

Molecular Evolution and Bioinformatics

Symposium Program

Venue: *Kyushu University Station-1 for Collaborative Research*
November 1, 2009

12:50

Opening Remarks

Yukio Fujiki

(Leader of Global COE Program, Kyushu University)

13:00-14:00

Keynote Lecture

Chair: Yukio Fujiki

Events during information flow from genomic sequence to protein structure/function in biological system

Mitiko Go (Research Organization of Information and Systems)

14:00-14:15 Break

14:15-15:05

Special Lecture I

Chair: Chikara Meno

The evolution of brains and eyes in Bilateria: a cell type perspective

Detlev Arendt (European Molecular Biology Laboratory, Germany)

15:05-15:20 Break

15:20-16:30

Session 1: Genome Informatics I

Chair: Hiroyuki Toh

S1-1 (15:20-15:55)

Towards elucidation of the grammar governing the architecture of transcriptional regulatory regions

Kenta Nakai (Institute of Medical Science, University of Tokyo)

S1-2 (15:55-16:30)

Systematic approach for large-scale microbial comparative genomics

Ikuo Uchiyama (National Institute for Basic Biology)

16:30– 16:45 Break

16:45-18:00

Young Investigators Forum (Poster Preview)

Chair: Daisuke Kohda

P-1: Functions of PTEN binding protein PICT1

Kohichi Kawahara (Medical Institute of Bioregulation, Kyushu University)

P-2: Re-definition of p57 as a bona fide CDK inhibitor uncovered by novel mouse genetics models

Etsuo Susaki (Medical Institute of Bioregulation, Kyushu University)

P-3: Protrudin interacts with KIF5 and regulates neural function

Fumiko Matsuzaki (Medical Institute of Bioregulation, Kyushu University)

P-4: Clinical magnitude of the repression of *FBXW7* in primary cancer and peripheral blood in breast cancer cases.

Sayuri Akiyoshi (Medical Institute of Bioregulation, Kyushu University)

P-5: Clinicopathological significance of genomic aberrations on microRNA locus in colorectal cancer.

Shinya Ishimaru (Medical Institute of Bioregulation, Kyushu University)

P-6: Molecular mechanism controlling intracellular DOCK2 dynamics during neutrophil chemotaxis

Akihiko Nishikimi (Medical Institute of Bioregulation, Kyushu University)

P-7: Oleic acid-induced ADRP expression requires both AP-1 and PPAR-response elements, and is reduced by Pycnogenol through mRNA degradation in NMuLi liver cells

Bin Fan (Medical Institute of Bioregulation, Kyushu University)

P-8: Human NUDT16 is a novel nucleotide pool sanitizing enzyme protecting cells from deleterious effects of (deoxy)inosine nucleotides

Teruaki Iyama (Medical Institute of Bioregulation, Kyushu University)

P-9: An increased expression of NUDT16 with IDP/dIDP hydrolyzing activity in immortalized ITPA-null mouse embryonic fibroblasts suppresses ITPA-deficient phenotypes

Nona Abolhassani (Medical Institute of Bioregulation, Kyushu University)

P-10: Definitive SNP/CNV haplotype map of Asians determined using a collection of complete hydatidiform moles

Tomoko Tahira (Medical Institute of Bioregulation, Kyushu University)

P-11: Molecular evolutionary study of the *COMT* gene as a schizophrenia susceptibility gene.

Maiko Uchida (Medical Institute of Bioregulation, Kyushu University)

P-12: The basic helix-loop-helix protein, HES1 controls the differentiation of IL-17-producing $\gamma\delta$ T cells in the thymus.

Kensuke Shibata (Medical Institute of Bioregulation, Kyushu University)

P-13: Molecular structures and motions of mitochondrial Tom20-presequence complexes

Takashi Saitoh (Medical Institute of Bioregulation, Kyushu University)

P-14: Distinguishing structural and functional constraints by comparing two different types of profiles.

Hiroyuki Oda (Medical Institute of Bioregulation, Kyushu University)

P-15: *In vivo* analysis of molecular mechanism for pre-TCR-mediated β -selection

Eri Ishikawa (Medical Institute of Bioregulation, Kyushu University)

P-16: Homeodomain interacting protein kinase 2 promotes Wnt signaling via Lef1 transcription factor.

