

Poster Sessions

Day 1 - Thursday, September 11th
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 P1-Even No. : 16:00 ~ 17:00
 Venue : Exhibition Hall B

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Poster Sessions

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Ion Channels and Excitable Membranes

- P1-001** **Detecting the Monovalent Cation Concentrations at the Vicinity of the Plasma Membrane**
Wan Hsuan Hsu, Chien-Yuan Pan
Dept. of Life science, National Taiwan University, Taipei, Taiwan
- P1-002** **Differential expression of Kir2.x inward rectifier K⁺ channels in neurons and glial cells in rat dorsal root ganglion and spinal cord**
Yuzo Murata¹, Yuko Honda¹, Toshiharu Yasaka¹, Makoto Takano², Sadahiko Masuko¹, Keiko Ishihara²
¹*Dept. of Anat. and Pysiol., Saga Med.Sch.* ²*Dept Physiology, Kurume University School of Medicine, Kurume, Japan*
- P1-003** **Roles of acid-sensing ion channel-1a in hippocampal adult neurogenesis**
Natsuko Kumamoto, Mariko Hoshikawa, Yasuhiro Shibata, Takashi Ueda, Shinya Ugawa
Dept. of Neurobiology and Anatomy, Graduate School of Medical Sciences, Nagoya City university
- P1-004** **Involvement of TASK channels in rank-ordered recruitment of masseter motoneurons**
Hiroki Toyoda, Keiko Hirao, Norihito Emura, Mitsuru Saito, Hajime Sato, Tsutomu Kawano, Youngnam Kang
Osaka Univ Grad Sch Dentistry, Dept Neurosci and Oral Physiol
- P1-005** **Activation efficiency of the G protein gated inwardly rectifying potassium channel depends on distance from the Gq but not Gi/o coupled receptors**
Michihiro Tateyama^{1,2}, Yoshihiro Kubo^{1,2}
¹*Div Biophys and Neurobiol, Dept Physiol Sci, NIPS, Aichi, Japan* ²*Dept Physiol Sci, SOKENDAI, Kanagawa, Japan*
- P1-006** **The Kv2.1 voltage-gated potassium channel regulates action potentials in cerebellar Purkinje cells**
Yuan Li, Shoji Watanabe, Hiroaki Misonou, Moritoshi Hirono
Laboratory of Ion Channel Pathophysiology, Graduate School of Brain Science, Doshisha University, Kyoto, Japan
- P1-007** **Involvement of nitric oxide-induced calcium release in extinction of cerebellar motor-learning**
Sho Kakizawa¹, Yasushi Kishimoto², Taisuke Miyazaki³, Midori Tanaka¹, Takashi Murayama⁴, Masahiko Watanabe³, Masamitsu Iino⁵, Hiroshi Takeshima¹
¹*Dept Biol Chem, Grad Sch Pharmaceu Sci, Kyoto Univ, Kyoto, Japan*
²*Dept Biophysics, Kagawa Sch Pharmaceu Sci, Tokushima Bunri Univ, Sanuki, Japan*
³*Dept Anat, Grad Sch Med, Hokkaido Univ, Sapporo, Japan* ⁴*Dept Pharmacol, Juntendo Univ Sch Med, Tokyo, Japan*
⁵*Dept Pharmacol, Grad Sch Med, Univ Tokyo, Tokyo, Japan*
- P1-008** **Expression of alpha-2-delta-1 subunit at the spinal cord in spinal cord injury rats**
Kazuki Kusuyama¹, Toshiya Tachibana², Hiroki Yamanaka¹, Shinichi Yoshiya², Koichi Noguchi¹
¹*Dept Anatomy & Neurosci, Hyogo Col of Med, Hyogo, Japan* ²*Dept Ortho Surg, Hyogo Col of Med, Hyogo, Japan*
- P1-009** **Effects of extracellular electric fields on spike initiation and intracellular Ca²⁺ elevation in single hippocampal CA1 pyramidal neuron**
Takamitsu Fujimori, Masashi Inoue, Hiroyoshi Miyakawa
Laboratory of Cellular Neurobiology, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan
- P1-010** **Current Clamp Analysis of Low-voltage-activated Ca²⁺ Current in Avian Nucleus Laminaris**
Ryota Fukaya¹, Rei Yamada¹, Hiroshi Kuba^{1,2}
¹*Dept Cell Physiol, Nagoya Univ, Aichi, Japan* ²*JST PRESTO*
- P1-011** **Proteomic identification of TARP γ -8-interacting proteins in rat synaptosomal P2 fraction**
Makoto Itakura, Etsuko Nagata, Tsukiko Sugaya, Masami Takahashi
Dept Biochem, Univ of Kitasato, Kanagawa, Japan
- P1-012** **Mechanisms underlying the motility of ependymal cell cilia in the third ventricle of the mouse brain**
Shigeru Yoshida, Seiji Ishio, Naoko Sakaki, Arata Onji, Teruki Hagiwara
Kinki University
- P1-013** **Modulation by ATP of glycine receptors in rat retinal ganglion cells**
Pingping Zhang¹, Yi-Yang Li^{1,2,3,4}, Shi-Jun Weng^{1,2,3,4}, Xiong-Li Yang^{1,2,3,4}, Yong-Mei Zhong^{1,2,3,4}
¹*Fudan University* ²*Institute of Neurobiology* ³*Institutes of Brain Science* ⁴*State Key Laboratory of Medical Neurobiology*
- P1-014** **Group I metabotropic glutamate receptors regulate the excitability of rat retinal ganglion cells**
Qian Li¹, Yi Wu^{1,2,3,4}, Xiao-Han Wang^{1,2,3,4}, Xiong-Li Yang^{1,2,3,4}, Zhong-Feng Wang^{1,2,3,4}
¹*Fudan University* ²*Institutes of Brain Science* ³*Institute of Neurobiology* ⁴*State Key Laboratory of Medical Neurobiology*

