

## シンポジウム

## 【第1日目12月1日(火)】

IS2 第2会場(神戸ポートピアホテル 本館 地下1階 倍楽1)

9:00-11:30 [E]

**Molecular system for creating, decoding, and destroying glycans**

Organizers : Koichi Kato (National Institutes of Natural Sciences)  
 Shinji Miyata (Nagoya University)

**Introduction**

[9:00]

Shinji Miyata (Nagoya University)

IS2-1

[9:05]

**Neurocan, a brain chondroitin sulfate proteoglycan, regulates neuronal migration and morphogenesis during corticogenesis**

Shinji Miyata<sup>1,2</sup>, Chihiro Sato<sup>1,3</sup>, Ken Kitajima<sup>1,3</sup>, Hiroshi Kitagawa<sup>4</sup> (<sup>1</sup>Biosci. Biotech. Center, Nagoya Univ., <sup>2</sup>Inst. Adv. Res., Nagoya Univ., <sup>3</sup>Grad. Sch. Bioagr. Sci., Nagoya Univ., <sup>4</sup>Dept. Biochem., Kobe Pharma. Univ.)

IS2-2

[9:25]

**Functional analysis of enzymes involved in the formation of laminin-binding glycans displayed on  $\alpha$ -dystroglycan**

Hirokazu Yagi<sup>1</sup>, Koichi Kato<sup>1,2</sup> (<sup>1</sup> Grad. Sch. of Pharm. Sci., Nagoya City Univ., <sup>2</sup>Okazaki Inst. for Integr. Biosci., Nat. Inst. of Nat. Sci.)

IS2-3

[9:45]

**Impact of tissue/animal-specific expression pattern of N-glycolylneuraminic acid**

Yuko Naito-Matsui (Kobe Pharm. Univ.)

IS2-4

[10:05]

**Chemical synthesis of correctly folded and misfolded glycoproteins for understanding of glycoprotein quality control system**

Yasuhiro Kajihara (Dept. of Chem., Grad.Sch.of Sci., Osaka univ.)

IS2-5

[10:25]

**Molecular recognition of glycopeptides by human immune receptor, PILR.**

Katsumi Maenaka (Fac. Pharm. Sci., Hokkaido Univ.)

IS2-6

[10:45]

**Glycan conformation, dynamics and interaction with lectin receptors: a structural glycobiology approach**

Yoshiki Yamaguchi (Struct. Glycobiol. Team, RIKEN)

IS2-7

[11:05]

**Towards Understanding the physiological role of non-lysosomal glycan catabolism**

Tadashi Suzuki (RIKEN, Glycometabolome T.)

**Conclusion**

[11:25]

Koichi Kato (National Institutes of Natural Sciences)

IS3 第3会場(神戸ポートピアホテル 本館 地下1階 倍楽2)

9:00-11:30 [E]

**Spontaneous pattern formation driven by cell-cell communication**

Organizers : Eisuke Nishida (Kyoto University)  
 Miki Ebisuya (RIKEN)

**Introduction**

[9:00]

Eisuke Nishida (Kyoto University)

IS3-1

[9:03]

**Reconstitution of cell-cell communication mechanisms**

Miki Ebisuya (RIKEN QBiC)

IS3-2

[9:32]

**Regulatory circuitry initiating two-dimensional stomatal patterning in the plant epidermis**Keiko Torii<sup>1,2</sup> (<sup>1</sup>Howard Hughes Medical Institute, <sup>2</sup>University of Washington)

IS3-3

[10:01]

**Intercellular propagation of ERK activity and its role in collective cell migration.**

Kazuhiro Aoki (Grad. Sch. of Med., Kyoto University)

IS3-4

[10:30]

**Competitive interactions between normal and transformed epithelial cells**

Yasuyuki Fujita (Dev. Mol. Onco., Inst. for Gen. Med., Hokkaido Univ.)

