

## Oral Session

Day 1 - Wednesday, July 20

## Oral O1-G-1

9:00 ~ 10:00 Room G (303)

## Executive and Other Cortical Functions

Chairpersons : Eiji Hoshi *Tokyo Metropolitan Institute of Medical Science*  
Ken-Ichiro Tsutsui *Tohoku University Graduate School of Life Sciences*

- O1-G-1-1 Selective attention: Model-based approaches for identifying network mechanisms**  
Sridharan Devarajan, Sanjna Banerjee, Shrey Grover, Arshed Nabeel, Abhimanyu Pavuluri, Simran Purokayastha, Sriram R, Bikash Sahoo, Varsha Sreenivasan  
*Indian Institute of Science (IISc), Bangalore, India*
- O1-G-1-2 Sub-second activation dynamics of the oddball task: A simultaneous EEG-fMRI study**  
Epifanio Jr. T Bagarinao<sup>1</sup>, Kengo Mizuno<sup>2</sup>, Satoshi Maesawa<sup>1</sup>, Hirohisa Watanabe<sup>1</sup>, Saea Tohira<sup>3</sup>, Toshiharu Nakai<sup>4</sup>, Haruo Isoda<sup>1,2</sup>  
<sup>1</sup>*Brain and Mind Research Center, Nagoya University, Nagoya, Japan*  
<sup>2</sup>*Department of Radiological Sciences, Nagoya University Graduate School of Medicine, Nagoya, Japan*  
<sup>3</sup>*Center for General Education, Aichi Institute of Technology, Toyota, Japan*  
<sup>4</sup>*National Center for Geriatrics and Gerontology, Ohbu, Japan*
- O1-G-1-3 Hierarchical prefrontal network arising from frontal pole area 10 during contextual memory retrieval in macaques**  
Takahiro Osada<sup>1,2</sup>, Yusuke Adachi<sup>1</sup>, Kentaro Miyamoto<sup>1</sup>, Koji Jimura<sup>3</sup>, Rieko Setsuie<sup>1</sup>, Tomomi Watanabe<sup>1</sup>, Yasushi Miyashita<sup>1</sup>  
<sup>1</sup>*Dept Physiol, Univ of Tokyo Sch Med, Tokyo, Japan* <sup>2</sup>*Dept Neurophysiol, Juntendo Univ Sch Med, Tokyo, Japan*  
<sup>3</sup>*Prec Intel Lab, Tokyo Inst of Tech, Yokohama, Japan*
- O1-G-1-4 Individual difference of creative insight in broad-age ranged adults: combined Voxel-Based Morphometry and resting-state functional connectivity analyses**  
Takeshi Ogawa<sup>1</sup>, Takatsugu Aihara<sup>2</sup>, Takeaki Shimokawa<sup>2</sup>, Okito Yamashita<sup>2</sup>  
<sup>1</sup>*ATR Cognitive Mechanisms Labs., Kyoto, Japan* <sup>2</sup>*ATR Neural Information Analysis Lab, Kyoto, Japan*

## Oral O1-G-2

10:00 ~ 11:00 Room G (303)

## Decision Making

Chairpersons : Junya Hirokawa *Dept. of Systems Neurosci, Grad Sch Brain Science, Doshisha Univ, Japan*  
Kenji Kobayashi *Helen Wills Neuroscience Institute, University of California, Berkeley*

- O1-G-2-1 Categorical representations of decision-variables in orbitofrontal cortex**  
Junya Hirokawa<sup>1,2</sup>, Alex Vaughan<sup>2</sup>, Adam Kepecs<sup>2</sup>  
<sup>1</sup>*Dept. of Systems Neurosci, Grad Sch Brain Science, Doshisha Univ, Japan* <sup>2</sup>*Cold Spring Harbor Laboratory, New York, USA*
- O1-G-2-2 Common and Dissociable Neural Processing of Valuable and Novel Objects**  
Ali Ghazizadeh, Whitney Griggs, David A Leopold, Okihide Hikosaka  
*Laboratory of Sensorimotor Research, National Eye Institute, National Institutes of Health, Bethesda, Maryland, USA*
- O1-G-2-3 Neural basis of valuation of information**  
Kenji Kobayashi<sup>1</sup>, Ming Hsu<sup>1,2</sup>  
<sup>1</sup>*Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, USA* <sup>2</sup>*Haas School of Business, UC Berkeley, Berkeley, USA*
- O1-G-2-4 Rapid Intermittent Subthalamic Deep Brain Stimulation Biases Decisions Under Uncertainty**  
Shaun Patel, Todd Herrington, Sameer Sheth, Matthew Mian, Sarah Bourne, Thilo Deckersbach, Darin Dougherty, Emad Eskandar  
*Harvard Medical School*

**Oral O1-G-3**
**14:00 ~ 15:00 Room G (303)**
**Alzheimer's Disease and Dementia**

Chairpersons : Ikuo Tooyama *Molecular Neuroscience Research Center, Shiga University of Medical Science*  
 Nobutaka Hattori *Department of Neurology, Juntendo University School of Medicine*

- O1-G-3-1 Simultaneous imaging of Fluorine-19 MR images for detecting A $\beta$  oligomers in a mouse model of Alzheimer's disease**  
 Daijiro Yanagisawa, Nor Faeizah Ibrahim, Hiroyasu Taguchi, Shigehiro Morikawa, Ikuo Tooyama  
*Mol Neurosci Res Center, Shiga Univ of Medical Science, Shiga, Japan*
- O1-G-3-2 Possible involvement of adiponectin, the anti-diabetes molecule, the pathogenesis of Alzheimer's disease.**  
 Makoto Hashimoto<sup>1</sup>, Yoshiki Takamatsu<sup>1</sup>, Wakako Koike<sup>1</sup>, Kazunari Sekiyama<sup>1</sup>, Eliezer Masliah<sup>2</sup>, Masaaki Waragai<sup>1,3</sup>  
<sup>1</sup>Tokyo Metropolitan Institute of Medical Sciences, Tokyo, Japan <sup>2</sup>University of California, San Diego  
<sup>3</sup>Higashi Matsudo Municipal Hospital, 123-13 Matsudo
- O1-G-3-3 Short-term treadmill exercise increased tau insolubility and neuroinflammation in tauopathy model mice**  
 Yumiko Motoi<sup>1</sup>, Elahi Montasir<sup>1</sup>, Shin-Ei Matsumoto<sup>1</sup>, Nobutaka Hattori<sup>1,2</sup>  
<sup>1</sup>Dept of Diagnosis, Prevention and Treatment of Dementia, Juntendo Univ Graduate School of Medicine  
<sup>2</sup>Juntendo University School of Medicine Dept of Neurology
- O1-G-3-4 Expression of A152T human tau causes age-dependent neuronal dysfunction and loss in transgenic mice**  
 Sumihiro Maeda<sup>1,2</sup>, Biljana Djukic<sup>1</sup>, Gui-Qiu Yu<sup>1</sup>, Iris Lo<sup>1</sup>, Weikun Guo<sup>1</sup>, Xin Wang<sup>1</sup>, Daniel Kim<sup>1</sup>, Michael Gill<sup>1</sup>, Eliezer Masliah<sup>3,4</sup>, Lennart Mucke<sup>1,2</sup>  
<sup>1</sup>Gladstone Institute of Neurological Disease, San Francisco, USA  
<sup>2</sup>Department of Neurology, University of California, San Francisco, San Francisco, CA, USA  
<sup>3</sup>Department of Neurosciences, University of California, San Diego, La Jolla, CA, USA  
<sup>4</sup>Department of Pathology, University of California, San Diego, La Jolla, CA, USA

**Oral O1-G-4**
**15:00 ~ 16:00 Room G (303)**
**Neurodegenerative Disorders**

Chairpersons : Nobuyuki Nukina *Doshisha University Graduate School of Brain Science*  
 Hitomi Tsuiji *Department of Biomedical Science, Graduate School of Biomedical Sciences, Nagoya City University*

- O1-G-4-1 Molecular determinants of cellular energy homeostasis and DNA damage in Huntington's disease**  
 Tz-Chuen Ju<sup>1</sup>, Chern Yijuang<sup>2</sup>, Dickson Dennis W.<sup>3</sup>  
<sup>1</sup>Catholic St. Mary's Junior College of Medicine, Nursing and Management, Yi-Lan 26644, Taiwan  
<sup>2</sup>Division of Neuroscience, Institute of Biomedical Sciences, Academia Sinica, Taipei 11529, Taiwan  
<sup>3</sup>Department of Neuroscience, Mayo Clinic College of Medicine, Jacksonville, FL 32224, USA
- O1-G-4-2 A novel isogenic Huntington disease (IsoHD) hESC allelic panel to unravel cell type-specific CAG repeat length effects**  
 Mahmoud A Pouladi<sup>1,2</sup>, Xiaohong Xu<sup>2</sup>, Kagistia Hana Utami<sup>2</sup>, Bernice Sim<sup>2</sup>, Yi Lin Tay<sup>2</sup>, Yihui Huang<sup>2</sup>, Lian Yee Yip<sup>3</sup>, Radoslaw M Sabota<sup>4</sup>, Eric Chan<sup>5</sup>, Michael R Hayden<sup>1,2,6</sup>, Jolene Ooi<sup>2</sup>  
<sup>1</sup>Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Singapore  
<sup>2</sup>Translational Laboratory in Genetic Medicine, Agency for Science, Technology and Research (ASTAR), Singapore  
<sup>3</sup>Bioprocessing Technology Institute, Agency for Science, Technology and Research (ASTAR), Singapore  
<sup>4</sup>Institute of Molecular and Cell Biology, Agency for Science, Technology and Research (ASTAR), Singapore  
<sup>5</sup>Department of Pharmacy, National University of Singapore, Singapore  
<sup>6</sup>Centre for Molecular Medicine and Therapeutics, University of British Columbia, Vancouver, Canada
- O1-G-4-3 PI3K activation alleviates TDP-43-induced axonopathy in the spinal motor neuron in zebrafish**  
 Kazuhide Asakawa<sup>1</sup>, Koichi Kawakami<sup>1,2</sup>  
<sup>1</sup>National Institute of Genetics, Mishima, Japan <sup>2</sup>Molecular and Developmental Biology, NIG, Mishima
- O1-G-4-4 Analysis of axonal transport in cultured neurons from ALS model mouse by using the microfluidic cell culture system**  
 Asako Otomo<sup>1,3</sup>, Ryosuke Araki<sup>2</sup>, Syo Yokoyama<sup>3</sup>, Junki Wada<sup>2</sup>, Shinji Hadano<sup>2</sup>, Hiroshi Kimura<sup>2,3</sup>  
<sup>1</sup>Dept of Mol Life Sci, Univ of Tokai, Kanagawa, JAPAN <sup>2</sup>Dept of MechE, Sch of Eng, Univ of Tokai, <sup>3</sup>MNTC, Univ of Tokai

## Oral O1-G-5

17:00 ~ 18:00 Room G (303)

## Motivation

Chairpersons : Koji Jimura *Department of Biosciences and Informatics, Keio University*  
 Sho Yagishita *Laboratory of Structural Physiology, Graduate School of Medicine, The University of Tokyo*

- O1-G-5-1 Circuit-dependent striatal PKA and ERK signaling underlies rapid behavioral shift in mating reaction of male mice**  
 Akihiro Goto<sup>1,2,3</sup>, Ichiro Nakahara<sup>2</sup>, Takashi Yamaguchi<sup>2</sup>, Yuji Kamioka<sup>3</sup>, Kenta Sumiyama<sup>4</sup>,  
 Michiyuki Matsuda<sup>3</sup>, Shigetada Nakanishi<sup>2</sup>, Kazuo Funabiki<sup>2</sup>  
<sup>1</sup>RIKEN, BSI, Lab. for Memory Mechanisms, Saitama, Japan <sup>2</sup>Osaka Bioscience Institute, Osaka, Japan  
<sup>3</sup>Kyoto University Graduate School of Biostudies, Kyoto, Japan <sup>4</sup>RIKEN, QBIC, Laboratory for Mouse Genetic Engineering, Osaka, Japan
- O1-G-5-2 Prefrontal-striatal mechanisms of impulsivity during reward attainment**  
 Koji Jimura<sup>1,2</sup>, Ayaka Misonou<sup>1</sup>  
<sup>1</sup>Dept Biosci Inform Keio Univ <sup>2</sup>Dept Psychol Washington Univ St Louis, USA
- O1-G-5-3 Self-efficacy mediates the control of neural and self-reported craving in smokers: fMRI study**  
 Miki Ono<sup>1</sup>, Takanori Kochiyama<sup>2</sup>, Junya Fujino<sup>1</sup>, Takashi Sozu<sup>3</sup>, Ryouzaku Kawada<sup>1</sup>, Naoto Yokoyama<sup>1</sup>,  
 Genichi Sugihara<sup>1</sup>, Toshiya Murai<sup>1</sup>, Hidehiko Takahashi<sup>1</sup>  
<sup>1</sup>Dept Psychol, Kyoto Univ, Kyoto, Japan  
<sup>2</sup>Advanced Telecommunications Research Institute International, Brain Activity Imaging Center, Kyoto  
<sup>3</sup>Dept management science, Graduate School of Engineering, Tokyo University of Science, Tokyo, Japan
- O1-G-5-4 The brain activities correlated to the perception of cadence**  
 Reiko Shiba<sup>1,2</sup>, Kiyoshi Furukawa<sup>3</sup>, Iku Nemoto<sup>1</sup>  
<sup>1</sup>Sch Info Env, Tokyo Denki Univ, Chiba, Japan <sup>2</sup>BSI, RIKEN, Saitama, Japan <sup>3</sup>Intermedia Art, Tokyo Univ of the Arts, Tokyo, Japan

## Oral O1-G-6

18:00 ~ 19:00 Room G (303)

## Neuroendocrine Processes

Chairpersons : Keiichi Itoi *Graduate School of Information Sciences, Tohoku University*  
 Noriyuki Koibuchi *Department of Integrative Physiology, Gunma University Graduate School of Medicine*

- O1-G-6-1 Association between brain activity in the mPFC during rectal distention and ACTH response in irritable bowel syndrome**  
 Michiko Kano<sup>1,2,3</sup>, Tomohiko Muratsubaki<sup>2</sup>, Joe Morishita<sup>2</sup>, Mao Yagihashi<sup>2</sup>, Huynh Giao Ly<sup>4</sup>,  
 Patrick Dupont<sup>5</sup>, Lukas Van Oudenhove<sup>4</sup>, Motoyori Kanazawa<sup>2</sup>, Shin Fukudo<sup>2,3</sup>  
<sup>1</sup>Frontier Research Institute for Interdisciplinary Sciences <sup>2</sup>behavioral medicine, Univ of Tohoku, Sendai  
<sup>3</sup>Departments of Psychosomatic Medicine, Univ of Hospital, Sendai  
<sup>4</sup>Translational Research Center for Gastrointestinal Disorders, University of Leuven  
<sup>5</sup>Laboratory for Cognitive Neurology, University of Leuven
- O1-G-6-2 Regulatory mechanism for catecholamine secretion**  
 Michiko Shirane, Keiichi I Nakayama  
 Dept Mol Cell Biol, Med Inst Bioreg, Kyushu Univ, Fukuoka, Japan
- O1-G-6-3 Vasoinhibins block NGF-induced neurite outgrowth and decrease survival of PC12 cells**  
 Zesergio Melo, Bibiana Moreno-Carranza, Carmen Clapp, Gonzalo Martinez de la Escalera  
 Instituto de Neurobiología (INB), Universidad Nacional Autónoma de México (UNAM), Campus UNAM-Juriquilla, Querétaro, México

## Oral O1-H-1

9:00 ~ 10:00 Room H (304)

## Learning and Cognition: Animal Model

Chairpersons : Kotaro Kimura *Department of Biological Science, Osaka University*  
 Kae Nakamura *Department of Physiology Kansai Medical University*

- O1-H-1-1 Metabotropic glutamate receptors regulate olfactory learning in a pair of multisensory integrating neurons in *C. elegans***  
 Shuhei Yamazaki<sup>1</sup>, Yosuke Ikejiri<sup>1</sup>, Yuki Tanimoto<sup>1</sup>, Takeshi Ishihara<sup>2</sup>, Kotaro Kimura<sup>1</sup>  
<sup>1</sup>Dept Biol Sci, Osaka Univ, Osaka <sup>2</sup>Dept Biol, Grad Sch Sci, Kyushu Univ., Fukuoka
- O1-H-1-2 Parallel dopaminergic neurons write and update memories with cell-type-specific rules**  
 Yoshinori Aso, Gerald M Rubin  
 Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, USA



- O1-H-1-3** Neuronal computation based on the prediction error within the *Drosophila* mushroom body promotes long-term memory formation.  
Yukinori Hirano  
*Dept Med, Univ of Kyoto, Kyoto, Japan*
- O1-H-1-4** Accumulation of vocal experience regulates the critical period of vocal plasticity during active learning of birdsong  
Shin Hayase, Eri Ohgushi, Masahiko Kobayashi, Kazuhiro Wada  
*Dept Biol Sci, Fac Sci, Hokkaido Univ, Sapporo, Japan*

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**Oral O1-H-2**

10:00 ~ 11:00 Room H (304)

**Learning and Cognition: Disease Mechanisms**

Chairpersons : Masaaki Ogawa *Department of Neuroscience, Graduate School of Medicine, Kyoto University*  
Jun Goto *International University of Health and Welfare Mita Hospital, Department of Neurology*