Neurotransmitters, Gliotransmitters, and Modulators

- P1-015** **Direct and indirect striatal projection neurons exhibited slow calcium oscillations**
 Atsushi Tamura¹, Naohiro Yamada², Yuichi Yaguchi², Satomi Kikuta¹, Noriyasu Homma¹, Kazuto Kobayashi³, Makoto Osanai¹
¹Tohoku Univ Grad Sch Med, Miyagi, Japan ²Grad Sch Eng, Osaka Univ, Osaka, Japan ³Dept Mol Gen, Inst Biomed Sci, Fukushima Med Univ, Fukushima, Japan
- P1-016** **Comparison of the characteristics of two different fluorescent probes for neurotransmitter release**
 Takuya Hikima, Gordon W Arbuthnott
 Brain Mechanisms for Behaviour Unit, Okinawa Institute of Science and Technology, Okinawa, Japan
- P1-017** **GABAergic inhibition nullifies excitatory dendritic inputs**
 Chiaki Kobayashi¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Laboratory of Chemical Pharmacology, Graduate School of Pharmaceutical Sciences, The University of Tokyo ²Center for Information and Neural Networks
- P1-018** **Substance P regulates TRP-like nonselective cation channels and K⁺ channels via phosphatidylcholine-specific phospholipase C-dependent and -independent signaling pathways in nNOS-expressing GABAergic neurons in mouse visual cortex**
 Toshiaki Endo¹, Yuchio Yanagawa², Yukio Komatsu¹
¹Research Institute of Environmental Medicine, Nagoya University ²Dept Genetic and Behavioral Neuroscience, Gunma University Graduate School of Medicine and JST, CREST, Gunma, JAPAN
- P1-019** **Discovery and characterization of novel candidate genes involved in the modulation of nicotinic acetylcholine receptor**
 Yasuhiro Moriwaki, Natsuki Kubo, Taro Sugino, Hidemi Misawa
 Dept Pharmacol, Fac Pharm, Keio Univ. Tokyo, Japan
- P1-020** **Change in physiological actions by controlling mesolimbic dopaminergic system using an optogenetic tool**
 Moe Watanabe¹, Akira Yamashita^{1,2}, Michiko Narita¹, Yusuke Hamada¹, Hideki Tamura³, Daigo Ikegami¹, Naoko Kuzumaki¹, Akihiro Yamanaka², Minoru Narita^{1,3}
¹Dept. Pharmacol., Hoshi Univ. Sch. of Pharm. and Pharmaceut. Sci., Tokyo, Japan ²Dept. Neurosci. II, RIEM, Nagoya Univ. Aichi, Japan ³Life Science Tokyo Advanced research center (L-StaR), Tokyo, Japan
- P1-021** **Ventral midbrain-evoked rapid monoamine release in the dorsal hippocampal CA2 and surrounding regions**
 Adam Weitemier, Thomas J. McHugh
 RIKEN BSI
- P1-022** **Valeriana officinalis root extract suppresses physical and psychological stress responses by decreasing the ratio of monoamine neurotransmitters to their metabolites**
 Hyo Young Jung¹, Dae Young Yoo¹, Woosuk Kim¹, Sung Min Nam¹, Jong Whi Kim¹, Jung Hoon Choi², Yeo Sung Yoon¹, In Koo Hwang¹
¹Department of Anatomy and Cell Biology, College of Veterinary Medicine, and Research Institute for Veterinary Science, Seoul National University, Seoul, South Korea ²Department of Anatomy, College of Veterinary Medicine, Kangwon National University, Chuncheon, South Korea

Receptors and Transporters

- P1-023** **A study of synaptic transmission and APMA receptor channel kinetics**
 Hiroshi Kojima, Chloe Okuno
 Department of Intelligent Information Systems, Tamagawa University
- P1-024** **Vesicular glutamate transporters 1 and 2 are colocalized at two types of axon terminal in the posterior cingulate cortex**
 Satoko Oda¹, Hiromasa Funato^{1,2}, Fumi Sato¹, Satomi Adachi-Akahane³, Masanori Ito³, Kenkichi Takase¹, Masaru Kuroda¹
¹Dept Anat, Toho Univ Sch Med, Tokyo, Japan ²IIS, Univ of Tsukuba, Ibaraki, Japan ³Dept Physiol, Toho Univ Sch Med, Tokyo, Japan
- P1-025** **Histological analysis of Cre activity in a glycine transporter 2 promoter-driven Cre-expressing mouse line**
 Toshikazu Kakizaki¹, Hiroyuki Sakagami², Kenji Sakimura³, Yuchio Yanagawa¹
¹Dept. of Genetic and Behavioral Neuroscience, Gunma Univ. Grad. Sch. of Med., Gunma, Japan ²Dept Anat, fac of Medicine, Univ of Kitasato, Kanagawa, Japan ³Dept Cellular Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan

- P1-026** **Organic Cation Transporter 2 (SLC22A2), A low-affinity and high-capacity choline transporter, is preferentially enriched on synaptic vesicles in cholinergic neurons**
Takahiro Nakata^{1,2}, Toshiyasu Matsui², Kumiko Kobayashi¹, Yasushi Kobayashi², Naohiko Anzai³
¹Ishikawa Prefectural Nursing University, Ishikawa, Japan
²Dept of Anat and Neurobiol, National Defense Medical College, Saitama, Japan
³Dept of Pharmacol and Toxicol, Dokkyo Med Univ School of Medicine, Tochigi, Japan
- P1-027** **Developmental change of ATP transmission to glutamate stimulation and in normally developing or valproate-modified rat cerebellar slices**
Takumi Abe¹, Hideki Muramoto¹, Yukiko Fueta², Yuko Sekino³, Sachiko Yoshida¹
¹Dept Environ & Life Sci, Toyohashi Univ of Technology, Aichi, Japan
²Univ of Occupational and Environmental Health, Kitakyushu, Japan ³National Institute of Health Sciences, Tokyo, Japan
- P1-028** **Novel activation mechanism of intracellular dopamine D2L receptor**
Norifumi Shioda¹, Masakiyo Sasahara², Hisashi Mori³, Kohji Fukunaga¹
¹Dept. Pharmacol., Grad. Sch. Pharmaceu.Sci., Tohoku Univ. ²Dept. Pathology, Grad. Sch. Med. and Pharm. Sci., Univ of Toyama
³Dept Mol Neurosci, Grad. Sch. Med. and Pharm. Sci., Univ of Toyama
- P1-029** **Involvement of sigma-1 receptor chaperone in the regulation of μ -opioid receptor signaling**
Junpei Oya, Tomohisa Mori, Naoki Uzawa, Koichi Sugiyama, Masahiro Shibasaki, Tsutomu Suzuki
Dept. of Toxicol, Hoshi Univ School of Pharmacy and Pharmaceutical Sciences, Tokyo, Japan
- P1-030** **Agonist-independent basal activity of G-protein coupled receptor GPR5 leads to reduced intracellular cAMP levels**
Sumihiro Kunisue, Masao Doi, Hitoshi Okamura
Dept. of Syst. Biol., Grad. Sch. of Pharmaceut. Sci., Kyoto Univ., Kyoto, Japan
- P1-031** **LPA receptor genes expressed in *Oryzias latipes***
Nobuyuki Fukushima, Yuji Morimoto, Jun-ichi Ishibashi, Shoichi Ishii, Toshifumi Tsujiuchi, Nao Kagawa
Dept.of Life Sci., Fac. of Sci. and Eng., Kinki Univ.
- P1-032** **Distribution of L-DOPA receptor, ocular albinism 1 (OA-1)-immunoreactivities in the central nervous system**
Daiki Masukawa, Fumio Nakamura, Yoshio Goshima
Departments of Molecular Pharmacology & Neurobiology, Yokohama City Univ., Yokohama, Japan
- P1-033** **An investigation of post-translational cleavage of an orphan metabotropic receptor, Prrt3**
Azumi Yamamoto¹, Tomomi Yamamoto¹, Kohtaro Konno², Masahiko Watanabe², Yoshihiro Kubo^{1,3}
¹Div Biophys and Neurobiol, NIPS, Okazaki, Japan ²Dept Anatomy, Hokkaido Univ Grad Schl Med, Sapporo, Japan
³Physiol Sci SOKENDAI, Hayama, Japan
- P1-034** **Dry mouth related antidepressant desipramine suppresses salivary AQP5 trafficking**
Keimin Lee, Kyungpyo Park, Se-Young Choi
Department of Physiology and Dental Research Institute, Seoul National University, School of Dentistry, Seoul, Korea

