

# Circuit construction in the mammalian brain

Date: Dec. 4 (Mon) – 5 (Tue), 2017

Place: Lecture Hall (2F), National Institute of Genetics, Mishima, Japan

Sponsors: National Institute of Genetics

Grant-in-Aid for Scientific Research on Innovative Areas

“Dynamic regulation of Brain Function by Scrap & Build System”

Language: English

## December 4<sup>th</sup>

- 12:20-13:25 Registration
- 13:25-13:30 Opening remarks (Tagawa)
- Session I Chair: Takuji Iwasato
- 13:30-14:00 Takeshi Imai  
Dynamic regulation of spine density in cortical pyramidal neurons
- 14:00-14:30 Fumitaka Osakada  
Viral and imaging approaches for linking neuronal connectivity to circuit function.
- 14:30-14:55 Nao Nakagawa  
Lattice system of functionally distinct cell types in the neocortex
- 14:55-15:10 Coffee break
- Session II Chair: Hiroshi Kawasaki
- 15:10-15:40 Tatsumi Hirata  
Development and application of neuronal birthdate tagging
- 15:40-16:10 Hiroyuki Okuno  
A novel IEG-based neuronal mapping revealed remote memory traces in the dentate gyrus in mice
- 16:10-16:20 Group Photo
- 16:20-18:00 Poster session
- 19:00- Dinner, Discussion (@Kinshokan)

## December 5<sup>th</sup>

- ~9:00 Poster
- Session III Chair: Yoshiaki Tagawa

- 9:00-9:30 Goichi Miyoshi  
ASD-linked gene FoxG1 controls inhibitory circuit development in a dose-dependent manner
- 9:30-10:00 Yohei Shinmyo  
Folding of the cerebral cortex requires Cdk5 in upper-layer neurons in gyrencephalic mammals
- 10:00-10:30 Satoru Kondo  
Laminar differences in the orientation-selectivity of LGN inputs to mouse V1.
- 10:30-10:45 Coffee Break
- Session IV Chair: Yohei Shinmyo
- 10:45-11:05 Shingo Nakazawa  
Long-term in vivo imaging of neonates reveals a dynamic mechanism of dendritic refinement of cortical neurons
- 11:05-11:25 Naoyuki Matsumoto  
Gyrification of the cerebral cortex requires FGF signaling in the mammalian brain
- 11:25-11:45 Richi Sakaguchi  
Tetbow: bright multi-color labeling of neuronal circuits with fluorescent proteins and chemical tags
- 11:45-13:00 Lunch (& Poster)
- Session V Chair: Nobuhiko Yamamoto
- 13:00-13:30 Naofumi Uesaka  
Neurotransmission regulates the elimination of loser synapses, the full expansion of territory, but not winner-loser selection in the cerebellum
- 13:30-14:00 Hidenobu Mizuno  
In vivo imaging of the developing mouse somatosensory cortex for elucidating the mechanism of neuronal circuit refinement
- 14:00-14:30 Takuma Kitanishi  
Organization of the claustrum-to-entorhinal cortical connection in mice
- 14:30-14:35 Concluding remarks (Iwasato)