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- O1-H-2-1** Role of glycogen other than an energy reserve  
Anupama Rai, Ganesh Subramaniam  
*Indian Institute of Technology, Kanpur, India*
- O1-H-2-2** Epileptic Network Analysis with Magnetencephalographic Signals  
Toshihito Hiraoka<sup>1</sup>, Takufumi Yanagisawa<sup>1,2,3</sup>, Haruhiko Kishima<sup>2</sup>, Maki Kobayashi<sup>2</sup>, Ryouhei Fukuma<sup>2</sup>, Masayuki Hirata<sup>1,2</sup>, Toshihiko Araki<sup>1</sup>, Toshiki Yoshimine<sup>2</sup>, Shirou Yorifuji<sup>1</sup>  
<sup>1</sup>*Dept of Functional Diagnosis Science, Divi of Health Sciences, Grad Sch of Med, Osaka Univ, Osaka, Japan*  
<sup>2</sup>*Dept of Neurosci, Grad Sch of Med, Osaka Univ, Osaka, Japan* <sup>3</sup>*JST PRESTO, Japan*
- O1-H-2-3** **COGNITIVE IMPAIRMENTS AND NEURONAL INJURY IN DIFFERENT BRAIN REGIONS OF A GENETIC RAT MODEL OF ABSENCE EPILEPSY**  
 Maryam Jafarian<sup>1</sup>, Fariba Karimzadeh<sup>2</sup>, Fatemeh Alipour<sup>2</sup>, Fatemeh Attari<sup>2</sup>, Ahmad Ali Lotfinia<sup>2</sup>, E-S Speckmann<sup>3</sup>  
<sup>1</sup>*Shefa neuroscience research center, Tehran, Iran*  
<sup>2</sup>*School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran*  
<sup>3</sup>*Epilepsy Research Center, Klinik für Neurochirurgie, Department of Neurology, Institute of Neurophysiology, Westfälische Wi*

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**Oral O1-H-3**

14:00 ~ 15:00 Room H (304)

**Sleep and Biological Rhythms**

Chairpersons : Takahiro Moriya *Graduate School of Pharmaceutical Sciences, Tohoku University*  
Michihiro Mieda *Department of Molecular Neuroscience and Integrative Physiology, Faculty of Medicine, Kanazawa University*

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- O1-H-3-1** Systematic Behavioral Screening of *Sleepy* and *Dreamless*, Newly Identified Mouse Pedigrees with Sleep Abnormalities  
Takato Honda<sup>1,2,3</sup>, Tomoyuki Fujiyama<sup>1</sup>, Chika Miyoshi<sup>1</sup>, Makito Sato<sup>1</sup>, Hiromasa Funato<sup>1,4</sup>, Masashi Yanagisawa<sup>1,5,6</sup>  
<sup>1</sup>*Univ of Tsukuba, International Institute for Integrative Sleep Medicine (WPI-IIS), Tsukuba, Japan*  
<sup>2</sup>*Ph.D. Program in Human Biology, Univ of Tsukuba, Tsukuba, Japan* <sup>3</sup>*JSPS Reseach Fellow (DC1), Tokyo, Japan*  
<sup>4</sup>*Department of Anatomy, School of Medicine, Toho University, Tokyo, Japan*  
<sup>5</sup>*University of Texas Southwestern Medical Center, TX, USA* <sup>6</sup>*Howard Hughes Medical Institute (HHMI), USA*
- O1-H-3-2** Identification and manipulation of brainstem neurons crucial for REM/NREM sleep regulation  
Mitsuaki Kashiwagi<sup>1</sup>, Mika Kanuka<sup>1</sup>, Miho Morita<sup>1</sup>, Masanori Sakaguchi<sup>1</sup>, Masashi Yanagisawa<sup>1</sup>, Shigeyoshi Itoharu<sup>2</sup>, Yu Hayashi<sup>1,3</sup>  
<sup>1</sup>*International Institute for Integrative Sleep Medicine (WPI-IIS), University of Tsukuba, Ibaraki, Japan*  
<sup>2</sup>*Laboratory for Behavioral Genetics, Brain Science Institute, RIKEN, Saitama, Japan* <sup>3</sup>*JST PRESTO, Saitama, Japan*
- O1-H-3-3** Manipulating the cellular circadian period of AVP neurons alters the behavioral circadian period  
Michihiro Mieda<sup>1</sup>, Hitoshi Okamoto<sup>2</sup>, Takeshi Sakurai<sup>1</sup>  
<sup>1</sup>*Dept Molec Neurosci & Integr Physiol, Kanazawa Univ, Ishikawa* <sup>2</sup>*RIKEN BSI, Wako*
- O1-H-3-4** Astrocyte as a regulator of the central circadian clock and its input/output pathways  
Naoto Hayasaka  
*Immunology Frontier Res. Center, Osaka Univ., Suita, Japan*

## Oral O1-H-4

15:00 ~ 16:00 Room H (304)

## Social Behavior

Chairpersons : Sonoko Ogawa *Laboratory of Behavioral Neuroendocrinology, University of Tsukuba*  
 Tatsushi Onaka *Division of Brain and Neurophysiology, Department of Physiology, Jichi Medical University*

**O1-H-4-1 An essential role of vasotocin with mate-guarding behavior and an effect of mate-guarding on female mating preference in medaka**

Saori Yokoi<sup>1,2</sup>, Satoshi Ansai<sup>3</sup>, Kiyoshi Naruse<sup>1</sup>, Yasuhiro Kamei<sup>1</sup>, Yoshihito Taniguchi<sup>4</sup>,  
 Teruhiro Okuyama<sup>2,5</sup>, Hideaki Takeuchi<sup>2,6</sup>

<sup>1</sup>National Institute for Basic Biology, Aichi, Japan <sup>2</sup>Dept Biol Sci, Graduate schl of sci, Univ of Tokyo, Tokyo, Japan

<sup>3</sup>Division of Applied Biosciences, Graduate School of Agriculture, Kyoto Univ, Kyoto, Japan

<sup>4</sup>Department of Public Health and Preventive Medicine, Kyorin Univ, Tokyo, Japan <sup>5</sup>MIT, Cambridge, USA

<sup>6</sup>Graduate School of Natural Science and Technology, Okayama Uni, Okayama, Japan

**O1-H-4-2 Mammalian Brn-2/Pou3f2 is important for social behavior.**

Saori Yada<sup>1</sup>, Minori Onda<sup>1</sup>, Den'etsu Sutoo<sup>1,3</sup>, Kayo Akiyama<sup>3</sup>, Meguru Ito<sup>1</sup>, Nobuaki Yoshida<sup>2</sup>,  
 Shintaro Ueda<sup>1</sup>

<sup>1</sup>Dept. of Biol. Sci., Grad. Sch. of Sci., The Univ. of Tokyo, Japan

<sup>2</sup>Cent. of Exp. Med. and Sys. Biol., Inst. of Med. Sci., The Univ. of Tokyo, Japan <sup>3</sup>Inst. of Medi. Sci., Univ. of Tsukuba, Ibaraki, Japan

**O1-H-4-3 The optogenetic activation of the ventral medial habenula to interpeduncular nucleus pathway makes mice timid in social conflicts**

Miho Matsumata<sup>1</sup>, Takuma Kobayashi<sup>1</sup>, Kenzo Hirao<sup>1</sup>, Arthur Huang<sup>2</sup>, Megumi Kobayashi<sup>1</sup>,  
 Kawori Eizumi<sup>1</sup>, Thomas J McHugh<sup>2</sup>, Hitoshi Okamoto<sup>1</sup>

<sup>1</sup>Lab for Developmental Gene Regulation, RIKEN Brain Science Institute

<sup>2</sup>lab for Circuit & Behavioral Physiology, RIKEN Brain Science Institute

**O1-H-4-4 Is your boss an alarm bell or a useful tool? How social rank shapes low level visual attention.**

Matt Steffen Gobel<sup>1,3</sup>, Thomas Bullock<sup>3</sup>, Daniel C Richardson<sup>2</sup>, Heejung S. Kim<sup>3</sup>, Barry Giesbrecht<sup>3</sup>

<sup>1</sup>SAGE Center for the Study of the Mind, University of California at Santa Barbara, USA

<sup>2</sup>Experimental Psychology, University College London, UK

<sup>3</sup>Psychological and Brain Sciences, University of California at Santa Barbara, USA

## Oral O1-H-5

17:00 ~ 18:00 Room H (304)

## Neural Network Modeling

Chairpersons : Yutaka Sakai *Brain Science Institute, Tamagawa University*  
 Tomoki Fukai *RIKEN BSI, Laboratory for Neural Circuit Theory*

**O1-H-5-1 Efficient computer simulation of spatial neuron models with graphics processing units**

Tadashi Yamazaki<sup>1,2</sup>, Yuki Yamamoto<sup>3</sup>, Tsukasa Tsuyuki<sup>1</sup>

<sup>1</sup>The Univ of Electro-Communications, Tokyo <sup>2</sup>NIJC, RIKEN BSI <sup>3</sup>Tokyo Med and Dental Univ, Tokyo

**O1-H-5-2 A unified framework for quantifying information integration based on information geometry**

Masafumi Oizumi<sup>1,2</sup>, Naotsugu Tsuchiya<sup>2</sup>, Shun-Ichi Amari<sup>1</sup>

<sup>1</sup>RIKEN, Brain Science Institute, Saitama <sup>2</sup>School of Psychological Sciences, Monash University, Melbourne, Australia

**O1-H-5-3 Hub structure emerges when network is evolved based on synchronicity**

Yoshitaka Oku<sup>1</sup>, Amit Lal<sup>4</sup>, Hiroshi Someya<sup>3</sup>, Fumikazu Miwakeichi<sup>2</sup>, Yoshiyasu Tamura<sup>2</sup>

<sup>1</sup>Dept Physiol, Hyogo Coll Med, Japan <sup>2</sup>Dept Stat Model, Inst of Stat Math, Tokyo, Japan

<sup>3</sup>Sch Inf Sci Tech, Tokai Univ, Hiratsuka, Japan <sup>4</sup>Dept Biomed Eng, Peking Univ, Beijing, P.R.China

**O1-H-5-4 Machine learning aspects of cultured neural networks**

Takuya Isomura<sup>1</sup>, Kiyoshi Kotani<sup>2</sup>, Yasuhiko Jimbo<sup>3</sup>

<sup>1</sup>Dept of Human and Engineered Environmental Studies, Univ of Tokyo, Tokyo, Japan

<sup>2</sup>Research Center for Advanced Science and Technology, Univ of Tokyo, Tokyo, Japan

<sup>3</sup>Dept Precision Eng, Univ of Tokyo, Tokyo, Japan

**Oral O1-H-6**

18:00 ~ 19:00 Room H (304)

**Brain-machine Interface**

Chairpersons : Keiichi Kitajo *RIKEN Brain Science Institute*  
 Kenji Kansaku *Systems Neuroscience Section, Department of Rehabilitation for Brain Functions, Research Institute of National Rehabilitation Center for Persons with Disabilities*

- O1-H-6-1 Consistency and individuality of human brain responses to noisy visual inputs**  
 Keiichi Kitajo<sup>1</sup>, Takumi Sase<sup>1</sup>, Yoko Mizuno<sup>1</sup>, Hiromichi Suetani<sup>2</sup>  
<sup>1</sup>RIKEN Brain Science Institute, Wako, Japan <sup>2</sup>Faculty of Engineering, Oita University, Oita, Japan
- O1-H-6-2 Decoding articulation of Japanese alphabet by unit firing pattern and power spectrum obtained from the human face motor cortex.**  
 Kenji Ibayashi<sup>1</sup>, Takeshi Matsuo<sup>2</sup>, Naoto Kunii<sup>1</sup>, Yohei Ishishita<sup>1</sup>, Seiji Shimada<sup>1</sup>, Tomoyuki Koizumi<sup>1</sup>, Kensuke Kawai<sup>3</sup>, Nobuhito Saito<sup>1</sup>  
<sup>1</sup>Dept Neurosurg, Univ of Tokyo, Tokyo <sup>2</sup>NTT Medicacl Center Tokyo <sup>3</sup>Jichi Medical University
- O1-H-6-3 Affective sounds applied to auditory P300 brain-machine interface**  
 Akinari Onishi<sup>1</sup>, Hiroki Ora<sup>1,2</sup>, Kenji Kansaku<sup>1,2</sup>  
<sup>1</sup>Sys Neurosci Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan  
<sup>2</sup>Brain Sci Inspir Life Supp Res Cent, Univ of Electro-Communication, Chofu, Japan

**Oral O1-I-1**

9:00 ~ 10:00 Room I (311+312)

**Vision: New Technology**

Chairpersons : Masatoshi Yoshida *National Institute for Physiological Sciences*  
 Koichi Kawakami *Division of Molecular and Developmental Biology, National Institute of Genetics*

- O1-I-1-1 Estimation of superior colliculus parameters using data from acute slices and MCMC**  
 Richard E Veale<sup>1</sup>, Tadashi Isa<sup>1,2</sup>, Masatoshi Yoshida<sup>1</sup>  
<sup>1</sup>National Institute for Physiological Sciences <sup>2</sup>Kyoto University Graduate School of Medicine, Department of Neurology
- O1-I-1-2 Activation of the hypothalamic feeding center upon visual prey detection**  
 Akira Muto, Koichi Kawakami  
*National Institute of Genetics, Mishima, Japan*
- O1-I-1-3 Detection of sub-micrometer order fixational eye movement using SURF**  
 Yasuto Tanaka<sup>1</sup>, Hiroyuki Fujie<sup>2</sup>, Satoshi Shimegi<sup>3</sup>  
<sup>1</sup>Neuro-Mathematics Laboratory (NML), Kobe Japan <sup>2</sup>Miki Inc. <sup>3</sup>Osaka Univ.
- O1-I-1-4 Co-regulation of spatial and temporal network dynamics by parvalbumin-positive interneurons for population coding in visual cortex**  
 Masakazu Agetsuma<sup>1,2,3</sup>, Jordan Hamm<sup>1</sup>, Issei Sato<sup>4</sup>, Rafael Yuste<sup>1</sup>  
<sup>1</sup>Dept. Biological Sciences, Columbia University, New York, USA <sup>2</sup>JST, PRESTO, Tokyo, Japan <sup>3</sup>ISIR, Osaka University, Ibaraki, Japan  
<sup>4</sup>Department of Complexity Science and Engineering, Graduate School of Frontier Sciences, The University of Tokyo, Tokyo, Japan

**Oral O1-I-2**

10:00 ~ 11:00 Room I (311+312)

**Vision: Plasticity**

Chairpersons : Ichiro Fujita *Osaka University Graduate School of Frontier Biosciences and Center for Information and Neural Networks*  
 Yoshio Hata *Tottori University Graduate School of Medical Sciences*

- O1-I-2-1 Plasticity in vision following restoration of rod-mediated vision in blind mice**  
 Koji Nishiguchi, Kosuke Fujita, Naoyuki Tokashiki, Reiko Daigaku, Toru Nakazawa  
*Dept Ophthalmology, Tohoku Univ, Sendai, Japan*
- O1-I-2-2 Layer specific contribution of diacylglycerol lipase- $\alpha$  to ocular dominance plasticity in the mouse visual cortex**  
 Katsuro Kameyama<sup>1</sup>, Taisuke Yoneda<sup>1</sup>, Takahiro Gotou<sup>1</sup>, Keiko Terata<sup>1</sup>, Kenji Sakimura<sup>2</sup>, Masanobu Kano<sup>3</sup>, Yoshio Hata<sup>1</sup>  
<sup>1</sup>Div Integrative Biosci, Tottori Univ Grad Sch Med Sci, Tottori, Japan  
<sup>2</sup>Dept Cellular Neurobiology, Brain Research Institute, Niigata Univ, Niigata, Japan  
<sup>3</sup>Dept Neurophysiol, Grad Sch Med, Univ of Tokyo, Tokyo, Japan
- O1-I-2-3 Visual experience-dependent and independent development of visually-evoked synchronized firing in rat visual cortex**  
 Ayako W Ishikawa, Yukio Komatsu, Yumiko Yoshimura  
*National Institute for Physiological Sciences, Okazaki*

## Oral O1-I-3

14:00 ~ 15:00 Room I (311+312)

## Neurotransmitters and Signaling Molecules

Chairpersons : Shigeo Takamori *Graduate School of Brain Science, Doshisha University*  
 Hiroyuki Nawa *Brain Research Institute, Niigata Univ.*