Synapse

- P1-035** **Synaptic vesicle glycoprotein 2A modulates vesicular release at sympathetic synapses**
Shota Tanifuji¹, Christian Vogl², Gary J. Stephens², Sumiko Mochida¹
¹Dept Physiol., Tokyo Med.Univ. ²School of Pharmacy, Univ of Reading, Reading, UK
- P1-036** **Synaptic localization and function of VAMP4 in developing inhibitory neurons**
Hisayo Sadamoto¹, Toshihiko Kuriu¹, Yuchio Yanagawa^{2,3}, Shiro Konishi¹
¹Dept Neurophysiol, Kagawa Sch Pharmaceut Sci, Tokushima Bunri Univ, Kagawa, Japan
²Dept Genetic and Behavioral Sci, Gunma Univ Grad Sch of Med, Gunma, Japan
³Japan Science and Technology Agency, CREST, Tokyo, Japan
- P1-037** **The effect of the active zone protein CAST/ELKS deletion on the structure and function of retinal synapses and visual system**
Akari Hagiwara¹, Manabu Abe², Yamato Hida¹, Naoko Sugiyama¹, Kei Moriya¹, Takahisa Furukawa³, Kenji Sakimura², Toshihisa Ohtsuka¹
¹Dept Biochemistry, Faculty of Medicine, University of Yamanashi, Yamanashi, Japan
²Dept Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan
³Lab Molecular and Developmental Biology, Institute for Protein Research, Osaka University, Osaka, Japan
- P1-038** **Measurements of synaptic exo-endocytosis by electrophysiological and optical technique at the rat calyx of Held synapse**
Mitsuharu Midorikawa, Yuji Okamoto, Takeshi Sakaba
Doshisha Univ, Kyoto, Japan

- P1-039** **Selective expression of glutamate receptor GluD1 at ascending pathway synapses in thalamic neurons of the ventral posteromedial nucleus**
Kohtarou Konno, Koji Nishikawa, Masahiko Watanabe
Dept Anatomy & Embryology, Univ of Hokkaido, Sch Med, Sapporo, Japan
- P1-040** **Molecular mechanisms of ACF7 dependent excitatory postsynaptic regulation**
Yutaro Kashiwagi, Shigeo Okabe
Dept of Cell Neurobiol, Univ of Tokyo, Tokyo, Japan
- P1-041** **Subcellular localization of small GTPase Arf6 in the hippocampal pyramidal cell**
Masahiro Fukaya, Hiroyuki Sakagami
Kitasato University School of Medicine
- P1-042** **Conserved dimensional properties of dendritic trees in cortical pyramidal cell**
Alsayed Mohammed^{1,2}, Noboru Yamaguchi¹, Sayuri Hatada¹, Joachim Lübke⁵, Yasuo Kawaguchi^{1,3,4}, Yoshiyuki Kubota^{1,3,4}
¹*Div. Cerebral Circuitry, Natl. Inst. Phys. Sci., Okazaki, Japan* ²*Dept. Anat. & Embry., South Valley Univ., Qena, Egypt*
³*Dept. Phys. Sci., SOKENDAI, Okazaki, Japan* ⁴*JST, CREST, Tokyo, Japan*
⁵*Inst. Neurosci. & Med. INM-2 Res. Cen. Jülich, Jülich, Germany*
- P1-043** **Gap junctions mediate diverse connectivity between parvalbumin immunopositive interneurons in layer 4 of the mouse barrel cortex**
Naoki Shigematsu, Takaichi Fukuda
Dept Anat and Neurobiol, Grad Sch of Med Sci, Kumamoto Univ, Kumamoto, Japan
- P1-044** **Involvement of GABA_B Receptor-Mediated Presynaptic Inhibition in the Oscillatory Network Synchronization in the Rat Barrel Cortex**
Hajime Sato, Hiroki Toyoda, Mitsuru Saito, Tsutomu Kawano, Youngnam Kang
Dept. Neurosci. & Oral Physiol., Osaka Univ. Grad. Sch. Dent., Osaka, Japan
- P1-045** **Optogenetically induced oscillatory activities in the cortical circuits**
Takeshi Ohtsuka^{1,2}, Yasuo Kawaguchi^{1,2}
¹*Dept. of Cerebral Circuitry, Natl.Inst.for Physiol.Scis.* ²*JST, CREST, JAPAN*
- P1-046** **Inhibition of non-NMDA glutamatergic transmission onto cholinergic neurons in the rat basal forebrain by serotonin**
Takuma Nishijo, Toshihiko Momiyama
Dept Pharmacol, Jikei Univ Sch of Med, Tokyo, Japan
- P1-047** **Activation of TRPA1 channels by zingerone in adult rat spinal substantia gelatinosa neurons**
Chang-Yu Jiang, Tsugumi Fujita, Hai-Yuan Yue, Eiichi Kumamoto
Dept Physiol, Saga Med Sch, Saga, Japan

Short Talk 1
ST-1-3
9/11 9 : 00-10 : 00

Synaptic Plasticity

- P1-048** **Gap junctional regulation of cell-type-specific synapse formation in the developing neocortex**
Nao Nakagawa
Laboratory for Local Neuronal Circuits, Brain Science Institute, RIKEN
- P1-049** **Presynaptic probe for reporting synaptic plasticity in hippocampal cultured slices**
Jun Noguchi, Satoshi Watanabe, Noriko Takahashi, Hasan Ucar, Haruo Kasai
Structural Physiology, Grad.Sch. of Medicine, The University of Tokyo
- P1-050** **Visualization of discrete neurotransmitter receptor endocytosis around postsynaptic membrane**
Shumpei Fujii, Hiromitsu Tanaka, Tomoo Hirano
Dept. Biophys., Grad. Sch. Sci., Kyoto Univ.
- P1-051** **Study on the trafficking and lateral movement of AMPA-type glutamate receptor using mutants of N-glycosylation sites**
Jyoji Morise¹, Kenichi Suzuki², Ayaka Kitagawa¹, Yusuke Takeuchi¹, Kogo Takamiya³, Akihiro Kusumi², Hiromu Takematsu¹, Shogo Oka¹
¹*Dept of Biol Chem, Human Health Sci, Graduate School of Medicine, Univ of Kyoto, Kyoto, Japan*
²*WPI-iCeMS, Univ of Kyoto, Kyoto, Japan* ³*Dept Integr Physiol, Faculty of Medicine, Univ of Miyazaki, Miyazaki, Japan*
- P1-052** **Involvement of N-glycosylation in AMPA receptor channel properties**
Yoshihiko Wakazono¹, Munal B. Kandel¹, Ryosuke Midorikawa¹, Nana Kawasaki², Shogo Oka³, Kogo Takamiya¹
¹*Dept Integrative Physiol, Faculty of Med, Univ of Miyazaki, Miyazaki, Japan* ²*Div Biol Chem and Biologicals, Natl Inst Health Sci, Japan*
³*Dept Biol Chem, Human Health Sci, School of Med, Kyoto Univ, Kyoto, Japan*