Nobuyuki Shimizu (Medical Institute of Bioregulation, Kyushu University)

P-17: Structural basis of an erad pathway mediated by an ER-resident protein disulfide reductase, ERdj5

Kenichi Maegawa (Medical Institute of Bioregulation, Kyushu University)

P-18: Crystal structure of bacterial nitric-oxide reductase, a key enzyme in the respiratory evolution

Yushi Matsumoto (Medical Institute of Bioregulation, Kyushu University)

P-19: Analysis of molecular mechanisms for Tbx3 expression in hepatic stem cells.

Emi Himeno (Medical Institute of Bioregulation, Kyushu University)

P-20: Proliferation of peroxisomes by treatment with an HDAC inhibitor, 4-phenylbutyrate

Tomonori Nishino (Graduate School of Sciences, Kyushu University)

P-21: Identification of a novel cytosolic factor that regulates Pex5p export from peroxisomes

Non Miyata (Graduate School of Sciences, Kyushu University)

P-22: Generation of high-affinity monoclonal antibodies useful for G-protein coupled receptors study

Fumiyuki Sasaki (Graduate School of Medical Sciences, Kyushu University)

P-23: Lysophosphatidic acid signaling through LPA₁ receptor in fetal hydrocephalus

Yun C. Yung (The Scripps Research Institute, USA)

P-24: Functional analysis of the recombinant AAA-ATPases Pex1p and Pex6p

Delia Saffian (Ruhr-Universität Bochum, Germany)

P-25: Glycosomal peroxins as drug targets against African sleeping sickness

Janina Wolf (Ruhr-Universität Bochum, Germany)

P-26: Cell type evolution in Platynereis.

Daria Gavriouchkina (European Molecular Biology Laboratory, Germany)

P-27: The evolution of *Hox* gene function, hints from the annelid *Platynereis dumerilii*

Mette Handberg-Thorsager (European Molecular Biology Laboratory, Germany)

P-28: G-protein signaling in nervous system evolution

Tomas Larsson (European Molecular Biology Laboratory, Germany)

P-29: Origin and functions of non visual photoreceptors: a view from the annelid *Platynereis dumerilii*

Maria Antonietta Tosches (European Molecular Biology Laboratory, Germany)

18:00-19:20

Young Investigators Forum (Poster Presentation) with Buffet

Venue: Kyushu University Station-2 for Collaborative Research

November 2, 2009

9:00-9:50

Special Lecture II

Chair: Hideki Sumimoto

Vertebrate phylome: bioinformatics or informatic biology?

Shigehiro Kuraku (Department of Biology, University of Konstanz, Germany)

9:50-10:05 Break

10:05-11:40

Session 2: Evolutionary Developmental Biology I

Chair: Hideki Sumimoto

S2-1 (10:05-10:35)

Reversal of left-right asymmetry induced by aberrant nodal signaling in the node of mouse embryos

Chikara Meno (Graduate School of Medical Sciences, Kyushu University)

S2-2 (10:35-11:10)

Limb blastema stem cell & positional memory; genetic and epigenetic controls of gene expression during organ regeneration.

Koji Tamura (Graduate School of Life Sciences, Tohoku University)

S2-3 (11:10-11:40)

FoxM1-driven cell division is required for neuronal differentiation in early *Xenopus* embryos

Nobushige Nakajo (Graduate School of Sciences, Kyushu University)

11:40-13:40 Lunch

(**Global COE Conference:** Global COE and committee members)

13:40-14:50

Session 3: Genome Informatics II

Chair: Hiroyuki Toh

S3-1(13:40-14:15)

Identification of *cis*-regulatory elements by using genome alignment and high-throughput data

Mikita Suyama (Graduate School of Medicine, Kyoto University)

S3-2(14:15-14:50)

A novel method for miRNA target prediction

miRNAs and their targets are frequently coregulated by common transcription factors

Tetsushi Yada (Graduate School of Informatics, Kyoto University)

14:50-16:00

Session 4: Evolutionary Developmental Biology II

Chair: Chikara Meno

S4-1 (14:50-15:25)

Domain shuffling and the evolution of vertebrates

Hiroshi Wada (Graduate School of Life and Environmental Sciences, University of Tsukuba)

S4-2 (15:25-16:00)

The origin and evolution of the cranial sensory organs and pituitary: evidence from molecular phylogeny and tunicate development

Takehiro G. Kusakabe (Faculty of Science and Engineering, Konan University)

16:00-16:10

Closing Remarks

Yasunobu Yoshikai

(Director of Medical Institute of Bioregulation, Kyushu University)