- O1-I-3-1 Physiological roles of hydrogen sulfide (H<sub>2</sub>S) and hydrogen polysulfide (H<sub>2</sub>Sn)**  
 Hideo Kimura<sup>1</sup>, Yuka Kimura<sup>1</sup>, Yukiko Toyofuku<sup>1</sup>, Norihiro Shibuya<sup>1</sup>, Shin Koike<sup>2</sup>, Yuki Ogasawara<sup>2</sup>,  
 Noriyuki Nagahara<sup>3</sup>, David Lefer<sup>4</sup>, Yoshinori Mikami<sup>5</sup>, Jun-Ichiro Oka<sup>6</sup>  
<sup>1</sup>Dept Mol Pharm, Natl Inst Neurosci, NCNP, Tokyo, Japan <sup>2</sup>Dept Anal Chem, Meiji Pharmaceu Univ, Tokyo, Japan  
<sup>3</sup>RI Cnt, Nippon Medical School, Tokyo, Japan <sup>4</sup>LSU Health Cnt, USA <sup>5</sup>Dept Pharmacol, Tokyo Univ, Tokyo, Japan  
<sup>6</sup>Dept Pharmacol, Tokyo Univ Sci, Tokyo, Japan
- O1-I-3-2 DIFFERENTIAL EFFECT OF SPINAL CANNABINOID TYPE 1 RECEPTOR ACTIVATION IN THE RAT PAW INCISION AND FORMALIN TEST MODELS**  
 Pranav Prasoon, Mayank Gautam, Rahul Kumar, Shivani Gupta, S.B Ray  
*All India Institute of Medical Science*
- O1-I-3-3 Behavioral and Synaptic Effects of COX-2 Inhibition in an Animal Model of Stress-Induced Anxiety**  
 Joyonna Carrie Gamble-George<sup>1,2</sup>, Lindsay Halladay<sup>5</sup>, Adrina Kocharian<sup>5</sup>, Carolyn Silva<sup>2,7</sup>,  
 Holly Roberts<sup>2,7</sup>, Camille Pham-Lake<sup>6</sup>, Daniel Hermanson<sup>3</sup>, Lawrence J. Marnett<sup>3</sup>, Andrew Holmes<sup>5</sup>,  
 Sachin Patel<sup>1,2,4</sup>  
<sup>1</sup>Department of Psychiatry, Vanderbilt University School of Medicine, Nashville, TN, USA  
<sup>2</sup>Vanderbilt Brain Institute, Vanderbilt University School of Medicine, Nashville, TN, USA  
<sup>3</sup>A.B. Hancock Jr. Memorial Laboratory for Cancer Research, Departments of Biochemistry, Chemistry, and Pharmacology, Vanderbilt I  
<sup>4</sup>Department of Molecular Physiology and Biophysics, Vanderbilt University School of Medicine, Nashville, TN, USA  
<sup>5</sup>Laboratory of Behavioral and Genomic Neuroscience, Section on Behavioral and Genomic Neuroscience, National Institute on Alcohol  
<sup>6</sup>Agnes Scott College, Decatur, GA; <sup>7</sup>Vanderbilt University College of Arts and Sciences, Nashville, TN, USA  
<sup>7</sup>Vanderbilt University College of Arts and Sciences, Nashville, TN, USA
- O1-I-3-4 Neurotransmitter-dependent shedding of neuregulin-1 precursors in rat forebrain neurons**  
 Yuriko Iwakura, Ran Wang, Naoko Imamura, Kazuaki Araki, Hiroyuki Nawa  
*Dept Mol Neurobiol, Brain Res Inst, Niigata Univ*

## Oral O1-I-4

15:00 ~ 16:00 Room I (311+312)

## Gene Regulation and Epigenetics

Chairpersons : Daisuke Yamamoto *Tohoku University Graduate School of Life Sciences*  
 Kinichi Nakashima *Graduate School of Medical Sciences, Kyushu University*

- O1-I-4-1 Exploring the Role of a Novel DNA Modification and Its Reader in Memory Formation**  
 Wei Wei<sup>1</sup>, Xiang Li<sup>1,2</sup>, Qiongyi Zhao<sup>1</sup>, Chuanyang Dai<sup>1</sup>, Laura Leighton<sup>1</sup>, Timothy W Bredy<sup>1,2</sup>  
<sup>1</sup>Queensland Brain Institute, The University of Queensland, Brisbane, Australia  
<sup>2</sup>Department of Neurobiology and Behavior and Center for the Neurobiology of Learning and Memory, University of California Irvine,
- O1-I-4-2 Identification of the *fruitless* gene *cis* element that induces male-specific muscle in *Drosophila***  
 Yuri Nakamura, Hiroki Ito, Daisuke Yamamoto  
*Division of Neurogenetics, Tohoku University Graduated School of Life Sciences*
- O1-I-4-3 RNA granule assembly and disassembly modulated by methylation**  
 Nobuyuki Shiina<sup>1,2</sup>  
<sup>1</sup>Lab Neuronal Cell Biol, Okazaki Inst for Integr Biosci and Natl Inst for Basic Biol, Okazaki, Japan <sup>2</sup>Dept Basic Biology, SOKENDAI
- O1-I-4-4 Genome-wide analyses in neuronal cells reveal that USF transcription factors regulate lysosomal gene expression**  
 Tomoyuki Yamanaka, Nobuyuki Nukina  
*Doshisha Univ. Brain Sci, Kyoto, Japan*

## Oral O1-I-5

17:00 ~ 18:00 Room I (311+312)

## Homeostatic Regulation

Chairpersons : Takeshi Sakurai *WPI-IIS, University of Tsukuba*  
 Koichi Ito *Graduate School of Agricultural and Life Sciences, The University of Tokyo*

- O1-I-5-1 NPPFR2 signalling is critical for the regulation of feeding behaviour and energy homeostasis**  
 Lei Zhang, I-Chieh J Lee, Herbert Herzog  
*Neuroscience Division, Garvan Insitute of Medical Research, Sydney, Australia*

- O1-I-5-2 Distribution of histaminergic neuronal cluster in the rat and mouse hypothalamus**  
Seiichi Chiba<sup>1</sup>, Chinatsu Moriwaki<sup>2</sup>, Keisuke Ina<sup>1</sup>, Yoshihisa Fujikura<sup>1</sup>  
<sup>1</sup>Dept Mol Anat, Univ of Oita, Oita, Japan <sup>2</sup>Div Food Nutr, Univ of Nakamuragakuen, Fukuoka, Japan
- O1-I-5-3 Activation of the indirect pathway in the nucleus accumbens core produces slow-wave sleep**  
Yo Oishi<sup>1</sup>, Qi Xu<sup>2,3</sup>, Lu Wang<sup>2</sup>, Zhi-Li Huang<sup>2</sup>, Michael Lazarus<sup>1</sup>  
<sup>1</sup>International Institute for Integrative Sleep Medicine, University of Tsukuba, Ibaraki, Japan  
<sup>2</sup>State Key Laboratory of Medical Neurobiology, Department of Pharmacology, Institutes of Brain Science and the Collaborative Innovation Center for Brain Science, School of Basic Medical Sciences, Anhui Medical University, Hefei, China.  
<sup>3</sup>Department of Physiology, School of Basic Medical Sciences, Anhui Medical University, Hefei, China.
- O1-I-5-4 Passive and active thermoregulation during torpor**  
Genshiro A Sunagawa, Masayo Takahashi  
Laboratory for Retinal Regeneration, RIKEN CDB, Kobe, Japan

## Oral O1-I-6

18:00 ~ 19:00 Room I (311+312)

### Neuroimmunology

Chairpersons : Tomoyuki Furuyashiki *Division of Pharmacology, Graduate School of Medicine, Kobe University*  
Akihiko Yoshimura *Department of Microbiology and Immunology, Keio University School of Medicine*

- O1-I-6-1 Protection of renal ischemia/reperfusion injury by optogenetic stimulation of the C1 neurons**  
Chikara Abe<sup>1,2</sup>, Tsuyoshi Inoue<sup>3</sup>, Mabel A Inglis<sup>2</sup>, Kenneth E Viar<sup>2</sup>, Li-Ping Huang<sup>3</sup>, Hong Ye<sup>3</sup>, Diane L Rosin<sup>3</sup>, Ruth L Stornetta<sup>2</sup>, Mark D Okusa<sup>3</sup>, Patrice G Guyenet<sup>2</sup>  
<sup>1</sup>Department of Physiology, Gifu University Graduate School of Medicine, Gifu, Japan  
<sup>2</sup>Department of Pharmacology, University of Virginia, Charlottesville, VA, USA  
<sup>3</sup>Department of Medicine, Division of Nephrology and Center for Immunity, Inflammation, and Regenerative Medicine, Charlottesville
- O1-I-6-2 Endotoxemia-induced cytokine-mediated responses of hippocampal astrocytes transmitted by cells of the brain-immune interface**  
Atsuyoshi Shimada<sup>1</sup>, Muneo Inaba<sup>2</sup>, Hiroyuki Umegaki<sup>3</sup>, Sanae Hasegawa-Ishii<sup>4</sup>  
<sup>1</sup>Dept Pathol & Lab Med, Aichi Human Service Center Hospital, Aichi, Japan  
<sup>2</sup>First Dept Int Med, Kansai Medical Univ, Hirakata, Japan <sup>3</sup>Dept of Geriatrics, Graduate Sch of Med, Nagoya Univ, Nagoya, Japan  
<sup>4</sup>Dept Pharmacol, Pennsylvania State Univ College of Med, Hershey, PA, USA
- O1-I-6-3 Estrogen mediated neuroprotection and immunoregulation in aged rat hippocampus**  
Kamlesh Kumar Pandey, Pushpa Dhar, Pavan Kumar  
ALL INDIA INSTITUTE OF MEDICAL SCIENCES NEW DELHI INDIA

## Oral O1-J-1

9:00 ~ 10:00 Room J (313+314)

### Neurogenesis and Gliogenesis 1

Chairpersons : Hiroko Baba *Tokyo University of Pharmacy and Life Sciences*  
Masahiro Yamaguchi *Department of Physiology, Kochi Medical School*

- O1-J-1-1 Molecular basis of dynamic nuclear rotation in migrating neurons isolated from the developing brain**  
Yuu Kure<sup>1,2</sup>, Hiroki Umeshima<sup>2</sup>, Mineko Kengaku<sup>1,2</sup>  
<sup>1</sup>Grad Sch Biostudies, Kyoto Univ, Kyoto, Japan <sup>2</sup>iCeMS, Kyoto Univ, Kyoto, Japan
- O1-J-1-2 Prox1 regulates the cell cycle exit of cerebellar granule cell precursors through suppression of a cell cycle-related gene.**  
Satoshi Miyashita<sup>1</sup>, Yusuke Seto<sup>3</sup>, Syogo Aida<sup>1</sup>, Yoshiya Kawaguchi<sup>4</sup>, Takayuki Sota<sup>2</sup>, Mikio Hoshino<sup>1</sup>  
<sup>1</sup>Dept Biochem and Cellular Biol, Natl Inst Neurosci, NCNP, Tokyo, Japan  
<sup>2</sup>Sch. of Adv Sci and Eng Waseda Univ, Tokyo, Japan <sup>3</sup>Dept. of Mol. and Behav Neurosci., Grad. Sch. of Med., Univ. of Osaka.  
<sup>4</sup>Dept of Clinic Appli, Center for iPS Cell Res and Appli, Kyoto University, Kyoto, Japan.
- O1-J-1-3 Role of Meis1 in granule cell development**  
Tomoo Owa<sup>1</sup>, Shinichiro Taya<sup>1</sup>, Satoshi Miyashita<sup>1</sup>, Tomoki Nishioka<sup>2</sup>, Takuro Nakamura<sup>3</sup>, Ryo Goitsuka<sup>4</sup>, Kozo Kaibuchi<sup>2</sup>, Mikio Hoshino<sup>1</sup>  
<sup>1</sup>National Center for Neurology and Psychiatry <sup>2</sup>Dept. of Cell Pharmacology, School of Medicine, Nagoya Univ  
<sup>3</sup>Department of Carcinogenesis, Japanese Foundation for Cancer Research  
<sup>4</sup>Division of Development & Aging, Research Institute for Biological Sciences
- O1-J-1-4 Human Umbilical Cord MSCs encapsulated in a functionalized self-assembling peptide hydrogel RADA16-IKVAV for brain tissue engineering**  
Xinhua Zhang<sup>1</sup>, Wei Shi<sup>2</sup>, Chuanjun Huang<sup>1,2</sup>, Jian Chen<sup>2</sup>, Yinan Chen<sup>2</sup>, Guohua Jin<sup>1</sup>  
<sup>1</sup>Nantong University <sup>2</sup>Department of Neurosurgery, Affiliated Hospital of Nantong University, Nantong, China



## Oral O1-J-2

10:00 ~ 11:00 Room J (313+314)

## Neurogenesis and Gliogenesis 2

Chairpersons : Kazunobu Sawamoto *Nagoya City University*  
 Mitsuharu Hattori *Graduate School of Pharmaceutical Sciences, Nagoya City University*

- O1-J-2-1 A novel protrusion in new neurons regulating the migratory potential in the postnatal brain**  
 Masato Sawada<sup>1</sup>, Shih-Hui Huang<sup>1</sup>, Takao Hikita<sup>1</sup>, Akiyoshi Uemura<sup>2</sup>, Kazunobu Sawamoto<sup>1</sup>  
<sup>1</sup>Dept Dev Regen Biol, Nagoya City Univ Grad Sch Med Sci, Nagoya  
<sup>2</sup>Dept Retinal Vasc Biol, Nagoya City Univ Grad Sch Med Sci, Nagoya
- O1-J-2-2 Subtype specification in cortical layers is regulated both in neural progenitors and postmitotic neurons**  
 Koji Oishi<sup>1,2</sup>, Kazunori Nakajima<sup>1</sup>, Francois Guillemot<sup>2</sup>  
<sup>1</sup>Dept Anat, Keio Univ, Tokyo <sup>2</sup>The Francis Crick Institute, London, UK
- O1-J-2-3 Fyn-mediated control of cell-cell adhesion regulates detachment of chain-forming migrating neurons in the postnatal olfactory bulbs**  
 Kazuma Fujikake<sup>1,2</sup>, Masato Sawada<sup>1</sup>, Takao Hikita<sup>1</sup>, Mitsuharu Hattori<sup>3</sup>, Kazuya Sobue<sup>2</sup>, Kazunobu Sawamoto<sup>1</sup>  
<sup>1</sup>Department of Developmental and Regenerative Biology, Nagoya City University Graduate School of Medical Sciences, Aichi, Japan  
<sup>2</sup>Department of Anesthesiology and Intensive Care Medicine, Nagoya City University Graduate School of Medical Sciences, Aichi, Japan  
<sup>3</sup>Department of Biomedical Science, Nagoya City University Graduate School of Pharmaceutical Sciences, Aichi, Japan
- O1-J-2-4 Role of Vascular development during neural differentiation of the developing neocortex**  
 Ken-Ichi Mizutani<sup>1,5</sup>, Emiko Yamanishi<sup>1</sup>, Chisato Watanabe<sup>1</sup>, Ryota Iwai<sup>1</sup>, Hidenori Tabata<sup>2</sup>, Koh-Ichi Nagata<sup>2</sup>, Masatsugu Ema<sup>3</sup>, Hiroshi Harada<sup>4</sup>  
<sup>1</sup>Dept Neural Dev, Grad Sch Brain Sci, Doshisha Univ, Kyoto, Japan  
<sup>2</sup>Institute for Developmental Research, Aichi Human Service Center, Aichi, Japan <sup>3</sup>Shiga University of Medical Science, Shiga, Japan  
<sup>4</sup>Kyoto Univ Grad Sch of Medicine, Kyoto, Japan <sup>5</sup>JST PRESTO

## Oral O1-J-3

14:00 ~ 15:00 Room J (313+314)

## Neurogenesis and Gliogenesis 3

Chairpersons : Kazunori Nakajima *Department of Anatomy, Keio University School of Medicine*  
 Yuko Sekino *Division of Pharmacology, National Institute of Health Sciences*

- O1-J-3-1 The cerebrospinal fluid proteome and neuroepithelium transcriptome reveal fluid-tissue interactions that instruct early forebrain development**  
 Kevin Fongching Chau<sup>1,2</sup>, Mark W Springel<sup>2</sup>, Kevin G Broadbelt<sup>2</sup>, Hye-Yeon Park<sup>1,2</sup>, Salih Topal<sup>2</sup>, Melody P Lun<sup>2,3</sup>, Hillary Mullan<sup>2</sup>, Thomas Maynard<sup>4</sup>, Hanno Steen<sup>2</sup>, Anthony S Lamantia<sup>4</sup>, Maria K Lehtinen<sup>1,2</sup>  
<sup>1</sup>Harvard Medical School <sup>2</sup>Boston Children's Hospital <sup>3</sup>Boston University School of Medicine  
<sup>4</sup>The George Washington University School of Medicine and Health Sciences
- O1-J-3-2 Wnt proteins serve as directional cues for the Par-complex polarity and the Drosophila nervous tissue growth**  
 Shigeki Yoshiura, Fumio Matsuzaki  
 RIKEN Center for Developmental Biology
- O1-J-3-3 Cortical Intermediate GABAergic neuron progenitors divide symmetrically to produce similar GABAergic neuron pairs**  
 Shigeyuki Esumi<sup>1</sup>, Yuchio Yanagawa<sup>2</sup>, Kenji Sakimura<sup>3</sup>, Nobuaki Tamamaki<sup>1</sup>  
<sup>1</sup>Grad. Sch. of Life Science, Kumamoto Univ., Kumamoto, Japan <sup>2</sup>Graduate School of Medicine, Gunma University, Maebashi, Japan  
<sup>3</sup>Department of Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan
- O1-J-3-4 Roles of ApoER2 in neuronal migration and termination of migration in the developing cerebral cortex**  
 Yuki Hirota<sup>1</sup>, Ken-Ichiro Kubo<sup>1</sup>, Takahiro Fujino<sup>2</sup>, Tokuo T Yamamoto<sup>3</sup>, Kazunori Nakajima<sup>1</sup>  
<sup>1</sup>Dep. Anatomy, Keio Univ. School of Med. <sup>2</sup>Dept. Bioscience, INCS, Ehime Univ., Ehime, Japan  
<sup>3</sup>Inst. Dev. Aging Cancer, Tohoku Univ., Sendai, Japan