Short Talk 2
ST-2-2
9/11 10 : 00-11 : 00

Short Talk 1
ST-1-4
9/11 9 : 00-10 : 00

- P1-053** Multiple splice variants of Rab effector protein, rabaptin-5, are critical molecules for glutamate receptor trafficking at synapses
Kazuyuki Kiyosue¹, Kimihiko Kameyama²
¹Human Health Research Institute, National Institute of Advanced Industrial Science and Technology
²Department of Sensory-recognition and Locomotive-function Sciences in the Super-aged Society, The University of Tokyo
- P1-054** PKN1 normalizes functions of group 1 mGluRs by upregulating neuronal glutamate transporters
Hiroyuki Yasuda¹, Hikaru Yamamoto², Toshio Kawamata³, Hideyuki Mukai²
¹Education and Research Support Center, Gunma Univ. Grad. Sch. Med. ²Biosignal Res Ctr, Kobe Univ, Kobe, Japan
³Kobe Univ, Grad Sch Health Sci
- P1-055** Type 1 metabotropic glutamate receptor is involved in experience-dependent maintenance of retinogeniculate synapses in the mouse visual system
Madoka Narushima¹, Motokazu Uchigashima², Kouichi Hashimoto³, Takeshi Harada⁴, Atsu Aiba⁴, Masahiko Watanabe², Mariko Miyata^{1,5}, Masanobu Kano⁶
¹Dept Physiol, Tokyo Women's Medical Univ, Tokyo, Japan ²Dept Anatomy, Grad Sch Med, Hokkaido Univ, Sapporo, Japan
³Dept Neurophysiol, Grad Sch Biomed & Health Sci, Hiroshima Univ, Hiroshima, Japan
⁴Lab Animal Resources, CDBIM, Fac Med, Univ Tokyo, Tokyo, Japan ⁵PRESTO, JST, Kawaguchi, Japan
⁶Dept Neurophysiol, Grad Sch Med, Univ Tokyo, Tokyo, Japan
- P1-056** Retrograde signaling by Sema3A and Sema7A regulates synapse elimination in the developing cerebellum
Naofumi Uesaka¹, Motokazu Uchigashima², Takayasu Mikuni¹, Takanobu Nakazawa¹, Harumi Nakao⁴, Hirokazu Hirai³, Atsu Aiba⁴, Masahiko Watanabe², Masanobu Kano¹
¹Dept. Neurophysiol., Grad Sch Med, Univ of Tokyo, Tokyo ²Dept. Anat., Grad Sch Med, Hokkaido Univ, Sapporo
³Dept. of Neurophysiol., Grad. Sch. of Med., Gunma Univ., Maebashi ⁴Dept. Animal Resour., Grad Sch Med, Univ of Tokyo, Tokyo
- P1-057** Phldb2 regulates the maturation of dendritic spines and synaptic plasticity
Min-Jue Xie^{1,2,3}, Hideshi Yagi⁴, Tokuichi Iguchi⁵, Yuichiro Oka⁵, Kazuki Kuroda^{1,3}, Michisuke Yuzaki⁶, Shinji Matsuda⁶, Yasuyuki Ishikawa⁷, Makoto Sato^{1,2,5,8}
¹Dept Morphol Physiol, Div Cell Biol Neurosci, Univ of Fukui, Fukui, Japan ²Res Center Child Mental Dev, Univ of Fukui, Japan
³Res Edu Program Life Sci, Univ of Fukui, Japan ⁴Dept Ana Neurosci, Hyogo College Med, Nishinomiya, Japan
⁵Dept Ana Neurosci, Osaka Univ Grad Sch Med, Osaka, Japan ⁶Dept Neurophysiol Sch Med, Univ of Keio, Tokyo, Japan
⁷Dept Sys Life Engineering, Maebashi Institute Tech, Maebashi, Japan ⁸United Grad Sch Child Dev, Osaka Univ, Japan
- P1-058** Nogo restricts adult neural plasticity by limiting synaptic AMPA receptors delivery
Susumu Jitsuki¹, Waki Nakajima¹, Takuya Takahashi^{1,2}
¹Department of Physiology, Yokohama City University Graduate School of Medicine, Yokohama, Japan
²Department of Neuroscience, Albert Einstein College of Medicine, New York, USA
- P1-059** Effects of handling during the postnatal period on the development of brain and behavior of BALB/c mice
Hai Yan Li, Chihiro Ishikawa, Tomoyuki Masuda, Takashi Shiga
University of Tsukuba
- P1-060** Control of intrinsic excitability of layer 3/4 neurons in primary auditory cortex of blind mice
Toshio Suzuki, Hideki Derek Kawai
Dept Bioinformatics, Graduate School of Engineering, Soka University, Tokyo, Japan
Short Talk 2
ST-2-3
9/11 10:00-11:00
- P1-061** Excitatory Synaptic Plasticity in Rostral Agranular Insular Cortex (RAIC) in Mice
Pin Nan Hsieh, Ming-Yuan Min
National Taiwan University
- P1-062** Synaptic localization of CaMKII in the spinal dorsal horn of kinase-dead knock-in mouse in the neuropathic pain model
Ikuko Yao^{1,2}, Shinji Matsumura², Tayo Katano², Yoko Yamagata³, Keiji Imoto³, Seiji Ito²
¹Hamamatsu University School of Medicine, Shizuoka, Japan ²Dept Med Chem, Kansai Med Univ, Osaka, Japan
³Natl. Inst. for Physiological Sci., Aichi, Japan

Induction and Pattern Formation

- P1-063** Does sex-specific neurite patterning involve cell-cell interactions in *Drosophila* central neurons?
Takahiro Kato, Kosei Sato, Daisuke Yamamoto
Division of Neurogenetics, Tohoku University Graduate School of Life Science

