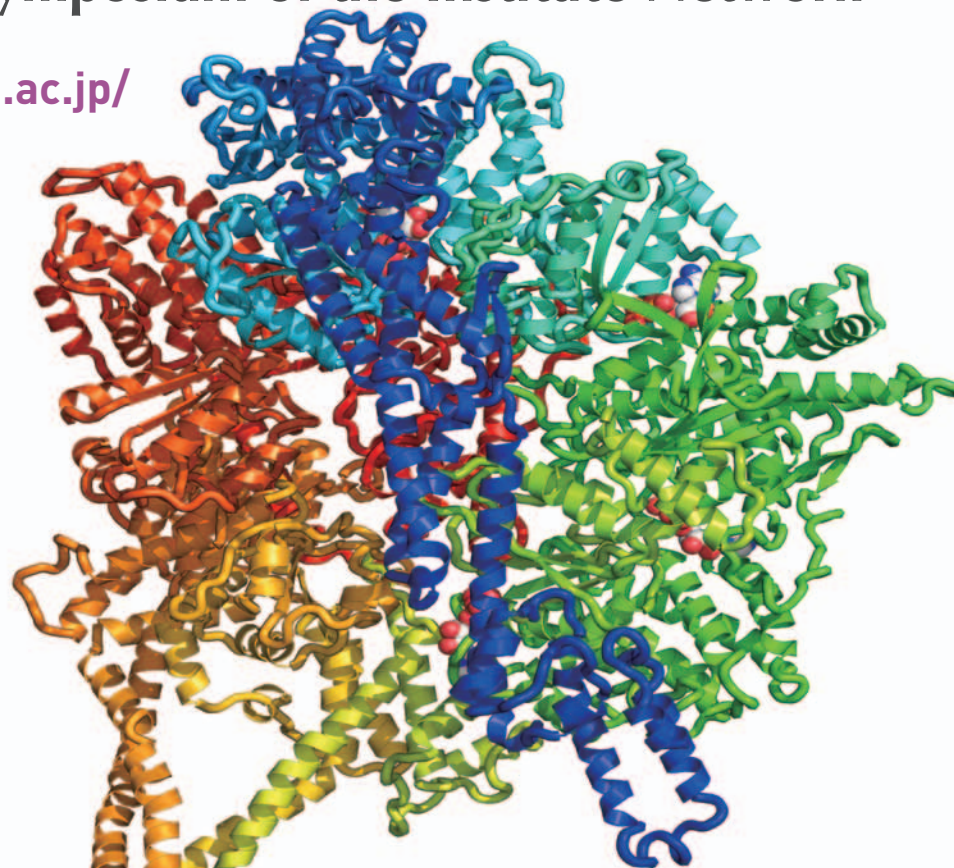
Molecular & Structural Biology

Session 4

Cell Migration & Cancer Biology

Session 5

Cell Signaling in Development
& Diseases



Association

Institute for Genetic Medicine, Hokkaido University (IGM)
Institute of Development, Aging and Cancer, Tohoku University (IDAC)
Institute of Medical Science, University of Tokyo (IMSUT)
Medical Research Institute, Tokyo Medical and Dental University (MRI)
Cancer Research Institute, Kanazawa University (CRI)
Institute of Frontier Medical Sciences, Kyoto University (IMFS)
Institute for Virus Research, Kyoto University (IVR)
Institute for Protein Research, Osaka University (IPR)
Research Institute for Microbial Diseases, Osaka University (RIMD)
Institute for Enzyme Research, University of Tokushima (IER)
Medical Institute of Bioregulation, Kyushu University (MIB)

Cosponsored by: "Collaborative research initiative toward the molecular comprehension of life system"
"Collaborative research initiative for microbial diseases"

Organized by: Institute for Protein Research, Osaka University
Research Institute for Microbial Disease, Osaka University

Corresponding office: Toshifumi Takao (IPR, Osaka Univ) E-mail: tak@protein.osaka-u.ac.jp / TEL: 06-6879-4312