**Oral O1-J-4**

15:00 ~ 16:00 Room J (313+314)

**Glial Mechanisms**

Chairpersons : Junichi Nabekura *National Institute for Physiological Sciences*  
 Schuichi Koizumi *Department of Neuropharmacology, Interdisciplinary Graduate School of Medicine, University of Yamanashi*

- O1-J-4-1 The anatomy and exocytic properties of astrocytic gliosignalling molecule vesicles**  
 Jernej Jorgacevski<sup>1,2</sup>, Alenka Gucek<sup>1</sup>, Priyanka Singh<sup>1</sup>, Claudia Geisler<sup>3</sup>, Maja Portokar<sup>1,2</sup>, Nina Vardjan<sup>1,2</sup>, Marko Kreft<sup>1,2,4</sup>, Vladimir Grubisic<sup>5</sup>, Randy F. Stout<sup>5,6</sup>, Vladimir Parpura<sup>5,7</sup>, Alexander Egner<sup>3</sup>, Robert Zorec<sup>1,2</sup>  
<sup>1</sup>Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia <sup>2</sup>Celica BIOMEDICAL, Ljubljana, Slovenia  
<sup>3</sup>Department of Optical Nanoscopy, Laser-Laboratory Göttingen e.V., Göttingen, Germany  
<sup>4</sup>Department of Biology, Biotechnical Faculty, University of Ljubljana, Ljubljana, Slovenia  
<sup>5</sup>Department of Neurobiology, University of Alabama, Birmingham, Alabama, USA  
<sup>6</sup>The Dominick P. Purpura Department of Neuroscience, Albert Einstein College of Medicine, Bronx, New York, USA  
<sup>7</sup>Department of Biotechnology, University of Rijeka, Rijeka, Croatia
- O1-J-4-2 The possible involvement of microglia in maintaining sleep-wake cycle by phagocytosis of synapses**  
 Mohammad E Choudhury, Kazuya Miyanishi, Kohta Kanehisa, Haruna Takeda, Afsana Islam, Hajime Yano, Junya Tanaka  
*Department of Molecular and Cellular Physiology, Ehime University Graduate School of Medicine*
- O1-J-4-3 Proximal propagation of mechanically-induced calcium wave between astrocytes is mediated by gap junction, while distal propagation is mediated by diffusion of ATP released by volume-regulated anion channel.**  
 Mitsuhiro Morita, Yuki Fujii  
*Dept Biol, Kobe Univ, Hyogo, Japan*
- O1-J-4-4 Microglial regulation of synaptic activity with their direct contacts**  
 Ryohei Akiyoshi<sup>1,2</sup>, Hiroaki Wake<sup>1,2,3</sup>, Junichi Nabekura<sup>1,2</sup>  
<sup>1</sup>Dept Homeostatic Develop, Natl Inst Physiol Sci, Okazaki, Japan <sup>2</sup>Dept Physiol, SOKENDAI, Okazaki, Japan  
<sup>3</sup>PRESTO, JST, Saitama, Japan

**Oral O1-J-5**

17:00 ~ 18:00 Room J (313+314)

**Development and Regeneration: Others 1**

Chairpersons : Takuya Shimazaki *Department of Physiology, Keio University, School of Medicine*  
 Naoko Kaneko *Department of Developmental and Regenerative Biology, Nagoya City University Graduate School of Medical Sciences*

- O1-J-5-1 Spontaneous activity governs the dendrite pruning of mitral cells to establish discrete connectivity**  
 Satoshi Fujimoto<sup>1</sup>, Marcus N Leiwe<sup>1</sup>, Yuko Muroyama<sup>2</sup>, Reiko Kobayakawa<sup>3</sup>, Ko Kobayakawa<sup>3</sup>, Tetsuichiro Saito<sup>2</sup>, Takeshi Imai<sup>1,4</sup>  
<sup>1</sup>Lab for Sensory Circuit Formation, RIKEN CDB, Kobe, Japan <sup>2</sup>Dept Dev Biol, Grad Sch Medicine, Chiba Univ, Chiba, Japan  
<sup>3</sup>Inst Biomedical Science, Kansai Medical Univ, Hirakata, Japan <sup>4</sup>Grad Sch Biostudies, Kyoto Univ, Kyoto, Japan
- O1-J-5-2 Mechanism that links vesicular fusion defects and apoptosis in photoreceptors**  
 Yuko Nishiwaki, Miyuki Suenaga, Masato Araragi, Ichiro Masai  
*OIST, Okinawa, Japan*
- O1-J-5-3 Targeted disruption of protein arginine methyltransferase 1 (PRMT1) in the CNS results in developmental defects and severe hypomyelination in mice.**  
 Misuzu Hashimoto<sup>1</sup>, Kazuya Murata<sup>2</sup>, Junji Ishida<sup>2,3</sup>, Akihiko Kanou<sup>3</sup>, Yoshitoshi Kasuya<sup>4</sup>, Anna Williams<sup>5</sup>, Akiyoshi Fukamizu<sup>1,2,3</sup>  
<sup>1</sup>Ph.D. Program in Human Biology, School of Integrative and Global Majors, University of Tsukuba, Ibaraki, Japan  
<sup>2</sup>Life Science Center, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba, Ibaraki, Japan  
<sup>3</sup>Graduate School of Life and Environmental Sciences, University of Tsukuba, Ibaraki, Japan  
<sup>4</sup>Department of Biochemistry and Molecular Pharmacology, Graduate School of Medicine, Chiba University, Chiba, Japan  
<sup>5</sup>MRC Centre for Regenerative Medicine, The University of Edinburgh, Edinburgh, United Kingdom
- O1-J-5-4 Regional volume decreases in the brain of Pax6 heterozygous mutant rats: MRI deformation-based morphometry**  
 Kotaro Hiraoka<sup>1</sup>, Akira Sumiyoshi<sup>2</sup>, Hiroi Nonaka<sup>2</sup>, Takako Kikkawa<sup>3</sup>, Ryuta Kawashima<sup>2</sup>, Noriko Osumi<sup>3</sup>  
<sup>1</sup>Div Cyclotron Nuclear Medicine, Cyclotron and Radioisotope Center, Tohoku Univ, Miyagi, Japan  
<sup>2</sup>Dep Functional Brain Imaging, Institute of Development, Aging and Cancer, Tohoku Univ, Miyagi, Japan  
<sup>3</sup>Dep Developmental Neuroscience, Tohoku Univ Graduate School of Medicine, Miyagi, Japan

Oral O1-J-6

18:00 ~ 19:00 Room J (313+314)

## Development and Regeneration: Others 2

Chairpersons : Naoyuki Inagaki *Laboratory of Systems Neurobiology and Medicine, Graduated School of Biological Sciences, Nara Institute of Science and Technology*

Hidenobu Mizuno *National Institute of Genetics, Division of Neurogenetics*

**O1-J-6-1 Early postnatal development of primary auditory and somatosensory cortexes in mouse hypothyroidism**

Minzi Chang, Hideki D Kawai  
*Dept. of Bioinformatics, Soka Univ., Tokyo, Japan*

**O1-J-6-2 Functional analysis of shootin1b in neuronal migration**

Takunori Minegishi, Yasuyuki Uesugi, Tadayuki Shimada, Wataru Yoshida, Naoyuki Inagaki  
*Graduate School of Biological Science, NAIST, Nara*

**O1-J-6-3 Dissecting neural circuits at a single-cell level using the Supernova system**

Wenshu Luo<sup>1,2</sup>, Hidenobu Mizuno<sup>1,2</sup>, Ryohei Iwata<sup>1,2</sup>, Shingo Nakazawa<sup>1,2</sup>, Takuji Iwasato<sup>1,2</sup>  
<sup>1</sup>*Div Neurogenetics, National Institute of Genetics, Shizuoka, Japan* <sup>2</sup>*Dept Genetics, SOKENDAI, Shizuoka, Japan*

## Oral O2-G-1

9:00 ~ 10:00 Room G (303)

### Neurodegenerative Disorders • Cardiovascular Disease

Chairpersons : Fumio Matsuzaki *RIKEN Center for Developmental Biology*  
 Takeshi Yamazaki *Graduate School of Integrated Arts and Sciences, Hiroshima University*

- O2-G-1-1** **The effect of corticospinal fiber integrity on spontaneous brain activity in the sensorimotor cortex in amyotrophic lateral sclerosis**  
 Wataru Sako<sup>1</sup>, Takashi Abe<sup>2</sup>, Yuishin Izumi<sup>1</sup>, Naoko Matsui<sup>1</sup>, Masafumi Harada<sup>2</sup>, Ryuji Kaji<sup>1</sup>  
<sup>1</sup>Department of Clinical Neuroscience, Institute of Biomedical Sciences, Tokushima University Graduate School, Tokushima, Japan  
<sup>2</sup>Department of Radiology, Institute of Biomedical Sciences, Tokushima University Graduate School, Tokushima, Japan
- O2-G-1-2** **Cerebrospinal ferritin determines the risk of cognitive decline in pre-clinical APOE-ε4 carriers: There is currently no clinically acceptable prognostic biomarker for Alzheimer's disease (AD), this is important because AD is a slowly**  
 Scott Ayton, Noel G Faux, Ashley I Bush  
*Florey Institute of Neuroscience and Mental Health*
- O2-G-1-3** **Neuroprotection and stimulation of estradiol synthesis by a retinoid X receptor agonist in hippocampal slices**  
 Takeshi Yamazaki, Hikaru Sakurai, Atsuhiko Ishida, Yasuhiro Ishihara  
*Grad Sch Integrated Arts and Sci, Hiroshima Univ, Higashi-Hiroshima, Japan*
- O2-G-1-4** **The role of aquaporins in therapeutic mannitol action and resistance in cerebral edema.**  
 Mootaz M. Salman<sup>1</sup>, Philip Kitchen<sup>2</sup>, Roslyn M Bill<sup>3</sup>, Nicola Woodrooffe<sup>1</sup>, Paul Heath<sup>4</sup>, Matthew T Conner<sup>1</sup>  
<sup>1</sup>BMRC, Sheffield Hallam University, Sheffield  
<sup>2</sup>Molecular Assembly and Organisation in Cells Doctoral Training Centre, University of Warwick, Coventry CV4 7AL, UK  
<sup>3</sup>School of Life & Health Sciences and Aston Research Centre for Healthy Ageing, Aston University, Aston Triangle, Birmingham, B4  
<sup>4</sup>Department of Neuroscience, Sheffield Institute for Translational Neuroscience, University of Sheffield Sheffield, UK

## Oral O2-G-2

10:00 ~ 11:00 Room G (303)

### Cerebrovascular Disease and Ischemia

Chairpersons : Hiroji Yanamoto *Laboratory of Neurology and Neurosurgery, National Cerebral and Cardiovascular Center*  
 Eiichi Miyachi *Department of Physiology, Fujita Health University School of Medicine*

- O2-G-2-1** **Phytosomes of NMITL118RT+: A prudent therapeutic approach for favourable outcomes in ischemic injury.**  
 Hafsa Ahmad, Abhishek Arya, Satish Agrawal, Rakesh Shukla, Anil K Dwivedi  
*CSIR-CDRI (Central Drug Research Institute)*
- O2-G-2-2** **Endogenous plasticity mechanisms as therapy for Stroke: A Multi-disciplinary Translational Medicine approach to drug selection and therapy optimisation**  
 Suhela Kapoor, Prasun Roy, Vps Rallabandi  
*National Brain Research Centre*
- O2-G-2-3** **Neurocognitive rehabilitation of stroke: A comparative study of Ghanaian stroke patients**  
 Delphine Nana Oye Bruce<sup>1</sup>, Samuel A Danquah<sup>1</sup>, Adotey Anum<sup>1</sup>, J Y Opoku<sup>2</sup>, David L Sam<sup>2</sup>  
<sup>1</sup>Psychology Dept, University of Ghana, Legon <sup>2</sup>Department of Psychosocial Science, University of Bergen, Bergen, Norway
- O2-G-2-4** **Activated protein C (APC) in the acute phase suppresses the development of cerebral injuries after focal cerebral ischemia**  
 Keiko Yamato<sup>1</sup>, Yukako Nakajo<sup>1,4</sup>, Hitomi Yamamoto-Imoto<sup>2</sup>, Koichi Kokame<sup>2</sup>, Toshiyuki Miyata<sup>2</sup>, Hiroharu Kataoka<sup>3</sup>, Jun C Takahashi<sup>3</sup>, Hiroji Yanamoto<sup>1,5</sup>  
<sup>1</sup>Lab. of Neurol. and Neurosurg., Natl. Cerebral and Cardiovasc. Ctr., Suita, Japan  
<sup>2</sup>Dept. of Mol. Pathogenesis, Natl. Cerebral and Cardiovasc. Ctr., Suita, Japan  
<sup>3</sup>Dept. of Neurosurg., Natl. Cerebral and Cardiovasc. Ctr., Suita, Japan <sup>4</sup>Res. Laboratory, Rakuwa-kai Otowa Hosp., Kyoto, Japan  
<sup>5</sup>Dept. of Cardiovasc. Science, Div. of Surgical Med., Osaka Univ. Grad. Sch. of Med., Suita, Japan

## Oral O2-G-3

17:00 ~ 18:00 Room G (303)

## Movement Disorders

Chairpersons : Yuzuru Imai *Juntendo University Graduate School of Medicine*  
 Takanori Yokota *Department of Neurology and Neurological Science, Tokyo Medical and Dental University*

- O2-G-3-1 Analysis of Vps35 D620N knock-in mice**  
 Nobutaka Ishizu<sup>1,2</sup>, Akira Hebisawa<sup>3</sup>, Hidenori Aizawa<sup>4,5</sup>, Wanpeng Cui<sup>4,5</sup>, Kenji Hashimoto<sup>6</sup>, Yuko Fujita<sup>6</sup>, Daishi Yui<sup>1</sup>, Hidehiro Mizusawa<sup>1,7</sup>, Takanori Yokota<sup>1</sup>, Kei Watase<sup>8</sup>  
<sup>1</sup>Dept Neurol, Tokyo Medical and Dental University Graduate School of Medical and Dental Sciences, Tokyo, Japan  
<sup>2</sup>Dept Neurol, Tokyo National Hospital, Tokyo, Japan <sup>3</sup>Dept Clinical research, Tokyo National Hospital, Tokyo, Japan  
<sup>4</sup>Lab Molecular Neuroscience, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan  
<sup>5</sup>Dept Neurobiology, Institute of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan  
<sup>6</sup>Div Clinical Neuroscience, Chiba University Center for Forensic Mental Health, Chiba, Japan  
<sup>7</sup>National Center of Neurology and Psychiatry, Tokyo, Japan  
<sup>8</sup>Center for Brain Integration Research, Tokyo Medical and Dental University, Tokyo, Japan
- O2-G-3-2 Suppression of Spinal Cord Injury by Human Mesenchymal Stem/Stromal Cells (hMSCs) via Pituitary Adenylate Cyclase-Activating Polypeptide (PACAP) in Mice**  
 Hirokazu Ohtaki<sup>1</sup>, Tomomi Tsumuraya<sup>2</sup>, Atsushi Sato<sup>2</sup>, Kazuyuki Miyamoto<sup>3</sup>, Akira Yoshikawa<sup>4</sup>, Jun Watanabe<sup>5</sup>, Yutaka Hiraizumi<sup>6</sup>, Kenji Dohi<sup>7</sup>, Hitoshi Hashimoto<sup>8</sup>, Kazuho Honda<sup>1</sup>  
<sup>1</sup>Dept Anat, Showa Univ Sch of Med, Tokyo, Japan <sup>2</sup>Dept Orthop Surg, Showa Univ Fujigaoka Hosp, Kanagawa, Japan  
<sup>3</sup>Dept Emerg Crit Care Med, Showa Univ Fujigaoka Hosp, Kanagawa, Japan <sup>4</sup>Dept Physiol, Showa Univ Sch Med, Tokyo, Japan  
<sup>5</sup>Dept Biotech, Showa Univ, Tokyo, Japan <sup>6</sup>Dept Orthop Surg, Showa Univ Sch Med, Tokyo, Japan  
<sup>7</sup>Tokyo Jikei Univ Sch Med, Dept Emerg Med, Tokyo, Japan  
<sup>8</sup>Lab Mol Neuropharm, Grad Sch Pharmaceutical Sci, Osaka Univ, Osaka, Japan
- O2-G-3-3 CHCHD2, a Parkinson's-Disease Associated Protein, Regulates the Mitochondrial cristae integrity and function in *Drosophila***  
 Hongrui Meng<sup>1</sup>, Chikara Yamashita<sup>2</sup>, Kahori Shiba<sup>3</sup>, Tsuyoshi Inoshita<sup>3</sup>, Yuzuru Imai<sup>2,4</sup>, Nobutaka Hattori<sup>1,2,3,4</sup>  
<sup>1</sup>Res Inst for Disease of Old Age, Juntendo University School of Medicine, Tokyo, Japan  
<sup>2</sup>Dept of Neurology, Juntendo University School of Medicine, Tokyo, Japan  
<sup>3</sup>Dept of Treat and Res in Multi Sclerosis and Neuro-intractable Disease, Juntendo University School of Medicine, Tokyo, Japan  
<sup>4</sup>Dept of Res for Parkinson's Disease, Juntendo University School of Medicine, Tokyo, Japan
- O2-G-3-4 Synaptic vesicle dynamics are regulated by a subset of Parkinson's disease genes**  
 Tsuyoshi Inoshita<sup>1</sup>, Changxu Cui<sup>2</sup>, Nobutaka Hattori<sup>1,2,3</sup>, Yuzuru Imai<sup>2,3</sup>  
<sup>1</sup>Dept Treatment and Research in Multiple Sclerosis and Neuro-intractable Disease, Juntendo Univ, Tokyo, Japan  
<sup>2</sup>Dept Neurology, Juntendo Univ Graduate School of Medicine, Tokyo, Japan  
<sup>3</sup>Dept Research for Parkinson's Disease, Juntendo Univ Graduate School of Medicine, Tokyo, Japan