- P1-064** **Prethalamus formation is regulated by Olig2, which is crucial for proper thalamocortical projection formation**
Katsuhiko Ono¹, Adrien Clavairoly², Tadashi Nomura¹, Hitoshi Gotoh¹, Aoi Uno¹, Olivier Armant³, Hirohide Takebayashi⁴, Qi Zhang⁵, Kenji Shimamura⁶, Shigeyoshi Itoharu⁵, Carlos M Parras², Kazuhiro Ikenaka⁶
¹Dept. of Biology, Kyoto Pref. Univ. Med. ²Inst of Brain and Spinal Cord (ICM), Inserm-UPMC, Paris, France
³Inst of Toxicol and Genetics, KIT Campus Nord, Eggenstein-Leopoldshafen, Germany
⁴Div of Neurobiol Anat, Grad Sch Medi and Dent Sci, Niigata Univ, Niigata, Japan ⁵Lab for Behav Genetics, RIKEN BSI, Wako, Japan
⁶Div of Neurobiol Bioinfo, NIPS, Okazaki, Japan
- P1-065** **Striped Protocadherin 10 expression pattern in the adult and developing mouse cerebellar cortex**
Suteera Vibulyaseck¹, Shinji Hirano², Izumi Sugihara¹
Short Talk 1
ST-1-5
9/11 9 : 00-10 : 00
¹Dept Systems Neurophysiol, Tokyo Med & Dental Univ, Tokyo, Japan ²Dept Cell Biology, Kansai Med Univ, Osaka, Japan
- P1-066** **The formation of correct synapse location in the retina is essential for proper visual function**
Rikako Sanuki¹, Satoshi Watanabe^{1,2}, Yuko Sugita^{1,2}, Shoichi Irie^{1,2}, Takashi Kozuka^{1,2}, Mariko Shimada^{1,2}, Takahisa Furukawa^{1,2}
¹Laboratory for Molecular and Developmental Biology, Institute for Protein Research Osaka University ²JST, CREST
- P1-067** **The bona fide pluripotency toward reproducible human neurogenesis**
Hidemasa Kato¹, Keiko Hiraki-Kamon²
¹Research Center for Genomic Medicine, Saitama Med Univ, Hidaka, Japan ²Dept Mol Etiol, RIRBM, Hiroshima Univ, Hiroshima, Japan

Stem Cells, Neuronal and Glial Production/Differentiation

- P1-068** **Scrap and rebuild glial assembly in *Drosophila* brain during metamorphosis**
Kentarō Kato, Yuko Umeki, Takeshi Awasaki
Dept Biol, Sch Med, Kyorin University
- P1-069** **Gene expression analysis of GABAergic marker in P19 cells during neuronal differentiation**
Nozomi Hara¹, Kouichi Nishimura¹, Shu Aizawa^{1,2}, Yutaka Yamamoto^{1,2}
¹Grad Sch of Bioresource Sci, Nihon Univ, Kanagawa, Japan ²Dept Anim Sci, Coll Bioresource Sci, Nihon Univ, Kanagawa, Japan
- P1-070** **Chemical library screening to identify a small compound that promotes motor neurons differentiation from iPSCs/ESCs**
Kazuya Goto^{1,2}, Keiko Imamura^{2,3}, Kohnosuke Mitani⁴, Kazuhiro Aiba⁵, Norio Nakatsuji⁵, Ryosuke Takahashi¹, Haruhisa Inoue^{2,3}
¹Department of Neurology, Kyoto University, Kyoto, Japan
²Laboratory of Stem Cell Medicine, Department of Cell Growth and Differentiation, Center for iPS Cell Research and Application (CiRA), Kyoto University, Kyoto, Japan
³Japan Science and Technology Agency (JST), Core Research for Evolutional Science and Technology (CREST), Japan
⁴Division of Gene Therapy, Research Center for Genomic Medicine, Saitama Medical University, Saitama, Japan
⁵Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto, Japan
- P1-071** **Physiological meanings of the dynamics of progenitor cells for the maintenance of the ventricular zone**
Tomoyasu Shinoda¹, Ryo Higuchi², Mayumi Okamoto¹, Arata Nagasaka¹, Takashi Miura³, Masaharu Nagayama², Toshihiko Fujimori⁴, Takaki Miyata¹
¹Dept Anatomy and Cell Biology, Nagoya Univ Graduate School of Medicine, Nagoya, Japan ²RIES, Hokkaido Univ, Hokkaido, Japan
³Kyusyu Univ Graduate School of Medicine, Fukuoka, Japan ⁴Div Embryology, NIBB, Okazaki, Japan
- P1-072** **Mechanisms that determine the timing of upper-layer neurogenesis in the neocortex**
Ken-ichi Toma^{1,2}, Takuma Kumamoto¹, Carina Hanashima¹
¹Lab. Neocortical Development, RIKEN Center for Developmental Biology ²Dep. of Bio., Grad. Sch. of Sci., Univ. of Kobe
- P1-073** **Dynamic protein expression patterns and essential functions of *Sbno1* in mouse brain development**
Ryuji Nakamura¹, Taku Sugiyama¹, Hideaki Imai², Shinichi Aizawa³, Toshio Terashima³, Noriko Osumi¹, Yu Katsutama¹
¹Division of Developmental Neuroscience, Center for Translational and Advanced Research, Tohoku University Graduate school of Medicine
²Div. of Devel Neurosc., Kobe Univ Grad Sch Med ³Lab Animal Resources and Genetic Engineering, RIKEN CDB
- P1-074** **Functional analysis of protein arginine methyltransferase-1 in the mouse embryonic neural stem cells**
Mizuki Honda, Sayako Katada, Kinichi Nakashima
Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan
- P1-075** **Malnutrition of n-6 and n-3 polyunsaturated fatty acids disturbs neocortical development**
Nobuyuki Sakayori^{1,2}, Noriko Osumi¹
¹Div. of Dev. Neurosci., Grad. Sch. of Med., Tohoku Univ. ²JSPS Research Fellow

- P1-076** **BMP signaling propel production of Gfap-expressing NSCs existed in developing hippocampus**
Taichi Kashiwagi¹, Seiji Shioda², Tatsunori Seki¹
¹Dept Histol Neuroanat, Tokyo Med Univ, Tokyo, Japan ²Dept Anat, Showa Univ, Tokyo, Japan
- P1-077** **The property of dentate granule cell progenitors is altered immediately after birth**
Tatsunori Seki¹, Shiori Minakawa^{1,2}, Toru Sato¹, Keiko Toda¹, Shoichi Iwamura², Seiji Shioda³
¹Dep Histol Neuroanat, Tokyo Med Univ, Tokyo, Japan ²Dept Biol, Toho Univ, Chiba, Japan ³Dept Anat, Showa Univ, Sch Med, Tokyo, Japan
- P1-078** **The effect of Entacapone on adult hippocampal neurogenesis**
Dae Young Yoo¹, Hyo Young Jung¹, Sung Min Nam¹, Jong Whi Kim¹, Jung Hoon Choi², Yeo Sung Yoon¹, In Koo Hwang¹
¹Department of Anatomy and Cell Biology, College of Veterinary Medicine, and Research Institute for Veterinary Science, Seoul National University, Seoul, South Korea
²Department of Anatomy, College of Veterinary Medicine, Kangwon National University, Chuncheon, South Korea
- P1-079** **BASAL RADIAL GLIA in the marmoset cerebral cortex**
Ayako Murayama^{1,2}, Hideyuki Okano^{1,2}
¹Keio University School of Medicine, Department of Physiology ²RIKEN, BSI