IS3-5

[10:59]

**What we can learn from a novel mechanism of constructing the architectural skeleton of sponges: how the pattern of spicule-holding-up (SHU) points is determined**

Noriko Funayama (京大・院理・生物科学専攻・生物物理)

**Conclusion**

[11:28]

Miki Ebisuya (RIKEN)

IS4

第4会場(神戸ポートピアホテル 本館 地下1階 偕楽3)

9:00-11:30 [E]

**Molecular Mechanisms of Brain and Mind development**

Organizers : Fumio Matsuzaki (RIKEN)

Tomomi Shimogori (RIKEN)

**Introduction**

[9:00]

Fumio Matsuzaki (RIKEN )

IS4-1

[9:02]

**Cortical expansion during the development of mammalian complex brains**

Fumio Matsuzaki (Cell Asymmetry, RIKEN, CDB)

IS4-2

[9:29]

**The mechanisms of neuronal circuit formation and maturation in the postnatal brain**

Tomomi Shimogori (RIKEN BSI)

IS4-3

[9:59]

**Comprehensive 3D imaging of synaptic activity reveals rules directing experience-driven growth in awake brain**

Kurt Haas, Kaspar Podgorski, Serhiy Opushnyev (Centre for Brain Health, University of British Columbia)

IS4-4

[10:29]

**Stress-induced neuronal remodeling in the medial prefrontal cortex: Neuronal and microglial mechanisms**

Tomoyuki Furuyashiki (Div. of Pharmacol., Grad. Sch. of Med., Kobe University)

IS4-5

[10:59]

**Involvement of posttranslational and epigenetic modifications in developmental brain disorders: Bedside to bench, and back to bedside**

Koko Ishizuka (Johns Hopkins University)

**Conclusion**

[11:29]

Tomomi Shimogori (RIKEN)

## IS14 第14会場(神戸国際会議場1階 メインホール)

9:00-11:30 [E]

科学研究費補助金 新学術領域研究「オートファジーの集学的研究：分子基盤から疾患まで」共催シンポジウム  
**Autophagy**

Organizers : Noboru Mizushima (The University of Tokyo)  
Maho Hamasaki (Osaka University)

## Introduction

[9:00]

Noboru Mizushima (The University of Tokyo)

## IS14-1

[9:05]

**Formation and maturation of the autophagosome**

Noboru Mizushima (Dept. of Biochem. & Mol. Biol., Grad. Sch. of Med., Univ. of Tokyo)

## IS14-2

[9:30]

**New Insights into Autophagy in Diseases**

Tamotsu Yoshimori (Grad. Sch. of FBS/Med, Osaka Univ.)

## IS14-3

[9:55]

**Visualization of the autophagic process using beads incorporated into living cells**

Tokuko Haraguchi<sup>1,2,3</sup>, Shouhei Kobayashi<sup>1</sup>, Takako Koujin<sup>1</sup>, Hiroko Osakada<sup>1</sup>, Tomoko Kojidani<sup>1,4</sup>, Chie Mori<sup>1</sup>, Yasushi Hiraoka<sup>1,2,3</sup> (<sup>1</sup>Advanced ICT Res. Inst., NICT, <sup>2</sup>Grad. Sch. of Front. BioSci., Osaka Univ., <sup>3</sup>Grad. Sch. of Sci., Osaka Univ., <sup>4</sup>JWU)

## IS14-4

[10:20]

**The lysosome as a signaling hub.**

Andrea Ballabio<sup>1,2,3</sup> (<sup>1</sup>Director Tigem (Telethon Institute of Genetics and Medicine), <sup>2</sup>Professor of Medical Genetics, Department of Translational Medical Sciences, University of Naples "Federico II", Italy, <sup>3</sup>Professor, Department of Molecular and Human Genetics, Baylor College of Medicine Jan and Dan Duncan Neurological Research Institute, Texas Children Hospital Houston, Texas, USA)