## Oral O2-G-4

18:00 ~ 19:00 Room G (303)

## Schizophrenia

Chairpersons : Takatoshi Hikida *Kyoto University Graduate School of Medicine*  
 Keiko Ikemoto *Department of Psychiatry, Iwaki Kyoritsu General Hospital*

- O2-G-4-1 Raloxifene modulates dopamine receptor gene expression in the cortex and protects executive function in male rats**  
 Tertia Purves-Tyson<sup>1,2,3</sup>, Tasnim Rahman<sup>1,2,3</sup>, Samantha Owens<sup>1,2,3</sup>, Simon Killcross<sup>4</sup>, Cyndi Shannon Weickert<sup>1,2,3</sup>  
<sup>1</sup>Schizophrenia Research Laboratory, Neuroscience Research Australia, Sydney, Australia  
<sup>2</sup>Schizophrenia Research Institute, Sydney, Australia <sup>3</sup>School of Psychiatry, University of New South Wales, Sydney, Australia  
<sup>4</sup>School of Psychology, University of New South Wales, Sydney, Australia
- O2-G-4-2 Functional connectivity and delusional cognitive bias in healthy people and schizophrenia**  
 Jun Miyata<sup>1</sup>, Akihiko Sasamoto<sup>1</sup>, Nobukatsu Sawamoto<sup>2</sup>, Yasuo Mori<sup>1</sup>, Masanori Isobe<sup>1</sup>, Shinichi Urayama<sup>3</sup>, Toshihiko Aso<sup>3</sup>, Hidenao Fukuyama<sup>3</sup>, Yuki Sakai<sup>4</sup>, Takanori Kochiyama<sup>5</sup>, Toshiya Murai<sup>1</sup>, Hidehiko Takahashi<sup>1</sup>  
<sup>1</sup>Dept Psychiatry, Kyoto Univ, Kyoto, Japan <sup>2</sup>Dept Human Health Sciences, Univ of Kyoto, Kyoto  
<sup>3</sup>Human Brain Research Center, Kyoto University, Kyoto, Japan <sup>4</sup>Dept Neural Computation Decision-making, ATR  
<sup>5</sup>Brain Activity Imaging Center, ATR-Promotions, Seikacho, JAPAN
- O2-G-4-3 D-Cell Hypothesis of Schizophrenia: Link of NSC Dysfunction Hypothesis and Dopamine Hypothesis**  
 Keiko Ikemoto<sup>1,2</sup>, Kunio Kitahama<sup>3</sup>, Anne Jouvet<sup>4</sup>, Michel Jouvet<sup>5</sup>  
<sup>1</sup>Dept Psychiatry, Iwaki Kyoritsu Gen Hosp, Iwaki, Japan <sup>2</sup>Tokushima Grad Univ, Tokushima, Japan  
<sup>3</sup>Dept Cellular Mol Integrat Physiol, UMR5123 CNRS/UCBL Lyon1, Villeurbanne, France <sup>4</sup>Dept Neuropathol, Hosp Neurol, Lyon, France  
<sup>5</sup>Dept Exp Med, Claude Bernard Univ, Lyon, France

## O2-G-4-4 Common intrinsic functional network for working memory across healthy and multiple psychiatric-disorder individuals

Masahiro Yamashita<sup>1</sup>, Yujiro Yoshihara<sup>2</sup>, Ryuichiro Hashimoto<sup>3</sup>, Noriaki Yahata<sup>4,5</sup>, Naho Ichikawa<sup>6</sup>, Yuki Sakai<sup>1,7</sup>, Noriko Matsukawa<sup>2</sup>, Takashi Yamada<sup>1,3</sup>, Go Okada<sup>6</sup>, Saori C. Tanaka<sup>1</sup>, Kiyoto Kasai<sup>4</sup>, Nobumasa Kato<sup>3</sup>, Yasumasa Okamoto<sup>6</sup>, Ben Seymour<sup>1,8,9</sup>, Hidehiko Takahashi<sup>2</sup>, Mitsuo Kawato<sup>1</sup>, Hiroshi Imamizu<sup>1,10</sup>

<sup>1</sup>Brain Info Commun Res Lab Group, ATR, Kyoto, Japan <sup>2</sup>Dept Psychiatry, Kyoto University, Kyoto, Japan

<sup>3</sup>Medical Institute of Developmental Disabilities Research, Showa University, Tokyo, Japan

<sup>4</sup>Dept Neuropsychiatry, Univ of Tokyo, Tokyo, Japan

<sup>5</sup>Molecular Imaging Center, National Institute of Radiological Sciences, Chiba, Japan

<sup>6</sup>Dept Psychiatry and Neurosciences, Hiroshima Univ, Hiroshima, Japan <sup>7</sup>Dept Psychiatry, Kyoto Prefectural Univ Med, Kyoto, Japan

<sup>8</sup>Computational and Biological Learning Laboratory, Dept Engineering, University of Cambridge, Cambridge, United Kingdom

<sup>9</sup>CiNet, NICT, Osaka, Japan <sup>10</sup>Dept Psychol, Univ of Tokyo, Tokyo, Japan

## Oral O2-H-1

9:00 ~ 10:00 Room H (304)

### Learning and Cognition: Learning, Memory and Plasticity

Chairpersons : Kimiko Shimizu *Department of Biological Sciences, Graduate School of Science, The University of Tokyo*  
Masanori Sakaguchi *WPI-International Institute for Integrative Sleep Medicine (IIS), University of Tsukuba*

#### O2-H-1-1 SCOP mediated circadian regulation of long-term recognition memory

Kimiko Shimizu<sup>1</sup>, Yodai Kobayashi<sup>1</sup>, Erika Nakatsuji<sup>1</sup>, Kenji Sakimura<sup>2</sup>, Maya Yamazaki<sup>2</sup>, Yoshitaka Fukada<sup>1</sup>

<sup>1</sup>Dept. Biological Sciences, Univ of Tokyo, Tokyo, Japan

<sup>2</sup>Department of Cellular Neurobiology, Brain Research Institute, Niigata University

#### O2-H-1-2 Expression diversity and genetic variation of pituitary adenylate cyclase-activating polypeptide (PACAP) gene in mouse

Akira Tanave<sup>1,2</sup>, Tsuyoshi Koide<sup>1,2,3</sup>

<sup>1</sup>Mouse Genomics Resource Laboratory, National Institute of Genetics, Mishima, Japan

<sup>2</sup>Transdisciplinary Research Integration Center, Tokyo, Japan <sup>3</sup>Department of Genetics, SOKENDAI, Kanagawa, Japan

#### O2-H-1-3 The Mysteries of Memory Generalization after Fear Learning

Ruth Li

*International Institute for Integrative Sleep Medicine*

#### O2-H-1-4 Central cholinergic neurons are rapidly recruited by reinforcement feedback



Balazs Hangya<sup>1,2</sup>, Sachin Ranade<sup>2</sup>, Maja Lorenz<sup>2</sup>, Adam Kepecs<sup>2</sup>

<sup>1</sup>Institute of Experimental Medicine, Hungarian Academy of Sciences <sup>2</sup>Cold Spring Harbor Laboratory, New York, USA

## Oral O2-H-2

10:00 ~ 11:00 Room H (304)

### Learning and Cognition: Hippocampus

Chairpersons : Yasunori Hayashi *RIKEN Brain Science Institute*  
Takashi Okada *Department of Psychology, Faculty of Human Sciences, Sophia University*

#### O2-H-2-1 PACSIN1 regulates the dynamics of AMPA receptor trafficking



Victor Anggono<sup>1</sup>, Jocelyn Widagdo<sup>1</sup>, Huaqiang Fang<sup>2</sup>

<sup>1</sup>Clem Jones Centre for Ageing Dementia Research, Queensland Brain Institute, The University of Queensland, Brisbane, QLD 4072, Au

<sup>2</sup>Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore, USA

#### O2-H-2-2 Memory forgetting and NMDA receptor: Post-acquisition chronic microinfusion of NVP-AAM077 into dorsal hippocampus subsequently impairs the performance at spatial reversal task in Morris water maze

Keisuke Shinohara<sup>1,2</sup>, Toshimichi Hata<sup>3</sup>

<sup>1</sup>Graduate School of Psychology, Doshisha University, Kyotanabe <sup>2</sup>JSPS Research Fellow <sup>3</sup>Faculty of Psychology, Doshisha University

#### O2-H-2-3 Functional analysis of ARC during scopolamine-induced amnesia and its restoration with leaf-extract of Ashwagandha in mice



Akash Gautam<sup>1</sup>, S C Kaul<sup>2</sup>, M K Thakur<sup>3</sup>

<sup>1</sup>Center for Neural and Cognitive Sciences, Univ of Hyderabad, Hyderabad, India

<sup>2</sup>DAILAB, AIST, Central 4, 1-1-1 Higashi, Tsukuba, Ibaraki, 305-8562, Japan

<sup>3</sup>Dept of Zoology, Banaras Hindu University, Varanasi-221005, India

#### O2-H-2-4 Dynamic pattern activity of CA3 and CA1 along the longitudinal axis for successful performance

Nozomu Nakamura<sup>1,2</sup>, Sauvage M Magdalena<sup>2</sup>, Takashi Kitsukawa<sup>3</sup>

<sup>1</sup>Div Physiome, Dept Physiol, Hyogo Col Med, Nishinomiya, Japan

<sup>2</sup>Mercator Res Gro, Structure of Memory, Ruhr Univ Bochum, Bochum, Germany <sup>3</sup>Grad Sch of Frontier Biosci, Osaka Univ, Osaka, Japan

## Oral O2-H-3

17:00 ~ 18:00 Room H (304)

## New Technologies: Optogenetics and Genome Editing

Chairpersons : Atsu Aiba *Laboratory of Animal Resources, Center for Disease Biology and Integrative Medicine, Graduate School of Medicine, The University of Tokyo*

Hajime Fujii *Department of Neurochemistry, The University of Tokyo Graduate School of Medicine*

- O2-H-3-1 Co-opting intracellular proteins for cell-specific gene manipulation**  
 Chung Yiu Jonathan Tang<sup>1</sup>, Stephanie Rudolph<sup>2</sup>, Onkar S Dhande<sup>3</sup>, Victoria E Abaira<sup>4</sup>, Sebastian Choi<sup>4</sup>, Sylvain W Lapan<sup>1</sup>, Iain R Drew<sup>2</sup>, Emily G Ellis<sup>2</sup>, Eugene Drokhlyansky<sup>1</sup>, Andrew D Huberman<sup>3</sup>, Wade G Regehr<sup>2</sup>, Constance L Cepko<sup>5</sup>  
<sup>1</sup>Dept Genetics, Harvard Medical School/HHMI, Boston, USA <sup>2</sup>Dept Neurobiology, Harvard Medical School, Boston, USA  
<sup>3</sup>Dept Neurobiology, UC San Diego, San Diego, USA <sup>4</sup>Dept Neurobiology, Harvard Medical School/HHMI, Boston, USA  
<sup>5</sup>Dept Genetics and Ophthalmology, Harvard Medical School/HHMI, Boston, USA
- O2-H-3-2 CRISPR/Cas9-mediated gene knock-in in single neurons in vivo**  
 Takeshi Uemura<sup>1,2,3</sup>, Takuma Mori<sup>1</sup>, Taiga Kurihara<sup>1</sup>, Michiru Satoga<sup>1</sup>, Katsuhiko Tabuchi<sup>1,3</sup>  
<sup>1</sup>Dept Mol Cell Physiol, Inst of Med, Acad Assy, Shinshu Univ, Nagano, Japan <sup>2</sup>CREST, JST, Saitama, Japan  
<sup>3</sup>IBS-ICCER, Shinshu Univ, Nagano, Japan
- O2-H-3-3 *In vivo* genome editing for single-cell labeling of endogenous proteins in the mammalian brain**  
 Jun Nishiyama<sup>1</sup>, Takayasu Mikuni<sup>1</sup>, Ye Sun<sup>1,2</sup>, Naomi Kamasawa<sup>1</sup>, Ryohei Yasuda<sup>1</sup>  
<sup>1</sup>Max Planck Florida Institute for Neuroscience, Jupiter, USA <sup>2</sup>Florida Atlantic University, Jupiter, USA
- O2-H-3-4 Light control of intracellular Ca<sup>2+</sup> signals by a genetically encoded protein, BACCS**  
 Tomohiro Ishii<sup>1</sup>, Koji Sato<sup>2,3,4,5</sup>, Toshiyuki Kakumoto<sup>1</sup>, Shigenori Miura<sup>3,4</sup>, Kazushige Touhara<sup>5,6</sup>, Shoji Takeuchi<sup>3,4</sup>, Takao Nakata<sup>1</sup>  
<sup>1</sup>Dept Cell Biology, Tokyo Medical and Dental University, Tokyo, Japan  
<sup>2</sup>Div Bioregulatory Signaling, Okazaki Inst for Integrative Biosci, Okazaki, Japan <sup>3</sup>Inst Ind Sci, Univ of Tokyo, Tokyo, Japan  
<sup>4</sup>JST ERATO Takeuchi Biohybrid Innovation Project, Tokyo, Japan <sup>5</sup>Dept Appl Biol Chem, Univ of Tokyo, Tokyo, Japan  
<sup>6</sup>JST ERATO Touhara Chemosensory Signal Project, Tokyo, Japan

## Oral O2-H-4

18:00 ~ 19:00 Room H (304)

## Emotion: Fear

Chairpersons : Naoki Matsuo *Department of Molecular and Behavioral Neuroscience, Graduate School of Medicine, Osaka University*  
 Akira Uematsu *RIKEN BSI*

- O2-H-4-1 Role of the Emotion of Fear on Entrepreneurial Decision Making: A Neuroscientific Approach**  
 Victor Perez  
*Kobe University, Faculty of Business Administration, Kobe, Japan*
- O2-H-4-2 Orexin regulates noradrenergic signaling in lateral amygdala to modulate fear-related behavior**  
 Shingo Soya<sup>1</sup>, Takashi Maejima<sup>1</sup>, Thomas McHugh<sup>2</sup>, Kazunari Miyamichi<sup>3</sup>, Takeshi Sakurai<sup>1</sup>  
<sup>1</sup>Dept Physiol, Kanazawa Med Univ, Ishikawa, Japan <sup>2</sup>RIKEN, Brain Science Institute, Saitama, Japan  
<sup>3</sup>Dept Applied Biological Chemistry, Univ of Tokyo, Tokyo, Japan
- O2-H-4-3 Molecular mechanisms of fear extinction in adolescence compared to adulthood**  
 Jee Hyun Kim, Despina E Ganella, Johnny CH Park, Andrew J Lawrence, Isabel C Zbukvic  
*The Florey Institute of Neuroscience and Mental Health, Melbourne, Australia*
- O2-H-4-4 The Neural Network of Empathy's Regulation**  
 Navot Naor, Simone Shamay-Tsoory, Hadas Okon-Singer  
*University of Haifa*

**Language & Communication 1**

Chairpersons : **Ryu-ichiro Hashimoto** *Department of Language Sciences, Tokyo Metropolitan University*  
**Masayuki Hirata** *Division of Clinical Neuroengineering, Global Center for Medical Engineering and Informatics, Osaka University*

- O2-I-1-1 Antero-posterior gradients exist in functional connections between human inferior frontal gyrus and middle & posterior temporal gyri. An intraoperative cortico-cortical evoked potential study**  
 Takuro Nakae<sup>1</sup>, Riki Matsumoto<sup>2</sup>, Takeharu Kunieda<sup>1</sup>, Yoshiki Arakawa<sup>1</sup>, Tamaki Kobayashi<sup>1</sup>, Taku Inada<sup>1</sup>, Yuki Takahashi<sup>1</sup>, Sei Nishida<sup>1</sup>, Rika Inano<sup>1</sup>, Katsuya Kobayashi<sup>3</sup>, Akihiro Shimotake<sup>3</sup>, Masao Matsuhashi<sup>4</sup>, Takayuki Kikuchi<sup>1</sup>, Ryosuke Takahashi<sup>3</sup>, Akio Ikeda<sup>2</sup>, Susumu Miyamoto<sup>1</sup>  
<sup>1</sup>*Department of Neurosurgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan*  
<sup>2</sup>*Department of Epilepsy, Movement disorder and Physiology, Graduate School of Medicine, Kyoto University, Kyoto, Japan*  
<sup>3</sup>*Department of Neurology, Graduate School of Medicine Kyoto University, Kyoto, Japan*  
<sup>4</sup>*Human Brain Research Center, Graduate School of Medicine, Kyoto University, Kyoto, Japan*
- O2-I-1-2 Detailed spatial distribution analysis of cortico-cortical evoked potential with high-dense intracranial electrodes**  
 Seijiro Shimada<sup>1</sup>, Naoto Kunii<sup>1</sup>, Kensuke Kawai<sup>2</sup>, Nobuhito Saito<sup>1</sup>  
<sup>1</sup>*Dept of Neurosurg, Univ of Tokyo Hospital, Tokyo, Japan* <sup>2</sup>*Dept of Neurosurg, Jichi Medical Univ Hospital, Shimotsuke, Japan*
- O2-I-1-3 Evaluation of Agrammatic Comprehension in Stroke Patients using a Picture-Sentence Matching Task**  
 Tomokazu Takakura<sup>1,2,5</sup>, Yoshihiro Muragaki<sup>1,5</sup>, Ryuta Kinno<sup>4,5</sup>, Manabu Tamura<sup>1,5</sup>, Chiharu Niki<sup>1,5</sup>, Kuniyoshi L Sakai<sup>3,5</sup>  
<sup>1</sup>*Faculty of Advanced Techno-Surgery, Institute of Advanced Biomedical Engineering and Science, Graduate school of Medicine, Tokyo, Japan*  
<sup>2</sup>*Dept. of Physical Medicine and Rehabilitation, Japan Labour Health and Welfare Organization Tokyo Rosai Hospital, Tokyo, Japan*  
<sup>3</sup>*Dept Basic Science, Graduate school of Arts and Science, Univ of Tokyo, Tokyo, Japan*  
<sup>4</sup>*Division of Neurology, Dept of Internal Medicine, Showa University Northern Yokohama Hospital, Yokohama, Japan*  
<sup>5</sup>*CREST, Japan Science and Technology Agency, Tokyo, Japan*
- O2-I-1-4 Compensatory mechanisms of semantic- and kanji / kana word processing after resection of the anterior temporal lobe in epilepsy surgery**  
 Makiko Ota<sup>1</sup>, Akihiro Shimotake<sup>1</sup>, Riki Matsumoto<sup>2</sup>, Mitsuhiro Sakamoto<sup>1</sup>, Masako Daifu<sup>1</sup>, Takuro Nakae<sup>3</sup>, Takeharu Kunieda<sup>3</sup>, Susumu Miyamoto<sup>3</sup>, Ryosuke Takahashi<sup>1</sup>, Matthew A Lambon Ralph<sup>4</sup>, Akio Ikeda<sup>2</sup>  
<sup>1</sup>*Dept Neurol, Kyoto Univ Grad Sch of Med, Kyoto*  
<sup>2</sup>*Dept Epilepsy, Movement Disorders and Physiology, Kyoto Univ Grad Sch of Med, Kyoto*  
<sup>3</sup>*Dept Neurosurg, Kyoto Univ Grad Sch of Med, Kyoto* <sup>4</sup>*NARU, Sch. of Psychol Sci, Univ. of Manchester*

**Language & Communication 2**

Chairpersons : **Kuniyoshi L Sakai** *Department of Basic Science, Graduate School of Arts and Sciences, The University of Tokyo*  
**Norihiro Sadato** *National Institutes of Natural Sciences, National Institutes for Physiological Sciences*

- O2-I-2-1 Dorsal vs. ventral pathways: The plasticity related to the development of syntactic abilities in second language (L2)**  
 Kayako Yamamoto<sup>1,2</sup>, Kuniyoshi L Sakai<sup>1,3</sup>  
<sup>1</sup>*Dept Basic Science, Univ of Tokyo, Tokyo* <sup>2</sup>*Japan Society for the Promotion of Science, Tokyo, Japan*  
<sup>3</sup>*CREST, Japan Science and Technology Agency, Tokyo, Japan*
- O2-I-2-2 Activation changes of the left frontal regions modified by independent factors of construction and scrambling**  
 Kyohei Tanaka, Shinri Ohta, Kuniyoshi L. Sakai  
*Dept. of Basic Sci., Univ. of Tokyo, Tokyo, Japan*
- O2-I-2-3 Ventral part of the anterior temporal lobe actively engages in Kanji reading: Evidence from direct cortical stimulation of the basal temporal language area**  
 Masako Daifu<sup>1</sup>, Riki Matsumoto<sup>2</sup>, Akihiro Shimotake<sup>1</sup>, Mitsuhiro Sakamoto<sup>1</sup>, Makiko Ota<sup>1</sup>, Takeharu Kunieda<sup>3</sup>, Susumu Miyamoto<sup>3</sup>, Ryosuke Takahashi<sup>1</sup>, Matthew A. Lambon Ralph<sup>4</sup>, Akio Ikeda<sup>2</sup>  
<sup>1</sup>*Department of Neurology, Kyoto University Graduate School of Medicine*  
<sup>2</sup>*Department of Epilepsy, Movement Disorders and Physiology, Kyoto University Graduate School of Medicine*  
<sup>3</sup>*Department of Neurosurgery, Kyoto University Graduate School of Medicine*  
<sup>4</sup>*Neuroscience and Aphasia Research Unit (NARU), School of Psychological Sciences, University of Manchester, Manchester, UK*



**O2-I-2-4 Neural basis of sharing attention during eye contact: Hyperscanning fMRI study**

Takahiko Koike<sup>1</sup>, Saori Abe<sup>1,2</sup>, Bayard Bosch<sup>1,3</sup>, Norihiro Sadato<sup>1</sup>

<sup>1</sup>National Institute for Physiological Sciences, Okazaki, Japan <sup>2</sup>Tokyo Med and Dental Univ, Tokyo

<sup>3</sup>Universidad Nacional Autonoma de Mexico, Queretaro, Mexico

**Oral O2-I-3**

17:00 ~ 18:00 Room I (311+312)

**Audition**

Chairpersons : Yoko Kato *Department for Neuroscience, School of Medicine and Health Sciences, Carl von Ossietzky University Oldenburg*

Hiroaki Tsukano *Dept of Neurophysiol, Brain Res Inst, Niigata Univ*

**O2-I-3-1 Representative response to mistuning component in complex harmonic tones in inferior colliculus of gerbils.**

Yoko Kato, Rainer Beutelmann, Georg M Klump

*Cluster of Excellence Hearing4all, Dep. Neurosci. Carl von Ossietzky Univ, Oldenburg, Germany*

**O2-I-3-2 Slow periodic modulations in conspecific vocalizations are over-represented in the primary auditory cortex of common marmosets**

Taku Banno<sup>1</sup>, Wataru Suzuki<sup>2</sup>, Naohisa Miyakawa<sup>2</sup>, Toshiki Tani<sup>3</sup>, Noritaka Ichinohe<sup>2,3</sup>

<sup>1</sup>Dept Med, Univ of Penn, Philadelphia USA

<sup>2</sup>Department of Ultrastructural Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry

<sup>3</sup>Lab for Molecular Analysis of Higher Brain Function, RIKEN BSI, Wako, Japan

**O2-I-3-3 Genetic Trapping of Neuronal Activity in the Mouse Auditory Cortex**

Genichi Tasaka<sup>1</sup>, Amos Shalev<sup>1</sup>, Liqun Luo<sup>2</sup>, Adi Mizrahi<sup>1</sup>

<sup>1</sup>Dept Neurobiology, The Edmond and Lily Safra Center for Brain Sciences, The Hebrew University of Jerusalem, Jerusalem, Israel

<sup>2</sup>Dept Biology, Howard Hughes Medical Institute, Stanford University, Stanford, USA

**O2-I-3-4 Combining multi-unit recording and flavoprotein fluorescence imaging reveals field- and layer-specific sound-evoked neural responses in the rodent auditory cortex**

Jun Nishikawa, Takeaki Haga, Yuishi Tachibana, Yuto Ohtaka, Yasutaka Yanagawa, Hisayuki Osanai, Takashi Tateno

*Grad Sch of Info Sci & Tech, Hokkaido Univ, Sapporo*

**Oral O2-I-4**

18:00 ~ 19:00 Room I (311+312)

**Olfaction**

Chairpersons : Hokto Kazama *Lab for Circuit Mechanisms of Sensory Perception, Brain Science Institute, RIKEN*

Yoshihiro Yoshihara *RIKEN Brain Science Institute*

**O2-I-4-1 On the origin and function of background activity in the mouse piriform cortex *in vivo***

Malinda Lalitha Suvimal Tantirigama, John M Bekkers

*Eccles Institute of Neuroscience, The Australian National University, Canberra, Australia*

**O2-I-4-2 A specific subtype of olfactory bulb interneurons is necessary for odor-detection and discrimination behaviors**

Hiroo Takahashi<sup>1</sup>, Sei-Ichi Yoshihara<sup>1</sup>, Yoichi Ogawa<sup>2</sup>, Ryo Asahina<sup>1</sup>, Masahito Kinoshita<sup>1</sup>,

Tatsuro Kitano<sup>1</sup>, Akio Tsuboi<sup>1</sup>

<sup>1</sup>Lab for Mol Biol of Neural System, Nara Med Univ, Kashihara, Japan <sup>2</sup>Dep of Physiol I, Nara Med Univ, Kashihara, Japan

**O2-I-4-3 Integration of excitatory and inhibitory synaptic inputs in the *Drosophila* mushroom body neurons**

Kengo Inada<sup>1,2</sup>, Hokto Kazama<sup>1,2</sup>

<sup>1</sup>RIKEN Brain Science Institute <sup>2</sup>Graduate School of Arts and Sci, Univ of Tokyo, Japan

**O2-I-4-4 A dynamic feedforward inhibitory circuit for odour processing in the piriform cortex**

Norimitsu Suzuki, John M. Bekkers

*Eccles Inst Neurosci, John Curtin Schl Med Res, Australian National Univ, Canberra, Australia*

**Oral O2-J-1**

9:00 ~ 10:00 Room J (313+314)

**Synapse**

 Chairpersons : Keiko Matsuda *Department of Physiology, Keio University School of Medicine*  
 Katsunori Kobayashi *Department of Pharmacology, Nippon Medical School*

- O2-J-1-1 Trans-Synaptic Modulation of hippocampal CA3 neurons through mossy fiber derived secreted molecule, C1qL2 and C1qL3**  
 Keiko Matsuda<sup>1</sup>, Budisantoso Timotheus<sup>1</sup>, Miwako Yamasaki<sup>2</sup>, Kotaro Konno<sup>2</sup>, Manabu Abe<sup>3</sup>, Motokazu Uchigashima<sup>2</sup>, Masahiko Watanabe<sup>2</sup>, Kenji Sakimura<sup>3</sup>, Michisuke Yuzaki<sup>1</sup>  
<sup>1</sup>Dept Physiol, Univ of Keio, Sch of Med, Tokyo, Japan <sup>2</sup>Dept of Anat, Grad Sch of Med, Hokkaido Univ, Sapporo, Japan  
<sup>3</sup>Dept of Cell Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan
- O2-J-1-2 A Novel Presynaptic Triad: NRXN-Cbln-NPR and Their Orchestration for Synapse Regulation**  
 Sungjin Lee<sup>1</sup>, Mengping Wei<sup>2</sup>, Stephan Maxeiner<sup>1</sup>, Chen Zhang<sup>2</sup>, Thomas C. Sudhof<sup>1</sup>  
<sup>1</sup>Dept Mol Cell Physiol, Stanford Medical School <sup>2</sup>Peking University
- O2-J-1-3 Electroconvulsive stimulation enhances hippocampal synaptic modulation mediated by endogenous monoamines**  
 Katsunori Kobayashi, Hidenori Suzuki  
 Dept Pharmacol, Nippon Med Sch, Tokyo, Japan
- O2-J-1-4 Astrocytes elevate glutamate release in response to histamine**  
 Aniko Karpati, Takeo Yoshikawa, Tadaho Nakamura, Fumito Naganuma, Tomomitsu Iida, Yamato Miura, Kazuhiko Yanai  
 Tohoku University Graduate School of Medicine

**Oral O2-J-2**

10:00 ~ 11:00 Room J (313+314)

**Synaptic Plasticity**

 Chairpersons : Tomoo Hirano *Department of Biophysics, Graduate School of Science, Kyoto University*  
 Takashi Tominaga *Laboratory for Neural Circuit Systems, Institute of Neuroscience, Tokushima Bunri University*

- O2-J-2-1 Relationship between patterns of spontaneous activity in the cultured neuronal network and glucose concentration of culture medium.**  
 Wataru Minoshima<sup>1,2</sup>, Hidekatsu Ito<sup>1,2</sup>, Suguru N. Kudoh<sup>1,2</sup>  
<sup>1</sup>Dept. Sci. and Tech. Kwansai Gakuin University Human Sys. Interaction <sup>2</sup>Reserch Institute of Bio Robotics
- O2-J-2-2 Synaptic plasticity onto oxytocin neurons in the hypothalamic paraventricular nucleus is regulated by systemic energy states.**  
 Shigetomo Suyama<sup>1</sup>, Misato Hirano Kodaira<sup>1</sup>, Zesendorj Otgon-Uul<sup>1</sup>, Yoichi Ueta<sup>2</sup>, Masanori Nakata<sup>1</sup>, Toshihiko Yada<sup>1</sup>  
<sup>1</sup>Div Integrative Physiol, Dept Physiol, Jichi Med Univ Sch of Med, Tochigi, Japan  
<sup>2</sup>Dept of Physiol, Sch of Med, Univ of Occupational and Environmental Health, Kitakyushu 807-8555, Japan
- O2-J-2-3 GABA dependent paired burst facilitation (PBF) is a new class of NMDA-independent short-term plasticity in area CA1 of the hippocampal slice. A voltage-sensitive dye study**  
 Takashi Tominaga, Yoko Tominaga  
 Lab Neural Circuit Systems, Inst Neurosci, Tokushima Bunri Univ
- O2-J-2-4 Amyloid beta suppresses exocytosis of GluA1 containing AMPA-type glutamate receptors in hippocampal long-term potentiation**  
 Hiromitsu Tanaka, Daiki Sakaguchi, Tomoo Hirano  
 Dept. Biophys., Grad. Sch. Sci., Kyoto Univ.

**Oral O2-J-3**

17:00 ~ 18:00 Room J (313+314)

**Axon/Dendrite Growth and Circuit Formation 1**

 Chairpersons : Tadao Usui *Laboratory of Cell Recognition and Pattern Formation, Graduate School of Biostudies, Kyoto University*  
 Atsushi Enomoto *Department of Pathology, Nagoya University Graduate School of Medicine*

- O2-J-3-1 Structural plasticity of the axon initial segment in marmoset prefrontal cortex**  
 Nafiseh Atapour<sup>1</sup>, Marcello G Rosa<sup>1,2</sup>  
<sup>1</sup>Neuroscience Program, Monash Biomedicine Discovery Institute and Department of Physiology, Monash University, Melbourne, Austral  
<sup>2</sup>Australian Research Council Centre of Excellence for Integrative Brain Function, Monash University, Melbourne, Australia

- O2-J-3-2** Inositol 1,4,5-trisphosphate receptor type 3 (IP<sub>3</sub>R3) is important for growth cone turning because it controls the asymmetry in Ca<sup>2+</sup> elevation in response to guidance cues  
 Carmen Chan<sup>1</sup>, Hiroki Akiyama<sup>1</sup>, Noriko Ooashi<sup>1</sup>, Toru Matsuura<sup>2</sup>, Tomomi Shimogori<sup>3</sup>, Katsuhiko Mikoshiba<sup>2</sup>, Hiroyuki Kamiguchi<sup>1</sup>  
<sup>1</sup>RIKEN Brain Science Institute, Lab. for Neuronal Growth Mechanisms <sup>2</sup>RIKEN Brain Science Institute, Developmental Neurobiology <sup>3</sup>RIKEN Brain Science Institute, Molecular Mechanisms of Thalamus Development
- O2-J-3-3** Structural and functional compartmentalization in cerebellar circuitry development : 4D imaging in zebrafish  
 Sachiko Tsuda<sup>1</sup>, Risa Kinno<sup>3</sup>, Hiroaki Miyazawa<sup>3</sup>, Kyo Yamasu<sup>2</sup>  
<sup>1</sup>Research and Development Bureau, Saitama University <sup>2</sup>Graduate School of Science and Engineering, Saitama University <sup>3</sup>Faculty of Science, Saitama University
- O2-J-3-4** Facilitation of axon outgrowth via a Wnt5a-CaMKK-CaMKI $\alpha$  pathway  
 Shin-Ichiro Horigane<sup>1,2</sup>, Natsumi Ageta-Ishihara<sup>1,3</sup>, Satoshi Kamijyo<sup>1</sup>, Hajime Fujii<sup>1</sup>, Michiko Okamura<sup>1</sup>, Makoto Kinoshita<sup>3</sup>, Sayaka Takemoto-Kimura<sup>1,2</sup>, Haruhiko Bito<sup>1</sup>  
<sup>1</sup>Dept Neurochem, Grad Sch Med, Univ of Tokyo <sup>2</sup>Dept of Neurosci I, Res Inst of Environ Med, Nagoya Univ <sup>3</sup>Dept of Mol Biol, Div of Biol Sci, Grad Sch Sci, Nagoya Univ

Oral O2-J-4

18:00 ~ 19:00 Room J (313+314)

## Axon/Dendrite Growth and Circuit Formation 2

Chairpersons : Takeshi Nakamura *Research Institute for Biomedical Sciences, Tokyo University of Science*  
 Takuji Iwasato *National Institute of Genetics*

- O2-J-4-1** cAMP-induced Activation of PKA and p190B Mediates Down-regulation of Plasmalemmal TC10 Activity and Neurite Outgrowth  
 Shingo Koinuma<sup>1</sup>, Tomohisa Nanao<sup>1</sup>, Naoyuki Wada<sup>2</sup>, Takeshi Nakamura<sup>1</sup>  
<sup>1</sup>RIBS, Tokyo Univ of Science, Tokyo, Japan <sup>2</sup>Fac of Sci and Tech, Tokyo Univ of Sci, Japan
- O2-J-4-2** The two receptor tyrosine phosphatases Lar and Ptp69D create a safety net in *Drosophila* photoreceptor axon wiring  
 Satoko Hakeda-Suzuki, Hiroki Takechi, Takashi Suzuki  
 Department of Bioscience and Biotechnology, Tokyo Institute of Technology, Kanagawa, Japan
- O2-J-4-3** Spinal RacGAP  $\alpha$ -chimaerin is required to establish midline barrier for proper corticospinal projection  
 Shota Katori<sup>1,2</sup>, Shigeyoshi Itohara<sup>3</sup>, Takuji Iwasato<sup>1,4</sup>  
<sup>1</sup>Div Neurogenetics, National Institute of Genetics (NIG), Mishima, Japan <sup>2</sup>JSPS Research Fellow <sup>3</sup>Lab for Behav Genetics, RIKEN BSI, Saitama, Japan <sup>4</sup>Dept. Genetics, SOKENDAI, Mishima, Japan

## Oral O3-G-1

17:00 ~ 18:00 Room G (303)

### Disorders of Neural Systems

Chairpersons : Shinji Hadano *Department of Molecular Life Sciences, Tokai University School of Medicine*  
 Tsuyoshi Udagawa *Graduate School of Pharmaceutical Sciences, Tohoku University*


- O3-G-1-1** **Region-specific role of DNA methylation in the reconsolidation of appetitive and aversive memories associated with morphine in rats**  
 Jianjun Zhang, Peng Liu, Nan Sui  
*Institute of Psychology, Chinese Academy of Sciences*
- O3-G-1-2** **The novel ALS2-interacting small G protein Rab17 colocalizes with ALS2/Alsin in recycling endosomes**  
 Suzuka Ono<sup>1</sup>, Asako Otomo<sup>1</sup>, Mitsunori Fukuda<sup>2</sup>, Shinji Hadano<sup>1</sup>  
<sup>1</sup>Dept Mol Life Sci, Tokai Univ Sch of Med, Kanagawa, Japan <sup>2</sup>Grad Sch Life Sci, Tohoku Univ, Sendai, Japan
- O3-G-1-3** **Ribosome ubiquitylation-mediated mRNA/protein quality control is critical for neuronal functions and survival**  
 Tsuyoshi Udagawa, Toshifumi Inada, Takato Sugiyama, Misaki Sato, Risa Nobuta  
*Graduate School of Pharmaceutical Sciences, Tohoku University*
- O3-G-1-4** **Neuroprotective properties of galectin-3 after injury and under diabetic conditions in the peripheral nervous system**  
 Kazunori Sango, Naoko Niimi, Hideji Yako, Masami Tsukamoto  
*Diabetic Neuropathy Project, Tokyo Metr Inst Med Sci*

## Oral O3-G-2

18:00 ~ 19:00 Room G (303)

### Drug Abuse and Addiction

Chairpersons : Takeshi Izumi *Department of Neuropharmacology, Hokkaido University Graduate School of Medicine*  
 Tetsuya Suhara *Department of Functional Brain Imaging Research, National Institute of Radiological Sciences, National Institute for Quantum and Radiological Science and Technology*

- O3-G-2-1** **Synaptic plasticity in the nucleus accumbens core of rats prone to diet-induced obesity**  
 Robyn Mary Brown<sup>1</sup>, Yonatan M Kupchik<sup>2,3</sup>, Sade Spencer<sup>2</sup>, Constanza Garcia-Keller<sup>2,4</sup>, David C Spanswick<sup>5</sup>, Andrew J Lawrence<sup>1</sup>, Stephanie E Simonds<sup>5</sup>, Danielle J Schwartz<sup>2</sup>, Kelsey A Jordan<sup>2</sup>, Thomas C Jhou<sup>2</sup>, Peter W Kalivas<sup>2</sup>  
<sup>1</sup>Florey Neuroscience Institutes, The University of Melbourne, Melbourne, VIC, Australia  
<sup>2</sup>Department of Neurosciences, Medical University of South Carolina, Charleston, SC 29425  
<sup>3</sup>Department of Medical Neurobiology, The Hebrew University, Jerusalem, Israel  
<sup>4</sup>Departamento de Farmacología, Universidad Nacional de Córdoba, Córdoba, Argentina  
<sup>5</sup>Department of Physiology, Monash University, Clayton, Australia
- O3-G-2-2** **The neuroimmunopharmacology of opioids and the CNS drug discovery**  
 Xiaohui Wang  
*Changchun Institute of Applied Chemistry, Chinese Academy of Sciences*
- O3-G-2-3** **A novel mechanism for stress-induced cocaine relapse: Orexin-induced dopaminergic disinhibition mediated by 2-arachidonoylglycerol in the ventral tegmental area**  
 Lih-Chu Chiou<sup>1,2</sup>, Li-Way Tung<sup>1</sup>, Guan-Ling Lu<sup>1</sup>, Yen-Hsien Lee<sup>3</sup>, Lung Yu<sup>4</sup>, Hsin-Jung Lee<sup>1</sup>, Emma Leishman<sup>5</sup>, Heather Bradshaw<sup>5</sup>, Ling-Ling Hwang<sup>3</sup>, Ming-Shiu Hung<sup>6</sup>, Ken Mackie<sup>5</sup>, Andreas Zimmer<sup>7</sup>  
<sup>1</sup>Graduate Institute of Pharmacology, College of Medicine, National Taiwan University, Taipei, Taiwan  
<sup>2</sup>Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taipei, Taiwan  
<sup>3</sup>Graduate Institute of Biomedical Science, Taipei Medical University, Taipei, Taiwan  
<sup>4</sup>Institute of Behavioral Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan  
<sup>5</sup>Gill Center and the Department of Psychological and Brain Sciences, Indiana University, Bloomington, Indiana, USA  
<sup>6</sup>Institute of Biotechnology and Pharmaceutical Research, National Health Research Institutes, Zhunan, Miaoli County, Taiwan  
<sup>7</sup>Institute for Molecular Psychiatry, University of Bonn, Bonn, Germany
- O3-G-2-4** **The blockade of GABAA receptors attenuates the inhibitory effect of orexin type 1 receptors antagonist on morphine withdrawal syndrome in rats**  
 Mahnaz Davoudi, Hossein Azizi, Javad Mirnajafi-Zadeh, Saeed Semnianian  
*Tarbiat Modares University*

## Oral O3-H-1

9:00 ~ 10:00 Room H (304)

## Neurodevelopmental Disorders • Depression

Chairpersons : Teruyuki Tanaka *Department of Developmental Medical Sciences, Graduate School of Medicine, The University of Tokyo*Tadafumi Kato *RIKEN, Brain Science Institute*

- O3-H-1-1 The role of autism susceptibility gene AUTS2 in the cerebellar Purkinje development**  
Kei Hori<sup>1</sup>, Ryo Aoki<sup>1</sup>, Asami Sakamoto<sup>1</sup>, Tomoo Owa<sup>1</sup>, Satoshi Miyashita<sup>1</sup>, Manabu Abe<sup>2</sup>, Maya Yamazaki<sup>2</sup>, Kenji Sakimura<sup>2</sup>, Mikio Hoshino<sup>1</sup>  
<sup>1</sup>Dept Biochem. & Cell Biol, National Institute of Neuroscience, NCNP, Tokyo, Japan <sup>2</sup>Cell Neurobiol, Brain Res Inst, Niigata Univ
- O3-H-1-2 CDKL5 controls postsynaptic NMDA receptor localization and regulates memory, emotion and seizure susceptibility**  
Takuto Murakami<sup>1</sup>, Kosuke Okuda<sup>1</sup>, Shizuka Kobayashi<sup>2</sup>, Masahiro Fukaya<sup>3</sup>, Keizo Takao<sup>4,5</sup>, Aya Watanabe<sup>1</sup>, Mai Hagiwara<sup>1</sup>, Hiroyuki Sakagami<sup>3</sup>, Masashi Mizuguchi<sup>1</sup>, Tsuyoshi Miyakawa<sup>4,6</sup>, Toshiya Manabe<sup>2</sup>, Teruyuki Tanaka<sup>1</sup>  
<sup>1</sup>Dept Developmental Med Sci, Univ of Tokyo, Tokyo, Japan  
<sup>2</sup>Division of Neuronal Network, Dept. of Basic Medical Sciences, The Univ. of Tokyo, Tokyo, Japan  
<sup>3</sup>Dept. of Anatomy, Kitasato Univ. School of Medicine, Sagamihara, Japan  
<sup>4</sup>Center for Genetic Analysis of Behavior, National Institute for Physiological Sciences, Okazaki, Japan  
<sup>5</sup>Division of Animal Resources and Development, Life Science Research Center, Univ of Toyama  
<sup>6</sup>Division of Systems Medical Science, Fujita Health University
- O3-H-1-3 Maternal fluoxetine treatment influences anxiety- and depressive-like behaviours in adolescent offspring: a rodent model**  
Kelly Newell, Samuel Millard, Connor Mackay, Marta Ramos, Rebecca Webby, Jeremy Lum, Francesca Fernandez  
*University of Wollongong*
- O3-H-1-4 Characterization of novel orally active soy-derived decapeptide that exerts antidepressant-like effect via the gut-brain axis**  
Kousaku Ohinata<sup>1</sup>, Yukiha Mori<sup>1</sup>, Akane Yamamoto<sup>1</sup>, Atsushi Kurabayashi<sup>2</sup>, Masaru Sato<sup>2</sup>, Hideyuki Suzuki<sup>2</sup>, Saori Odagiri<sup>3</sup>, Daisuke Yamada<sup>3</sup>, Masayuki Sekiguchi<sup>3</sup>, Keiji Wada<sup>3</sup>, Ryuhei Kanamoto<sup>1</sup>  
<sup>1</sup>Grad Sch Agr, Kyoto Univ, Kyoto <sup>2</sup>Kazusa DNA Inst, Chiba <sup>3</sup>Natl Inst Neurosci, NCNP, Tokyo

## Oral O3-H-2

10:00 ~ 11:00 Room H (304)

## Autism

Chairpersons : Hidenori Yamasue *Department of Neuropsychiatry, Graduate School of Medicine, University of Tokyo*  
Yoko Kamio *Department of Child and Adolescent Mental Health, National Institute of Mental Health, National Center of Neurology and Psychiatry*

- O3-H-2-1 Comprehensive behavioral analysis of RNG105 heterozygous mice: reduced social interaction and attenuated response to novelty**  
Rie Ohashi<sup>1,2</sup>, Keizo Takao<sup>4,6</sup>, Tsuyoshi Miyakawa<sup>5,6</sup>, Nobuyuki Shiina<sup>1,2,3</sup>  
<sup>1</sup>Lab of Neuronal Cell Biol., Nat'l Inst. for Basic Biol., Aichi, Japan <sup>2</sup>Dep. of Basic Biol., SOKENDAI, Aichi, Japan  
<sup>3</sup>Okazaki Inst. for Integr. Biosci., Aichi, Japan <sup>4</sup>Life Sci. Res. Ctr., Univ. of Toyama, Toyama, Japan  
<sup>5</sup>Div. of Systems Med. Sci., ICMS, Fujita Health Univ., Toyoake, Japan <sup>6</sup>Sec. of Behav. Patterns, Nat'l Inst. for Physiol. Sci.
- O3-H-2-2 Homozygotes of model mice for human chromosome 15q11-q13 duplication show severe developmental abnormalities.**  
Jin Nakatani<sup>1</sup>, Natsu Koyama<sup>2</sup>, Seiji Hitoshi<sup>2</sup>, Toru Takumi<sup>3</sup>, Tomoko Kato<sup>1</sup>, Ikuo Tooyama<sup>1</sup>, Akihiko Shiino<sup>1</sup>, Shigehiro Morikawa<sup>1</sup>, Toshiro Inubushi<sup>1</sup>  
<sup>1</sup>Molecular Neuroscience Research Center, Shiga University of Medical Science, Otsu, Japan  
<sup>2</sup>Dept of integrative Physiology, Shiga University of Medical Science <sup>3</sup>Brain Sci Inst, RIKEN
- O3-H-2-3 Neurobehavioral abnormalities in a mouse model for human 15q25.2-25.3 deletion**  
Jun Nomura<sup>1,2</sup>, Akifumi Kanda<sup>2</sup>, Yusuke Sotomaru<sup>2</sup>, Toru Takumi<sup>1,2</sup>  
<sup>1</sup>RIKEN Brain Science Institute, Saitama, Japan <sup>2</sup>Grad Sch Biomed and Health Sci, Hiroshima Univ, Hiroshima, Japan
- O3-H-2-4 Stability of the acoustic startle response and its modulation in children with typical development and those with autism spectrum disorders over one-year follow-up**  
Hidetoshi Takahashi<sup>1,2</sup>, Takayuki Nakahachi<sup>1</sup>, Andrew Stickley<sup>1</sup>, Makoto Ishitobi<sup>1</sup>, Yoko Kamio<sup>1</sup>  
<sup>1</sup>Department of Child and Adolescent Mental Health, National Institute of Mental Health, National Center of Neurology and Psychiatry  
<sup>2</sup>Department of Advanced Neuroimaging, Integrative Brain Imaging Center, National Center of Neurology and Psychiatry

**Oral O3-H-3**

17:00 ~ 18:00 Room H (304)

**Learning and Cognition: Signal Transduction**

 Chairpersons : Hiroyuki Okuno *Medical Innovation Center, Kyoto University Graduate School of Medicine*  
 Nobuyuki Shiina *National Institute for Basic Biology*

- O3-H-3-1 Neuronal orphan G-protein coupled receptors transduce Plasmalogens signaling leading to ERK and Akt activation**  
 Kurumi Mineno, Shamim Md Hossain, Toshihiko Katafuchi  
*Dept Int Physiol, Univ of Kyushu, Fukuoka, Japan*
- O3-H-3-2 The special lipids, plasmalogens, improve memory by accelerating BDNF-TrkB signaling in the hippocampus**  
 Shamim Md Hossain<sup>1</sup>, Masataka Ifuku<sup>1</sup>, Yuichi Abe<sup>2</sup>, Masanori Honsho<sup>2</sup>, Jun Kawamura<sup>3</sup>, Kiyotaka Miake<sup>3</sup>, Yukio Fujiki<sup>2</sup>, Toshihiko Katafuchi<sup>1</sup>  
<sup>1</sup>*Dept Integr Physiol, Grad Sch Med Sci, Kyushu Univ, Japan* <sup>2</sup>*Med Inst Bioregulation, Kyushu Univ, Japan*  
<sup>3</sup>*Central Res Inst, Marudai Food Co.*
- O3-H-3-3 Epigenetic modification of BDNF and FGF-1 expression by glucose in the murine hippocampus**  
 Yutaka Oomura, Shamim M Hossain, Toshihiko Katafuchi  
*Dept Integrative Physiol, Grad Sch Med Sci, Kyushu Univ, Fukuoka, Japan*
- O3-H-3-4 Activity-dependent RNA methylation in learning and memory**  
 Jocelyn Widagdo<sup>1,2</sup>, Qiong-Yi Zhao<sup>1</sup>, Victor Anggono<sup>1,2</sup>, Timothy W Bredy<sup>1,3</sup>  
<sup>1</sup>*Queensland Brain Institute, The University of Queensland, Brisbane, QLD 4072, Australia*  
<sup>2</sup>*Clem Jones Centre for Ageing Dementia Research, The University of Queensland, Brisbane, QLD 4072, Australia*  
<sup>3</sup>*Center for the Neurobiology of Learning and Memory and Department of Neurobiology and Behavior, University of California, Irvine*

**Oral O3-H-4**

18:00 ~ 19:00 Room H (304)

**Learning and Cognition: New Technologies**

 Chairpersons : Mineki Oguchi *Tamagawa University Brain Science Institute*  
 Hiroyuki Hioki *Department of Morphological Brain Science, Graduate School of Medicine, Kyoto University*

- O3-H-4-1 Axonal transport of moving cargoes: A dual-colour video microscopy study in living SCG neurons**  
 Christy Oi Ying Hung, Michael Coleman  
*Dept of Clinical Neurosciences, University of Cambridge, Cambridge, UK*
- O3-H-4-2 Delayed activation of adenylate cyclase 1 as a causality detector of Action-Reward conditioning: Simulation and experiments**  
 Hidetoshi Urakubo<sup>1</sup>, Kazuhiro Aoki<sup>2</sup>, Sho Yagishita<sup>3</sup>, Haruo Kasai<sup>3</sup>, Shin Ishii<sup>1</sup>  
<sup>1</sup>*Dept Sys Sci, Grad Sch Info, Kyoto Univ, Kyoto, Japan*  
<sup>2</sup>*Imaging Platform for Spatio-Temporal Information, Grad Sch Med, Kyoto Univ, Kyoto, Japan*  
<sup>3</sup>*CDBIM, Grad Sch Med, Univ of Tokyo, Tokyo, Japan*
- O3-H-4-3 Electromicroscopy of protein complex rearrangements in neurons and brain tissues in liquid**  
 Chikara Sato, Nassirhadjy Memtily, Masaaki Kawata, Tomoko Okada, Mari Sato, Tatsuhiko Ebihara  
*Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, Japan*