Cell Migration and Layer/Nuclear Formation

- P1-080** **PR domain protein Prdm8 knockout mouse exhibit abnormal development of upper layer neurons in the neocortex**
Short Talk 2
ST-2-4
9/11 10:00-11:00
Ryota Iwai^{1,2}, Mayuko Inoue¹, Masaki Kato³, Aya Honda¹, Waka Teshima¹, Chisato Watanabe¹, Yoichi Shinkai³, Ken-ichi Mizutani^{1,4}
¹Graduate School of Brain Science, Doshisha University ²Fac Life Sci, Doshisha Univ, Kyoto, Japan ³RIKEN, Saitama, Japan ⁴JST, Tokyo, Japan
- P1-081** **Prdm8 regulates the morphological transition at multipolar phase during neocortical development**
Ken-ichi Mizutani^{1,2}, Mayuko Inoue^{1,3}, Takao Kuroda¹, Aya Honda¹, Mariko Suzuki¹, Tae Komai³, Yoichi Shinkai⁴
¹Grad Sch Brain Science, Doshisha Univ, Kyoto, Japan ²JST, Tokyo, Japan ³Grad Sch, Biost, Kyoto Univ, Kyoto, Japan ⁴RIKEN, Saitama, Japan
- P1-082** **Analysis of the intramolecular regulatory mechanism of Dab1 in the developing neocortex**
Tomohiro Namikawa, Toshio Terashima, Satoshi Kikkawa
Div of Dev Neurobiol, Kobe Univ Grad Sch of Med, Hyogo, Japan
- P1-083** **Dmrt genes are involved in Cajal-Retzius cell development in the neocortex**
Takako Kikkawa, Yu Katsuyama, Noriko Osumi
Dept. of Dev. Neurosci., Sch. of Med., Tohoku Univ.
- P1-084** **Functional importance of ADP-ribosylation factor 6 (Arf6) in the neuronal migration during cortical layer formation**
Yoshinobu Hara, Masahiro Fukaya, Hiroyuki Sakagami
Kitasato University School of Medicine Department of Anatomy
- P1-085** **A novel migration mode of CA1 pyramidal neurons in the mouse hippocampus**
Short Talk 1
ST-1-6
9/11 9:00-10:00
Ayako Kitazawa, Ken-ichiro Kubo, Kanehiro Hayashi, Yuki Matsunaga, Kazuhiro Ishii, Kazunori Nakajima
Keio University School of Medicine
- P1-086** **The significance of the highly basic C-terminal region of Reelin in developing hippocampus**
Kaori Sakai, Takao Kohno, Hayata Yagyū, Mitsuharu Hattori
Nagoya City University
- P1-087** **Cell-tracing Analysis for Progenitor Cell Migration in the Embryonic Dentate Gyrus**
Short Talk 1
ST-1-7
9/11 9:00-10:00
Hirosi Shinohara¹, Toru Sato¹, Keiko Toda¹, Seiji Shioda², Tatsunori Seki¹
¹Dept Histol. Neuroanat., Tokyo Medical University, Tokyo, Japan ²Dept Anat., Showa University Sch. Med., Tokyo, Japan
- P1-088** **Sharp turn of tangentially-migrating hindbrain neurons controlled by modulating responsiveness to attractive midline via chemokine signalling and cAMP**
Yan Zhu, Fujio Murakami
Graduate School of Frontier Biosciences, Osaka University, Japan
- P1-089** **Distinction between Reticular Tegmental Nucleus and Pontine Grey Nucleus ---- rhombomeric origin, Hox gene expression, and topographic organization**
Masashi Kobayashi, Fujio Murakami, Yan Zhu
Graduate School of Frontier Biosciences, Osaka University

- P1-090** **The functional involvement of a down syndrome-associated gene in the neuronal migration**
Nariko Arimura¹, Yuki Nishihara¹, Yoneko Hayase¹, Yuchio Yanagawa², Shin-ichiro Taya¹, Mikio Hoshino¹
¹National Institute of Neuroscience, National Center of Neurology and Psychiatry
²Department of Genetic and Behavioral Neuroscience, Gunma University Graduate School of Medicine
- P1-091** **A role of EphA4- α -chimaerin signaling for spinal midline cells**
Shota Katori¹, Takuji Iwasato^{1,2}
¹Division of Neurogenetics, National Institute of Genetics, Mishima
²Department of Genetics, The Graduate University for Advanced Studies (SOKENDAI), Mishima