OSAKA UNIVERSITY

Program

June 19, 2014

Registration 12:00 -

12:30 - 13:30 Luncheon Poster Session

13:35 - 13:40 Opening Remarks

Haruki Nakamura

(Institute for Protein Research, Osaka University)

13:40 - 14:55 Session 1 Molecular Targets for Diseases

Chair: Akira Shinohara

(Institute for Protein Research, Osaka University)

S-1. HIV strategy for acceleration of viral replication *in vivo* and eradication approach of HIV proviral DNA

[30 min]

Yoshio Koyanagi (Institute for Virus Research, Kyoto University)

S-2. Small molecule discovery regulating HGF-Met pathway

[30 min]

Kunio Matsumoto (Cancer Research Institute, Kanazawa University)

Y-1. In silico methods for predicting drug targets and new drug indications

[15 min]

Yoshihiro Yamanishi (Medical Institute of Bioregulation, Kyushu University)

14:55 - 15:10 Intermission 1

15:10 - 17:40 Session 2 Infection & Immunity

Chair: Hiroaki Miki & Yukako Fujinaga

(Research Institute for Microbial Diseases,
Osaka University)

S-3. Epithelial barrier versus botulinum toxin: A key aspect of food-borne botulism pathogenesis

[30 min]

Yukako Fujinaga (Research Institute for Microbial Diseases, Osaka University)

S-4. Mechanisms regulating nucleic acid-sensing Toll-like receptors

[30 min]

Kensuke Miyake (Institute of Medical Science, University of Tokyo)

S-5. Immune responses to pathogens through C-type lectin receptors

[30 min]

Sho Yamasaki (Medical Institute of Bioregulation, Kyushu University)

16:40 - 16:55 Intermission 2

16:55 - 17:40 **Session 2** —continued—

S-6. Architecture of an HIV Nef-mediated endocytosis complex and inhibition of its formation by a single domain antibody

[30 min]

Matthias Geyer (Center of Advanced European Studies And Research (caesar), Bonn, Germany)

Y-2. Identification of an arthritogenic CD4⁺ Th clone in spontaneous autoimmune disease

[15 min]

Yoshinaga Ito (Institute for Frontier Medical Sciences, Kyoto University)

17:40 - 18:40 **Poster Session** —continued—

P-1

iPS cells from tumor-resistant rodent “Naked mole-rat” do not have tumorigenic potential due to their transcriptional derepression of *Arf*

Shingo Miyawaki (Institute for Genetic Medicine, Hokkaido University)

P-2

***In vitro* and *in vivo* antitumor effects of Romidepsin analogs as novel PI3K/HDAC dual inhibitors**

Jin Lee (Institute of Development, Aging and Cancer, Tohoku University)

P-3

Development of easy and speedy detection system for Nipah and Hendra virus by reverse transcription smart amplification process (RT-SmartAmp)

Mutsumi Awano (Institute of Medical Science, University of Tokyo)

P-4

Frequent gain-of-function mutations of *RHOA* in diffuse-type gastric carcinoma

Hiroto Katoh (Medical Research Institute, Tokyo Medical and Dental University)

P-5

NLRP3 mediates NF- κ B activation and cytokine gene induction under various cellular stress conditions

Takeshi Kinoshita (Cancer Research Institute, Kanazawa University)

P-6

Innate immune factor Lipocalin2 as a sperm maturation factor

Hitomi Watanabe (Institute for Frontier Medical Sciences, Kyoto University)

P-7

Identification and characterization of IL-15-expressing cells *in vivo*

Guangwei Cui (Institute for Virus Research, Kyoto University)

P-8

Structural characterization of the transmembrane-juxtamembrane region of FGFR3 in lipid bilayers

Hiroko Tamagaki (Institute for Protein Research, Osaka University)

P-9

Visualization of dynamic behavior of IZUMO1 during sperm-egg fusion

Yuhkoh Satoh (Research Institute for Microbial Diseases, Osaka University)

