

Memo

主催／熊本大学大学院医学教育部
共催／学術変革領域研究(B)
「脳多元自発活動の創発と遷移による
脳のデザインビルド」
(代表:上阪直史 東京医科歯科大学)
<https://designbuild.kuma-u.jp/>
後援／肥後医育振興会
熊本大学国際研究集会推進事業

Venue

Campus Maps



Okukubo Memorial Hall (Honjo North Campus)
熊本大学臨床医学教育研究センター
1階奥窪記念ホール
〒860-0856
熊本市中央区本荘1丁目1番1号

IMEG Conference Hall (Honjo Central Campus)
熊本大学発生医学研究所
1階カンファレンスルーム
〒860-0811
熊本県熊本市中央区本荘2丁目2-1

Contact

Hidenobu Mizuno 水野 秀信
International Research Center for Medical Sciences
hmizuno@kumamoto-u.ac.jp
熊本大学国際先端医学研究機構 (IRCMS)

IRCMS



第38回 熊本医学・生物科学国際シンポジウム



The 38th International Kumamoto Medical Bioscience Symposium

機能的 脳神経回路システムの 構築メカニズム

Construction of Functional Nervous System

Date and Time

2023.12.14 Tue ▶ 15 Fri.
13:00~ ~12:00

参加費
無料

Venue

Dec 14 Okukubo Memorial Hall (Honjo North Campus)
熊本大学臨床医学教育研究センター 1階奥窪記念ホール
Dec 15 IMEG Conference Hall (Honjo Central Campus)
熊本大学発生医学研究所 1階カンファレンスルーム

The 38th International Kumamoto Medical Bioscience Symposium

機能的脳神経回路システムの構築メカニズム Construction of Functional Nervous System

Program

第38回 熊本医学・生物科学国際シンポジウム
2023.12.14^{Thu} ▶ 15^{Fri}

December 14 | Thu | Okukubo Memorial Hall,
Kumamoto University Honjo North Campus

President Greeting **13:00–13:10**

Hisao Ogawa (Kumamoto University)

Group Photo **13:10–13:20**

Session 1 **13:20–14:25**

Chair : Hidenobu Mizuno (Kumamoto University)

Natalia De Marco García (Weill Cornell Medicine)

Activity-dependent mechanisms of GABAergic circuit assembly

Chiaki Ohtaka-Maruyama (Tokyo Metropolitan Institute of Medical Science)

Function and evolution of subplate neurons (SpNs) in the formation of cortical neural circuits

Goichi Miyoshi (Gunma University)

Early postnatal developmental period for ASD-related social behavioral circuit formation

Session 2 **14:35–15:40**

Chair : Takuji Iwasato (National Institute of Genetics)

Hirofumi Morishita (Mount Sinai Medicine)

Maturation of frontal cortico-thalamic circuitry in control of social behavior

Naoki Nakagawa (National Institute of Genetics)

Golgi polarity shift instructs thalamocortical module formation in the neonatal barrel cortex

Takeshi Imai (Kyushu University)

Mechanisms of synaptic competition in the developing brain

Poster Session **15:40–16:10**

Session 3 **16:10–17:15**

Chair : Yoshiaki Tagawa (Kagoshima University)

Tomohisa Toda (Friedrich-Alexander-Universität)

Long-term maintenance of nuclear architectural RNAs in the mammalian brain

Yusuke Hirabayashi (University of Tokyo)

Axonal mitochondria of cortical pyramidal neurons lack mitochondrial DNA and consume ATP

Kazuya Iwamoto (Kumamoto University)

Elevated LINE-1 retrotransposition in the brain and its potential implications for schizophrenia

Session 4 **17:25–18:45**

Chair : Nobuhiko Yamamoto (Shenzhen Bay Laboratory)

Naofumi Uesaka (Tokyo Medical and Dental University)

Developmental oligodendrocytes as a key player in developmental synchrony and the modulation of brain functionality

Hidenobu Mizuno (Kumamoto University)

Spontaneous neuronal activity and the formation of cortical microcircuits

Takashi Hayakawa (Nihon University)

A theory for correlated neuronal dynamics and plasticity of functional cortical microcircuits

Hayato Chiba (Tohoku University)

Dynamics of neuronal gamma oscillations on a random graph

Discussion and Social Dinner **19:15–21:00**

Shiromi-Yagura : <https://www.shiromiyagura.com/>

December 15 | Fri | IMEG Conference Room,
Kumamoto University Honjo Central Campus

Session 5 **9:30–10:35**

Chair : Wen-Jie Song (Kumamoto University)

Patrick Kanold (Johns Hopkins University)

TBA

Chitoku Toda (Kumamoto University)

A mechanism of hypothalamic glucose sensing to regulate blood glucose levels

Tatsuo Sato (Kagoshima University)

Enhanced aversive signals during classical conditioning in dopamine axons in medial prefrontal cortex

Session 6 **10:50–11:55**

Chair : Kenji Shimamura (Kumamoto University)

Shigeyuki Esumi (Kumamoto University)

GABAergic neuron intermediate progenitors produce glial cells in neonatal mouse cortex after cryogenic injury.

Navojit Dhali Pallab (Tohoku University)

Bifurcation and synchronization of Hodgkin-Huxley-type neurons in a small-world network

Haruka Sato (Kumamoto University)

Thalamic axon-derived VGF controls the formation of sensory area-specific cytoarchitecture

Jun Hatakeyama (Kumamoto University)

Importance of extrinsic factors surrounding developing brain in primates

Ceremony for award winners

Closing **11:55–**

Takaichi Fukuda (Kumamoto University)