## IS14-5

[11:00]

**Molecular Mechanism of Autophagy Initiation in Yeast**

Hayashi Yamamoto<sup>1</sup>, Sho W. Suzuki<sup>1</sup>, Yuko Fujioka<sup>2</sup>, Nobuo N. Noda<sup>2</sup>, Yoshinori Ohsumi<sup>1</sup> (<sup>1</sup>Frontier Research Center, Tokyo Tech, <sup>2</sup>Institute of Microbial Chemistry)

## IS15 第15会場(神戸国際会議場3階 国際会議室)

9:00-11:30 [E]

**Genomics and Epigenomics in Development and Evolution**

Organizers : Hiroyuki Takeda (The University of Tokyo)  
Koji Tamura (Tohoku University)

## Introduction

[9:00]

Hiroyuki Takeda (The University of Tokyo)

## IS15-1

[9:02]

**Avian phylogenomic analyses revealed the macroevolution patterns of bird genomes**

Guojie Zhang<sup>1,2</sup> (<sup>1</sup>China National Genebank, BGI-Shenzhen, Shenzhen, China, <sup>2</sup>Section of Ecology and Evolution, Department of Biology, University of Copenhagen, Copenhagen, Denmark)

## IS15-2

[9:32]

**Acquisition of novel *cis*-elements behind bird macroevolution**

Ryohei Seki<sup>1</sup>, Cai Li<sup>2</sup>, Mao Kondo<sup>3</sup>, Tomohiko Sato<sup>3</sup>, Haruka Matsubara<sup>3</sup>, Daisuke Saito<sup>3,4</sup>, Shinichi Hayashi<sup>5</sup>, Shiro Egawa<sup>3</sup>, Keiichi Kitajima<sup>3</sup>, Jiang Hu<sup>2</sup>, Luohao Xu<sup>2</sup>, Hailin Pan<sup>2</sup>, Naoki A. Irie<sup>6</sup>, Guojie Zhang<sup>2</sup>, Toshihiko Shiroishi<sup>1</sup>, Koji Tamura<sup>3</sup> (<sup>1</sup>Mamm. Genet. Lab., NIG, <sup>2</sup>China National Genebank, BGI-Shenzhen, <sup>3</sup>Grad. Sch. of Life Sci., Tohoku Univ., <sup>4</sup>FRIS, Tohoku Univ., <sup>5</sup>Dept. of Genet., Cell Biol., and Dev., Univ. of Minnesota, <sup>6</sup>Grad. Sch. of Sci., Univ. of Tokyo)

## IS15-3

[9:53]

**High dosage sensitivity of genes maintained after whole genome duplication**

Takashi Makino (Grad. Sch. of Life Sci., Tohoku Univ.)

## IS15-4

[10:14]

**The biological function of invertebrate DNA methylation in pre-mRNA processing**

Miho M. Suzuki (National Institute for Basic Biology)

## IS15-5

[10:35]

**Deciphering the genetic code for the vertebrate pluripotent epigenome**Ryohei Nakamura<sup>1</sup>, Masahiko Kumagai<sup>1</sup>, Sumio Sugano<sup>2</sup>, Yutaka Suzuki<sup>2</sup>, Shinichi Morishita<sup>2</sup>, Hiroyuki Takeda<sup>1</sup>(<sup>1</sup>Dept. of Biol. Sci., Grad. Sch. of Sci., Univ. of Tokyo, <sup>2</sup>Dept. of Comp. Biol and Med. Sci., Grad. Sch. of Front. Sci., Univ. of Tokyo)

## IS15-6

[10:56]

**A genetic mechanism for Batesian mimicry in swallowtail butterfly**

Haruhiko Fujiwara, Hideki Nishikawa, Takuro Iijima (Grad. Sch. of Front. Sci., Univ. of Tokyo )

## Discussion

[11:26]

## Conclusion

[11:28]

Koji Tamura (Tohoku University)