Axonal/Dendritic Growth and Circuit Formation

- P1-092** **Slow axonal growth in human iPSCs-derived neurons**
Reiko T. Roppongi¹, Yuki Ohara¹, Noriko Koganezawa¹, Hiroyuki Yamazaki¹, Mao Ootsu¹, Kaoru Sato², Yuko Sekino², Tomoaki Shirao¹
¹Dept Neurobiol and Behav, Gunma Univ Grad Sch Med, Gunma, Japan ²Div Pharmacol, NIHS, Tokyo, Japan
- P1-093** **Multiple patterns of spatiotemporal changes in layer-specific gene expression in the developing visual cortex of higher mammals**
Koichi Tomita¹, Makoto Sanbo², Naoko Yamauchi², Kazunari Yuri¹
¹Dept Neurobiol & Anat, Kochi Med Sch, Kochi Univ, Kochi, Japan ²Cent Genet Anal Beh, NIPS, Okazaki, Japan
- P1-094** **The role of Sox11 in neuronal maturation in the mouse cerebral cortex**
Yoshio Hoshiba^{1,2,3}, Tomohisa Toda^{1,2,3}, Hiroshi Kawasaki^{1,3}
¹Department of Medical Neuroscience, Graduate School of Medical Sciences, Kanazawa University, Ishikawa, JAPAN
²Department of Neurology, Graduate School of Medicine, University of Tokyo, Tokyo, JAPAN
³Brain/Liver Interface Medicine Research Center, Graduate School of Medical Sciences, Kanazawa University, Ishikawa, Japan
- P1-095** **In vivo function of singar which regulates polarity of cultured hippocampal neurons**
Takuro Kono¹, Hitomi Nakazawa¹, Colleen F Manning², James S Trimmer², Kenji Kohno¹, Akihiro Urasaki¹, Naoyuki Inagaki¹
¹Grad. Sch. Bio. Sci., NAIST, Nara, Japan ²Dept of Neurobiol. Physiol. and Behav., Univ. of California, Davis, USA
- P1-096** **Dendritic specification of neocortical neurons by axon guidance molecules**
Yuko Gonda, Carina Hanashima
Lab. Neocort. Dev., RIKEN CDB, Kobe, Japan
- P1-097** **Dynamics of CREB in neuronal activity-dependent transcription studied by single-molecule imaging in cortical neurons**
Hironobu Kitagawa, Noriyuki Sugo, Aya Ohkuni, Nobuhiko Yamamoto
Graduate School of Frontier Biosciences, Osaka Univ, Osaka, Japan
- P1-098** **Involvement of synapse formation in activity-dependent thalamocortical axon branching**
Naoyuki Matsumoto, Maki Hoshiko, Nobuhiko Yamamoto
Grad. Sch. Of Frontier BioSci., Osaka Univ., Japan
- P1-099** **Downstream molecular programs triggered by the expression of commissural neuron genetic determinant Dbx1**
Yasuyuki Inamata, Takeshi Kaneyama, Ryuichi Shirasaki
Grad Sch Frontier Biosci., Osaka Univ., Japan
- P1-100** **Neuronal activity in the second postnatal week is critical for the formation of callosal axon projections in mouse cerebral cortex**
Yoshiaki Tagawa^{1,3}, Yuta Tezuka^{1,3}, Kenta M Hagihara^{2,3}, Kenichi Ohki^{2,3}, Tomoo Hirano¹
¹Dept Biophys, Grad Sch of Sci, Kyoto Univ., Kyoto, Japan ²Dept Molecular Physiology, Kyushu Univ, Fukuoka, Japan
³CREST, JST, Saitama, Japan
- P1-101** **Axon projection of long association neurons in the mouse cerebral cortex**
Yuichiro Oka¹, Tokueichi Iguchi¹, Makoto Sato^{1,2,3}
¹Dept Anat & Neurosci, Grad Schl of Med, Osaka Univ, Osaka, Japan
²Dept of Child Dev, United Grad Schl of Child Dev, Osaka, Kanazawa, Hamamatsu Med, Chiba & Fukui Univs
³Res Center for Child Mental Dev, Univ of Fukui
- P1-102** **ISLR2, a novel marker for longitudinal tracts in early embryonic forebrain**
Shunsaku Homma¹, Takako Shimada¹, Masahiro Shibata², Noboru Sato², Hiroyuki Yaginuma¹
¹Dept Anat, Fukushima Med Univ, Fukushima, Japan
²Div of Gross Anat Morphogenesis, Niigata Univ Grad Sch of Medical and Dental Sciences

- P1-103** Expression of lysosomal-associated membrane protein 5 (Lamp5) gene in cerebellum
Michinori Koebis¹, Yuzuru Saito¹, Yo Shinoda¹, Teiichi Furuichi^{1,2}
¹Dept Appl Biol Sci, Tokyo Univ of Sci, Chiba, Japan ²Lab for Developmental Gene Regulation, RIKEN BSI, Saitama, Japan
- P1-104** Basement membrane structure is important for axogenesis of cerebellar granule cells
Miki Takeuchi^{1,2,3,4}
Short Talk 2
ST-2-6
9/11 10:00-11:00
¹Bioscience and Biotechnology Center, Nagoya University ²RIKEN Center for Developmental Biology, Hyogo, Japan
³National Institute of Genetics, Shizuoka, Japan ⁴Okazaki Institute for Integrative Bioscience, Aichi, Japan
- P1-105** Role of ryanodine receptor type 2 expressed by cerebellar granule cells in dendritic differentiation of Purkinje cells
Masahiko Tanaka, Ryo Ohashi, Manami Miura, Naohide Hirashima
Dept Cell Biophys, Grad Sch Pharmaceut Sci, Nagoya City Univ, Nagoya, Japan
- P1-106** The process in the regeneration of synaptic wiring on cerebellar Purkinje cell dendrite after the damage of climbing fiber or with parallel fiber
Ryoichi Ichikawa¹, Haruyuki Tatsumi¹, Masahiko Watanabe²
¹Dept. of Anat., Sapporo Medical Univ, Sapporo, Japan ²Dept Anat, Univ of Hokkaido, Sapporo, Japan
- P1-107** Scattered expression of clustered protocadherins: Expression analysis of Pcdh- β 3 in mouse brain
Ryosuke Kaneko¹, Manabu Abe², Masahiko Watanabe³, Kenji Sakimura², Yuchio Yanagawa¹, Takeshi Yagi⁴
¹Gunma Univ Grad Sch Med, Gunma, Japan ²Brain Res Inst, Niigata Univ, Niigata, Japan
³Grad Sch Med, Hokkaido Univ, Hokkaido, Japan ⁴Grad Sch Front Biosci, Osaka Univ, Osaka, Japan

Kinematics and EMG

- P1-108** Nerve plexus in the parietal peritoneum in the rat
Koichi Tanaka, Tetsu Hayakawa, Seishi Maeda, Sachi Kuwahara-Otani, Makoto Ski
Hyogo Coll. of Med.
- P1-109** Contributing factors to the polarity determination of surround responses in bipolar cells of the mouse retina
Chengzhu Yin, Makoto Kaneda
Department of physiology, Nippon Medical School,
- P1-110** Detecting spontaneous swallowing using surface electromyogram
Akihiro Ueta¹, Yumie Ono¹, Jin Shimada², Futaba Maki³, Takehito Otsubo², Yasuhiro Hasegawa³
¹Graduate school of Science and Technology, Meiji University, Kanagawa, Japan
²Department of Internal Medicine Division of Neurology, School of Medicine, St. Marianna University
³Department of Gastroenterological and General Surgery, St. Marianna University Hospital
- P1-111** Estimation of pulling directions of wrist prime movers on the wrist with a musculoskeletal model
Kyuengbo Min, Jongho Lee, Shinji Kakei
Tokyo Metropolitan Institute of Medical Science
- P1-112** Role of the red nucleus in suppressing the jaw-opening reflex following stimulation of the raphe magnus nucleus
Yoshihide Satoh, Ken'ichi Ishizuka, Shin-ichi Iwasaki
Dept Physiol, Nippon Dent Univ, Niigata, Japan
- P1-113** Inverse dynamic analysis of precision grip in the Japanese macaque based on a three-dimensional musculoskeletal model
Naomichi Ogihara¹, Tsuyoshi Saito¹, Tomohiko Takei², Kazuhiko Seki²
¹Dept Mech Eng, Keio Univ, Yokohama, Japan ²Dept Neurophysiol, Natl Inst Neurosci, Tokyo, Japan
- P1-114** Effect of trans-vertebral magnetic stimulation on vital signs
Yukio Nishimura^{1,2,3}, Syusaku Sasada¹, Suguru Kadowaki⁴, Kenji Kato¹, Yaoki Nakao^{1,3}, Takashi Murayama⁷, Susumu Yoshida⁵, Masayuki Iizuka⁷, Tomoyoshi Komiyama⁶, Yoshikazu Ugawa⁴
¹Department of Developmental Physiology, National Institutes for Physiological Sciences
²PRESTO, Japan Science and Technology Agency, Tokyo, Japan ³Life Science, The Graduate Univ. for Advanced Studies, Aichi, Japan
⁴Dept. of Neurology, Fukushima Medical Univ., Fukushima, Japan
⁵School of Rehabilitation Sciences, Health Sciences Univ. of Hokkaido, Hokkaido, Japan ⁶Faculty of Education, Chiba Univ, Chiba, Japan
⁷Chiba Rehabilitation Center, Chiba, Japan