**Oral O3-I-1**

9:00 ~ 10:00 Room I (311+312)

**Vision: Recognition**

 Chairpersons : Manabu Tanifuji *RIKEN Brain Science Institute*  
 Hidehiko Komatsu *National Institute for Physiological Sciences*

- O3-I-1-1 Responses to single colors cannot predict chromatic interaction profile in macaque area V4**  
 Takahisa M Sanada<sup>1,2</sup>, Hidehiko Komatsu<sup>1,2</sup>  
<sup>1</sup>*NIPS, Aichi, Japan.* <sup>2</sup>*SOKENDAI, Okazaki, Japan*
- O3-I-1-2 Central and peripheral part of receptive field of TE neurons may be formed through different cortical pathways between V4 and area TE**  
 Keitaro Obara<sup>1,2</sup>, Kazunori O'hashi<sup>2</sup>, Manabu Tanifuji<sup>1,2,3</sup>  
<sup>1</sup>*Dept Life Sci & Med Biosci, Waseda Univ, Tokyo, Japan* <sup>2</sup>*Brain Sci Inst, RIKEN, Wako, Japan*  
<sup>3</sup>*Dept Comp Sci Eng, Univ Tokyo, Kashiwa, Japan*

**O3-I-1-3 Broadly tuned neuronal responses to face-like patterns in the monkey superior colliculus**Quan Van Le<sup>1</sup>, Quang Van Le<sup>2</sup>, Hiroshi Nishimaru<sup>2</sup>, Jumpei Matsumoto<sup>2</sup>, Yusaku Takamura<sup>2</sup>, Taketoshi Ono<sup>2</sup>, Hisao Nishijo<sup>2</sup><sup>1</sup>Department of Physiology, Vietnam Military Medical University, 160 Phung Hung, Phuc La, Ha Dong, Hanoi, Vietnam  
<sup>2</sup>System Emotional Science, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Japan**O3-I-1-4 A hierarchical statistical model of face-selective IT neurons**Haruo Hosoya<sup>1</sup>, Aapo Hyvarinen<sup>2</sup><sup>1</sup>ATR Computational Neuroscience Laboratories, Kyoto 619-0288, Japan <sup>2</sup>Helsinki University, Helsinki, Finland**Oral O3-I-2****10:00 ~ 11:00 Room I (311+312)****Vision: High-level**Chairpersons : Munetaka Shidara *University of Tsukuba Faculty of Medicine*  
Kaunitz Lisandro *RCAST, University of Tokyo***O3-I-2-1 Task-specific, dimension-based modulation of neuronal responses in monkey area MT**Detlef Wegener, Fingal Orlando Galashan, Magdalena Przybyla, Andreas Kurt Kreiter, Bastian Schlegel  
*Brain Research Institute, Center for Cognitive Science, University of Bremen***O3-I-2-2 The effect of visual noise on the behavioral reaction time during pattern recognition is explained by the information encoded in the Macaque inferior temporal neuronal responses.**Ryosuke Kuboki<sup>1</sup>, Yasuko Sugase-Miyamoto<sup>2</sup>, Narihisa Matsumoto<sup>2</sup>, Barry J Richmond<sup>3</sup>, Munetaka Shidara<sup>1,4</sup><sup>1</sup>Grad Sch of Comprehensive Human Sci, University of Tsukuba, Tsukuba, Japan <sup>2</sup>Human Info. Res. Inst., AIST, Tsukuba, Japan  
<sup>3</sup>NIMH/NIH, Bethesda, MD, USA <sup>4</sup>Faculty of Medicine, University of Tsukuba, Tsukuba, Japan**O3-I-2-3 The Speed of Metacognition**Lisandro Kaunitz<sup>1,2</sup>, Dror Cohen<sup>2</sup>, Roger Koenig-Robert<sup>6</sup>, Naotsugu Tsuchiya<sup>2,3,4,5</sup><sup>1</sup>The University of Tokyo <sup>2</sup>School of Psychological Sciences, Faculty of Biomedical and Psychological Sciences, Monash University  
<sup>3</sup>Monash Institute of Cognitive and Clinical Neurosciences, Monash University<sup>4</sup>Visiting Researcher at Department of Dynamic Brain Imaging, Advanced Telecommunications Research (ATR), Japan<sup>5</sup>Visiting Researcher at CiNet, Osaka University, Japan<sup>6</sup>School of Psychology, Faculty of Science, University of New South Wales, Sydney, Australia.**Oral O3-I-3****17:00 ~ 18:00 Room I (311+312)****Computational Theories and New Technologies**Chairpersons : Makoto Ito *Okinawa Institute of Science and Technology Graduate University, Neural Computation Unit*  
Okito Yamashita *Neural Information Analysis Laboratories, ATR***O3-I-3-1 Nonlinear dimension reduction of optically recorded activities of hippocampus CA1 pyramidal neurons revealed not only spatial but also motion information coding**Makoto Ito, Kenji Doya  
*Okinawa Inst Sci & Tech, Okinawa, Japan***O3-I-3-2 Hyperacuity Bayesian technique to enhance temporal resolution of two-photon recording of complex spikes of cerebellar Purkinje cells**Huu Thien Hoang<sup>1,2</sup>, Okito Yamashita<sup>2</sup>, Isao T. Tokuda<sup>1</sup>, Kazuo Kitamura<sup>3</sup>, Masa-Aki Sato<sup>2</sup>, Mitsuo Kawato<sup>4</sup>, Keisuke Toyama<sup>2</sup><sup>1</sup>Department of Mechanical Engineering, Ritsumeikan University <sup>2</sup>ATR Neural Information Analysis Laboratories, Kyoto 619-0288, Japan<sup>3</sup>Department of Physiology, Division of Medicine, Graduate School of Interdisciplinary Research, University of Yamanashi, Yamanashi<sup>4</sup>ATR Computational Neuroscience Laboratories, Kyoto 619-0288, Japan**O3-I-3-3 Minimally invasive endovascular array for high-fidelity chronic recordings of cortical neural activity**Sam Emmanuel John<sup>1,2,3</sup>, Thomas J Oxley<sup>2,3,5</sup>, Nicholas L Opie<sup>2,3</sup>, Gil S Rind<sup>2,3</sup>, Stephen Ronayne<sup>2,3</sup>, Jack Judy<sup>4</sup>, David B Grayden<sup>1</sup>, Clive N May<sup>2,3</sup>, Terence O'Brien<sup>2,5</sup><sup>1</sup>Dept Electronic and Electrical Engineering, University of Melbourne, Melbourne, Australia<sup>2</sup>Dept of Medicine, University of Melbourne, Melbourne, Australia<sup>3</sup>Florey Institute of Neuroscience and Mental Health, Melbourne, VIC, Australia <sup>4</sup>University of Florida, Florida, United States of America<sup>5</sup>Royal Melbourne Hospital, Melbourne, Australia**O3-I-3-4 *In actio* optophysiological analyses reveal functional diversification of dopaminergic neurons in the nematode *C. elegans***Yuki Tanimoto<sup>1</sup>, Ying G Zheng<sup>1</sup>, Xianfeng Fei<sup>2</sup>, Yukako Fujie<sup>1</sup>, Koichi Hashimoto<sup>3</sup>, Kotaro Kimura<sup>1</sup><sup>1</sup>Dept. Biol. Sci., Osaka Univ., Osaka, Japan <sup>2</sup>Dept. Intel. Inf. Syst., Fac. Sci. Tech., Tohoku Bunka Gakuen Univ., Sendai, Japan<sup>3</sup>Dept. Syst. Inf. Sci., Tohoku Univ., Sendai, Japan.

**Oral O3-I-4**

18:00 ~ 19:00 Room I (311+312)

**Somatosensation**

 Chairpersons : Minami Ito *Graduate School of Health Care Sciences, Tokyo Medical and Dental University (TMDU)*  
 Tomomi Shimogori *RIKEN BSI*

- O3-I-4-1 Two types of orbitofrontal cortical projection from the rat submedial thalamic nucleus: Possible function in descending pain modulation**  
 Eriko Kuramoto<sup>1</sup>, Haruki Iwai<sup>1</sup>, Atsushi Yamanaka<sup>1</sup>, Ryozo Sendo<sup>2</sup>, Sachi Ohno<sup>2</sup>, Takahiro Furuta<sup>3</sup>, Hiroyuki Hioki<sup>3</sup>, Tetsuya Goto<sup>1</sup>  
<sup>1</sup>Dept Oral Anatomy and Cell Biol, Kagoshima Univ, Kagoshima, Japan <sup>2</sup>Dept Dental Anesthesiol, Kagoshima Univ, Kagoshima, Japan <sup>3</sup>Dept Morphol Brain Sci, Univ of Kyoto, Kyoto, Japan
- O3-I-4-2 Cortico-cortical and thalamocortical connections between the hand and face regions of area 3b are unaffected following dorsal spinal cord injuries in macaque monkeys**  
 Prem Chand, Neeraj Jain  
*National Brain Research Centre, Manesar, India*
- O3-I-4-3 Tactile Sensory Processing in Barrel Cortex Is Modified Following Alzheimer's Disease Induced by Chemical Lesion: Role of Nucleus Basalis of Meynert in Modulating Sensory Information**  
 Bahman Sadeghi  
*Dept Physiology, Shahid Beheshti University of Medical Sciences, Tehran, Iran*
- O3-I-4-4 Haptic sensation can be examined by the material discrimination task for human subjects**  
 Minami Ito, Akiho Tsuzura, Mutsumi Sasaki  
*Tokyo Medical and Dental University*

**Oral O3-J-1**

9:00 ~ 10:00 Room J (313+314)

**Motor Production**

 Chairpersons : Akio Ikeda *Department of Epilepsy, Movement Disorders and Physiology, Kyoto University Graduate School of Medicine*  
 Eiichi Naito *National Institute of Information and Communications Technology, Center for Information and Neural Networks*

- O3-J-1-1 Human motor inhibition network as revealed by epicortical ERP, CCEP and high frequency cortical stimulation.**  
 Hirofumi Takeyama<sup>1</sup>, Riki Matsumoto<sup>2</sup>, Kiyohide Usami<sup>1</sup>, Akihiro Shimotake<sup>1</sup>, Takeharu Kunieda<sup>3</sup>, Susumu Miyamoto<sup>3</sup>, Ryosuke Takahashi<sup>1</sup>, Akio Ikeda<sup>2</sup>  
<sup>1</sup>Dept Neurol, Univ of Kyoto, Kyoto, Japan <sup>2</sup>Dept Epilepsy, Movement Disorders and Physiology, Univ of Kyoto, Kyoto, Japan <sup>3</sup>Dept Neurosurgery, Univ of Kyoto, Kyoto, Japan
- O3-J-1-2 Functional mapping of praxis : Electrical cortical stimulation study**  
 Akihiro Shimotake<sup>1</sup>, Riki Matsumoto<sup>2</sup>, Katsuya Kobayashi<sup>1</sup>, Takeharu Kunieda<sup>3</sup>, Nobuhiro Mikuni<sup>4</sup>, Susumu Miyamoto<sup>3</sup>, Ryosuke Takahashi<sup>1</sup>, Akio Ikeda<sup>2</sup>  
<sup>1</sup>Dept. of Neurol, Grad. Sch. of Med., Kyoto Univ. <sup>2</sup>Dept. of Epi, Mov Disord & Physiol <sup>3</sup>Dept. of Neurosurg <sup>4</sup>Dept. of Neurosurg, Sapporo Med Univ. Sapporo
- O3-J-1-3 Analysis of eye-movement when drawing a line**  
 Emiko Shishido<sup>1,2</sup>, Shuntaro Okazaki<sup>2</sup>, Keiji Imoto<sup>2</sup>, Norihiro Sadato<sup>2</sup>, Naohiro Fukumura<sup>3</sup>, Norio Ozaki<sup>1,2</sup>  
<sup>1</sup>Nagoya University Graduate School of Medicine, Nagoya, Japan <sup>2</sup>National Institute for Physiological Sciences, Okazaki, Japan <sup>3</sup>Toyohashi University of Technology, Toyohashi, Japan
- O3-J-1-4 Maturation of cerebellar afferent and efferent tracts in typically developed brains**  
 Kaoru Amemiya<sup>1</sup>, Tomoyo Morita<sup>1,2</sup>, Daisuke N Saito<sup>3</sup>, Midori Ban<sup>4</sup>, Koji Shimada<sup>3</sup>, Yuko Okamoto<sup>3</sup>, Hiroataka Kosaka<sup>3</sup>, Hidehiko Okazawa<sup>3</sup>, Minoru Asada<sup>2</sup>, Eiichi Naito<sup>1</sup>  
<sup>1</sup>National Institute of Information and Communications Technology <sup>2</sup>Osaka University <sup>3</sup>Fukui University <sup>4</sup>Doshisha University



## Oral O3-J-2

10:00 ~ 11:00 Room J (313+314)

## Learning and Cognition: Others

Chairpersons : Kazuyuki Samejima *Tamagawa University Brain Science Institute*  
 Hiroshi Imamizu *The University of Tokyo*

- O3-J-2-1 Stress and anger management on brain regions, brain lobes, brain waves, blood pressure and pulse rate among higher secondary students**  
 Suriyakumar Veerakumar, Krishann Saraladevi  
*Tamil Nadu Teachers Education University*
- O3-J-2-2 Construction of EEG-based evaluation system for working memory ability - a feasibility study**  
 Chong-Kai Huang<sup>1</sup>, Cihun-Siyong Alex Gong<sup>1,4</sup>, Hsin-Yung Chen<sup>2</sup>, Chia-Yen Yang<sup>3</sup>  
<sup>1</sup>*Department of Electrical Engineering, Chang Gung University, Taoyuan, Taiwan*  
<sup>2</sup>*Department of Occupational Therapy & Graduate Institute of Behavioral Sciences, College of Medicine, Chang Gung University, Taoyuan, Taiwan*  
<sup>3</sup>*Department of Biomedical Engineering, Ming Chuan University, Taoyuan, Taiwan* <sup>4</sup>*Chang Gung Memorial Hospital, Taoyuan, Taiwan*
- O3-J-2-3 Human's Episodic Learning : Subsequent Memory Analysis on Large fMRI Dataset**  
 Supat Saetia, Natsue Yoshimura, Yasuharu Koike  
*Department of Information Processing, Tokyo Institute of Technology, Tokyo, Japan*

## Oral O3-J-3

17:00 ~ 18:30 Room J (313+314)

## Motor Control

Chairpersons : Takahiro Furuta *Dept. Morphological Brain Science, Grad. School of Medicine, Kyoto Univ.*  
 Yuriko Sugiuchi *Department of Systems Neurophysiology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University*

- O3-J-3-1 Contribution of bilateral lateral intraparietal area to induction of visually guided saccades after V1 lesion.**  
 Rikako Kato<sup>1</sup>, Takuya Hayashi<sup>2</sup>, Masayuki Kawahara<sup>2</sup>, Masatoshi Yoshida<sup>1,3</sup>, Hiroataka Onoe<sup>2</sup>, Tadashi Isa<sup>1,3</sup>  
<sup>1</sup>*Dept of Dev. Physiol. Nat'l Inst. Physiol. Sci., Okazaki, Japan* <sup>2</sup>*CLST, RIKEN, Kobe* <sup>3</sup>*Grad Univ Adv Stud, Hayama, Japan*
- O3-J-3-2 Comparison of Neuronal Activity in Globus Pallidus and Motor Thalamus of Monkeys during Motor Tasks**  
 Kiyoshi Kurata  
*Dept Physiol, Hirosaki Univ Sch Medicine, Japan*
- O3-J-3-3 Neural circuit of the superior colliculus output system for control of coordinated eye and head movements**  
 Mayu Takahashi, Yuriko Sugiuchi, Yoshikazu Shinoda  
*Department of Systems Neurophysiology, Tokyo Medical and Dental University, Tokyo, Japan*
- O3-J-3-4 Functional organization of the lateral part of the mesopontine tegmentum in relation to the control of posture and locomotion**  
 Kaoru Takakusaki  
*Research Center for Brain Function and Medical Engineering, Asahikawa Medical University, Japan*
- O3-J-3-5 Cerebellar lobules receive spatiotemporally specific inputs from the cerebral cortex**  
 Myeong Jeong Choo<sup>1</sup>, Riichiro Hira<sup>2</sup>, Masanori Matsuzaki<sup>2</sup>, Masanobu Kano<sup>1</sup>, Kazuo Kitamura<sup>1,3</sup>  
<sup>1</sup>*Dept Physiol, Grad Sch Med, Univ of Tokyo, Tokyo, Japan* <sup>2</sup>*Div Brain Circuit, NIBB, Aichi, Japan*  
<sup>3</sup>*Dept Physiol, Univ of Yamanashi, Yamanashi, Japan*
- O3-J-3-6 Correlation between the motor coding and axonal arborization of layer 5 neurons in rat motor cortex**  
 Ken-Ichi Shibata<sup>1</sup>, Takuma Tanaka<sup>2</sup>, Takeshi Kaneko<sup>1</sup>, Takahiro Furuta<sup>1</sup>  
<sup>1</sup>*Dept Morphol Brain Sci, Grad Sch Med, Kyoto Univ, Kyoto, Japan*  
<sup>2</sup>*Data Science Education and Research Center, Shiga Univ, Shiga, Japan*