P-10

Prions disturb post-Golgi membrane traffic to the cell surface

Keiji Uchiyama (Institute for Enzyme Research, University of Tokushima)

P-11

Deciphering function of CHD8L isoform in mouse development and differentiation

Yuta Katayama (Medical Institute of Bioregulation, Kyushu University)

P-12

Differentiation of macrophages in the microenvironment of pancreatic cancer

Shintaro Takeuchi (Institute for Genetic Medicine, Hokkaido University)

P-13

Molecular mechanisms of formation of neutrophil extracellular traps
Kyosuke Shishikura (Institute of Development, Aging and Cancer, Tohoku University)

P-14

***In vivo* role of the *Shigella Flexneri* effector Osp I**
Takahito Sanada (Institute of Medical Science, University of Tokyo)

P-15

Cardio-toxicity screening system using human iPS-derived cardiomyocytes
Junko Kurokawa (Medical Research Institute, Tokyo Medical and Dental University)

P-16

Redirection of central metabolism in Rb deficient cancer cells
Susumu Kohno (Cancer Research Institute, Kanazawa University)

P-17

The soluble form of CTLA-4 in regulatory T cells-mediated suppression
Motonao Osaki (Institute for Frontier Medical Sciences, Kyoto University)

P-18

The mode of expression and physiological roles of SecDF paralogs, protein translocation enhancing factors, in *Vibrio alginolyticus*
Eiji Ishii (Institute for Virus Research, Kyoto University)

P-19

Shugoshin 2-dependent formation of silent chromatin at chromosome ends
Sanki Tashiro (Institute for Protein Research, Osaka University)

P-20

PILR α negatively regulates DSS induced experimental colitis
Kazuki Kishida (Research Institute for Microbial Diseases, Osaka University)

P-21

Ectopic Aire expression in thymic cortex reveals inherent properties of Aire as a stromal factor for medullary thymic microenvironment
Hitoshi Nishijima (Institute for Enzyme Research, University of Tokushima)

P-22

Identification of a molecule critical for degranulation of mast cells and anaphylactic reaction

Kana Ogawa (Medical Institute of Bioregulation, Kyushu University)

P-23

Interaction between normal and transformed epithelial cells -Roles for caveolae microdomains and Caveolin-1-

Atsuko Ohoka (Institute for Genetic Medicine, Hokkaido University)

P-24

Cell surface TLR3 on CD8-positive dendritic cell and an essential role of the cleaved N-fragment of TLR3 ectodomain in polyI:C sensing

Yusuke Murakami (Institute of Medical Science, University of Tokyo)

P-25

Association of the RYR3 gene polymorphisms with atherosclerosis in elderly Japanese population

Chenxi Zhao (Medical Research Institute, Tokyo Medical and Dental University)

P-26

A Role for KDM5B on epithelial-mesenchymal transition in cancer cells

Shoichiro Tange (Cancer Research Institute, Kanazawa University)

P-27

Production of recombinant laminin fragment for X-ray crystallography

Mamoru Takizawa (Institute for Protein Research, Osaka University)

P-28

Identification of promoter region of human D-amino acid oxidase (hDAO) gene and its interacting proteins - Search for the regulation of hDAO expression

Diem Hong Tran (Institute for Enzyme Research, University of Tokushima)

18:45 - 20:45 Reception

June 20, 2014

8:30 - 10:30 Session 3 Molecular & Structural Biology
Chair: Atsushi Nakagawa & Genji Kurisu
(Institute for Protein Research, Osaka University)

S-7. Architectural noncoding RNAs controlling subnuclear organization and gene expression

[30 min]

Tetsuro Hirose (Institute for Genetic Medicine, Hokkaido University)

S-8. Epigenetic regulation of mammalian sex determination by histone demethylation

[30 min]

Makoto Tachibana (Institute for Enzyme Research, University of Tokushima)

S-9. Cooperative regulation of tissue-specific alternative splicing by multiple splicing factors determines ligand-binding specificity of FGF receptors

[30 min]

Hidehito Kuroyanagi (Medical Research Institute, Tokyo Medical and Dental University)

S-10. Structure-based development of selective type II topoisomerase-targeting anticancer drugs

[30 min]

Nei-Li-Chan (Institute of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University)

10:30 - 10:45 Intermission 3

10:45 - 11:15 Session 3 — continued —

Y-3. A novel function of the N-glycan revealed by the crystal structure of α -L-iduronidase

[15 min]

Nobuo Maita (Institute for Enzyme Research, University of Tokushima)

Y-4. Mechanism for signaling through the membrane in activation of receptor tyrosine kinase

[15min]

Takeshi Sato (Institute for Protein Research, Osaka University)

11:15 - 12:15 Session 4 Cell Migration & Cancer Biology

Chair: Junichi Takagi

(Institute for Protein Research, Osaka University)

S-11. Semaphorin and neuropilin functions in control of cancer cell behavior

[30 min]

Luca Tamagnone (Candiolo Cancer Institute-FPO(IRCCS) & Department of Oncology, University of Torino, Italy)

S-12. Canonical NHEJ on mitotic chromosome induces genome instability and is suppressed by XRCC4 through M-phase phosphorylation by CDK

[30 min]

Miki Shinohara (Institute for Protein Research, Osaka University)

12:15 - 13:25 Lunch

13:25 - 14:25 Session 4 — continued —

Y-5. Germ-line and somatic mutations of the MEK gene modulate its kinase activity in congenital Ras-MAPK syndromes and sporadic cancers

[15 min]

Yuji Kubota (Institute of Medical Science, University of Tokyo)

Y-6. Novel molecular mechanisms of acquired resistance to gefitinib in lung adenocarcinoma

[15 min]

Asuka Nakata (Cancer Research Institute, Kanazawa University)

Y-7. The role of Vasohibin-2 in tumor growth and angiogenesis

[15 min]

Yasuhiro Suzuki (Institute of Development, Aging and Cancer, Tohoku University)

Y-8. Recent progress in the research of senescence- and cancer-resistant rodent, Naked mole-rat (*Heterocephalus glaber*)
[15 min]
Kyoko Miura (Institute for Genetic Medicine, Hokkaido University)

14:25 – 15:10 Session 5 Cell Signaling in Development & Diseases
Chair: Takahisa Furukawa
(Institute for Protein Research, Osaka University)

Y-9. Dysregulation of MDA5-dependent signaling causes lupus-like nephritis
[15 min]
Hiroki Kato (Institute for Virus Research, Kyoto University)

Y-10. Roles of vascular endothelial stem-like cells in the liver regeneration and maintenance
[15 min]
Taku Wakabayashi (Research Institute for Microbial Diseases, Osaka University)

Y-11. Identification of a new dendritic cell progenitor with prominent plasmacytoid dendritic cell developmental potential
[15 min]
Nobuyuki Onai (Medical Research Institute, Tokyo Medical and Dental University)

15:10 - 15:25 Intermission 4

15:25 – 16:55 Session 5 - continued -

S-13. Heparan sulfate as a regulator of chondrocyte differentiation
[30 min]
Andrea Vortkamp (University Duisburg Essen, Germany)

S-14. Cross-regulation of redox balance and cell proliferation by Keap1-Nrf2 pathway
[30 min]
Hozumi Motohashi (Institute of Development, Aging and Cancer, Tohoku University)

S-15. Molecular dynamics underlying mouse sperm maturation
[30 min]
Gen Kondoh (Institute for Frontier Medical Sciences, Kyoto University)

16:55 - 17:10 Closing

Commendation for Young Investigator Award & Poster Presentation Award

Haruki Nakamura

(Institute for Protein Research, Osaka University)

Closing Remarks

Eisuke Mekada

(Research Institute for Microbial Diseases, Osaka University)