- P1-115** **Rewiring the damaged pathway via neural interface to restore volitional walking in spinal cord injury**
Syusaku Sasada^{1,2}, Kenji Kato², Yaoki Nakao^{2,3}, Takashi Murayama⁴, Suguru Kadowaki⁵, Susumu Yoshida⁶, Masayuki Iizuka⁴, Tomoyoshi Komiyama⁷, Yoshikazu Ugawa⁵, Yukio Nishimura^{2,3,8}
¹Sagami Women's Univ., Kanagawa, Japan ²Developmental Physiology, National Inst. for Physiological Sciences, Aichi, Japan
³Life Science, The Graduate Univ. for Advanced Studies, Aichi, Japan ⁴Chiba Rehabilitation Center, Chiba, Japan
⁵Dept. of Neurology, Fukushima Medical Univ., Fukushima, Japan
⁶School of Rehabilitation Sciences, Health Sciences Univ. of Hokkaido, Hokkaido, Japan ⁷Faculty of Education, Chiba Univ, Chiba, Japan
⁸PRESTO, Japan Science and Technology Agency, Tokyo, Japan
- P1-116** **Dual-hemisphere direct current stimulation over the secondary somatosensory cortex improves spatial tactile acuity in human**
Shuhei Fujimoto^{1,2}, Tomofumi Yamaguchi^{1,3}, Noriko Kon², Rieko Osu⁴, Yohei Otaka^{1,3}, Kunitsugu Kondo¹, Ryo Kitada⁵, Satoshi Tanaka⁶
¹Tokyo Bay Rehabilitation Hospital ²Dept Public Health, Kyoto University graduate school of medicine, Kyoto, Japan
³Dept Rehabilitation, Keio University school of medicine, Tokyo, Japan
⁴Advanced Telecommunications Research Institute International, Kyoto, Japan ⁵National Institute for Physiological Sciences
⁶Hamamatsu University School of Medicine, Shizuoka, Japan
- P1-117** **Cerebral generator mechanisms of cortical tremor in patients with benign adult familial myoclonus epilepsy (BAFME): a corticomuscular coherence study**
Katsuya Kobayashi¹, Takefumi Hitomi², Masao Matsushashi³, Takeyo Sakurai¹, Riki Matsumoto⁴, Tatsuya Mima³, Hidenao Fukuyama³, Masaaki Kato⁵, Masanori Sekimoto⁵, Teiichi Onuma⁵, Ryosuke Takahashi¹, Akio Ikeda⁴
¹Dept Neurol, Kyoto Univ, Kyoto, Japan ²Dept Clin Lab Med, Kyoto Univ, Kyoto, Japan
³Human Brain Res Center, Kyoto Univ, Kyoto, Japan ⁴Dept Epilepsy, Kyoto Univ, Kyoto, Japan
⁵Musashino-Kokubunji Clinic, Tokyo, Japan

Spinal cord Motor Neuros and Muscle

- P1-118** **Somatotopical Arrangement of Stimulus Outputs Induced by Subdural Micro-Stimulation on Cervical Spinal Cord in Monkeys**
Kenji Kato¹, Yukio Nishimura^{1,2,3}
¹Division of Behavioral Development, National Institute for Physiological Sciences, Aichi, Japan
²The graduate University for Advanced studies, SOKENDAI, Aichi, Japan
³Precursory Research for Embryonic Science and Technology (PRESTO), Japan Science and Technology Agency, Tokyo, Japan
- P1-119** **Role of RGMa inhibition in recovery of motor functions and axonal regeneration after spinal cord injury in macaques**
Hiroshi Nakagawa^{1,2,3}, Taihei Ninomiya^{2,3}, Masahiko Takada^{2,3}, Toshihide Yamashita^{1,3}
¹Dept Sys Neurosci, Primate Res Inst, Kyoto Univ, Aichi, Japan ²Dept Mol Neurosci, Osaka Univ, Osaka, Japan
³Core Research for Evolutional Science and Technology (CREST), Japan Science and Technology Agency (JST)
- P1-120** **Inhibition from the brachioradialis to the flexor carpi radialis motoneurone pool in humans**
Mitsuhiro Nito¹, Wataru Hashizume¹, Katsuhiko Suzuki², Toshiaki Sato³, Akira Naito¹
¹Dept Anat, Univ of Yamagata, Yamagata, Japan ²Dept Phys Ther, Yamagata Pref Univ Health Sci, Yamagata, Japan
³Dept Occup Ther, Yamagata Pref Univ Health Sci, Yamagata, Japan
- P1-121** **Effect of Undamaged Residual Axons on Motor Function in the Nerve-Crushed Rats**
Mika Karasawa, Kumiko Yokouchi, Kyutarō Kawagishi, Tetsuji Moriizumi, Nanae Fukushima
Dept Anat, Shinshu Univ Sch Med, Nagano, Japan
- P1-122** **Morphological analysis of spinal cholinergic interneuron, partition cells**
Yu Hongo^{1,2}, Toshiyasu Matsui¹, Takahiro Nakata³, Hiroyo Furukawa³, Takeshi Ono⁴, Kenichi Kaida², Yasushi Miyahira⁴, Yasushi Kobayashi¹
¹Dept. Anat. and Neurobiol., National Defense Med. Coll., Saitama, Japan
²Dept. Internal Med. III, National Defense Med. Coll., Saitama, Japan ³Dept. Health Sci., Ishikawa Pref. Nursing Univ., Ishikawa, Japan
⁴Dept. Global Infect. Dis. Trop. Med., National Defense Med. Coll., Saitama, Japan
- P1-123** **Distribution of respiratory and seizure-like neurons in cervical spinal cord**
Hideki Shimomura¹, Ayae Nishiyama², Yasuhiro Takeshima¹, Akiko Arata²
¹Department of pediatrics, Hyogo College of medicine ²Division of Physiome, Department of Physiology, Hyogo College of Medicine
- P1-124** **The number of gamma motoneurons decreased in Otsuka Long-Evans Tokushima Fatty (OLETF) rat**
Ken Muramatsu¹, Toru Tamaki¹, Junya Komagata¹, Masatoshi Niwa², Tomoyasu Ishiguro¹, Tatsuya Hasegawa³, Sei-ichi Sasaki⁴
¹Dept Physical Therapy, Health Science University, Yamanashi, Japan ²Dept. Occupational Therapy, Kyorin Univ, Tokyo, Japan
³Div. Human Environmental Science, Mount Fuji Research Institute, Yamanashi, Japan
⁴Center for Medical Sciences, Ibaraki Prefectural Univ of Health Sciences, