

The 4th Global COE
International Symposium 2009 joint
with the 19th Hot Spring Harbor Symposium



Molecular Evolution and Bioinformatics

November 1 12:50~19:20
(Sun)

November 2 9:00~16:05
(Mon)

Venue:

Kyushu University Station-1 and Station-2 for Collaborative Research
(3-1-1 Maidashi, Higashi-ku, Fukuoka 812-8582, Japan)

Speakers:

Detlev Arendt

(European Molecular Biology Laboratory, Germany)

Mitiko Go

(Research Organization of Information and Systems)

Shigehiro Kuraku

(Univ. Konstanz, Germany)

Takehiro Kusakabe

(Konan Univ.)

Chikara Meno

(Kyushu Univ.)

Kenta Nakai

(Univ. Tokyo)

Nobushige Nakajo

(Kyushu Univ.)

Mikita Suyama

(Kyoto Univ.)

Koji Tamura

(Tohoku Univ.)

Ikuo Uchiyama

(National Institute for Basic Biology)

Hiroshi Wada

(Univ. Tsukuba)

Tetsushi Yada

(Kyoto Univ.)

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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)
