

International Symposium “Neocortical Organization”

March 10, 2012 (Sat)

10:00-10:20 Tetsuo Yamamori: Introduction of the Scientific Research on Innovative Areas
"Neural Diversity and Neocortical Organization"

1. Neural Precursors and their Early Fate Determination

Chair : Noriko Osumi and Yukiko Gotoh

10:20-11:00 Ryoichiro Kageyama (Kyoto University)

Regulatory Mechanism of Embryonic and Adult Neural Stem Cells

11:00-11:40 Makoto Noda (Kyoto University)

Involvement of the Extracellular Matrix Regulator Reck in Cerebral Cortex
Formation and Adult Neurogenesis

11:40-12:20 Fumio Matsuzaki (RIKEN CDB)

Transitions in Division Mode of Neural Progenitors during Cortical Development

12:20-13:30 Lunch

Chair : Marta Nieto and Takuya Shimazaki

13:30-14:10 Noriko Osumi (Tohoku University)

Molecular and Cellular Mechanisms of Mammalian Cortical Neurogenesis Based on
the Morphology of Radial Progenitor Cells

14:10-14:50 Yukiko Gotoh (University of Tokyo)

Faithful Coupling of Neuronal Fate Commitment and the Onset of Neuronal
Migration during Neocortical Development

14:50-15:35 François Guillemot (MRC National Institute for Medical Research)

Transcriptional Regulation of Stem Cell Divisions in the Embryonic and Adult
Brain

15:35-15:55 Coffee Break

Chair : Ryoichiro Kageyama and François Guillemot

15:55-16:30 Carina Hanashima (RIKEN CDB)

Regulation of Early Identity Transition in the Cerebral Cortex

- 16:30-17:10 Takuya Shimazaki (Keio University)
Temporal Specification of CNS Stem Cells
- 17:10-17:55 Marta Nieto (Centro Nacional de Biotecnología)
How *Cux* TFs can Determine Cortical Circuits

March 11, 2012 (Sun)

2. Neural Precursors and their Late Fate Determination

Chair : Franck Polleux and Fujio Murakami

- 9:30-10:10 Hideyuki Okano (Keio University)
Corticogenesis of Common Marmoset
- 10:10-10:55 Arnold R. Kriegstein (University of California, San Francisco)
Neural Stem and Progenitor Cells in Human Cortical Development and Evolution
- 10:55-11:40 Song-Hai Shi (Memorial Sloan-Kettering Cancer Center)
Neocortex Development: from Neurogenesis to Microcircuit Assembly
- 11:40-13:10 Lunch

3. Neural Precursors and Determination of the Specificity of Neural Projections

Chair : Song-Hai Shi and Masayuki Masu

- 13:10-13:55 Franck Polleux (The Scripps Research Institute)
Inhibition of *SRGAP2* Function by its Human-specific Paralogs Induces Neoteny of Spine Maturation
- 13:55-14:35 Kozo Kaibuchi (Nagoya University)
Neuronal Polarity: from Extracellular Signals to Intracellular Mechanisms
- 14:35-15:10 Fujio Murakami (Osaka University)
Migration, its Termination, Axon Initiation and Maturation of Cortical Interneurons
- 15:10-15:30 Coffee Break

Chair : Makoto Noda and Kozo Kaibuchi

- 15:30-16:10 Masayuki Masu (University of Tsukuba)
Heparan Sulfate Modification by Endosulfatases are Required for Cortical Axon Guidance

16:10-16:50 Hitoshi Sakano (University of Tokyo)
Developmental Regulation of Axon Wiring in the Mouse Olfactory System

4. Neural Connections

Chair : Makoto Noda and Kozo Kaibuchi

16:50-17:30 Ikue Mori (Nagoya University)
Molecular Dissection of Neural Coding Underlying Behavior

17:30-18:10 Masanobu Kano (University of Tokyo)
Refinement of Climbing Fiber to Purkinje Cell Synapses during Postnatal Cerebellar Development

19:00-21:00 Mixing and Discussion (invited speakers) at New Grand Hotel

March 12, 2012 (Mon)

Chair : Yuji Ikegaya and Yasuo Kawaguchi

9:30-10:10 Junichi Nabekura (National Institute for Physiological Sciences)
Dynamics of Synapse Remodeling and Glia Motility in vivo

10:10-10:50 Masanori Matsuzaki (National Institute for Basic Biology)
Spatial and Temporal Structure of Cortical Microcircuit Activity for Generating Voluntary Movement

10:50-11:30 Yuji Ikegaya (University of Tokyo)
Microscopic Architecture of Cortical Microcircuitry

11:30-12:15 Rafael Yuste (Columbia University)
Dense, Unspecific Inhibitory Connectivity in Neocortex

12:15-13:30 Lunch

Chair : Junichi Nabekura and Masanori Matsuzaki

13:30-14:05 Yoshiaki Tagawa (Kyoto University)
Activity-dependent Circuit Construction in Neonatal Mouse Cerebral Cortex

14:05-14:45 Yasuo Kawaguchi (National Institute for Physiological Sciences)
Thalamocortical Subnetwork Activities in Slow Waves and Desynchronization

15:00-18:00 Poster Session

18:30-20:30 Banquet

March 13, 2012 (Tue)

5. Brain Formation

Chair : Christopher Gregg and Ikue Mori

9:30-10:10 Shinichi Aizawa (RIKEN CDB)
Initial Brain Regionalization

10:10-10:55 Alex P. Gould (MRC National Institute for Medical Research)
Food for Thought: Nutrients and Neural Stem Cells in *Drosophila*

10:55-11:35 Masayoshi Mishina (University of Tokyo)
Synapse Organizers of the Brain

11:35-13:00 Lunch

Chair : Alex P. Gould and Masayoshi Mishina

13:00-13:45 Christopher Gregg (University of Utah)
Maternal and Paternal Gene Networks in the Brain

13:45-14:30 Takao Hensch (Harvard University)
Shaping Neural Circuits by Early Experience

14:30-15:10 Tetsuo Yamamori (National Institute for Basic Biology)
Genes Selectively Expressed in Regions of Primate Neocortex: the Functions and
Implication for Cortical Specialization

15:10-15:30 Concluding Remarks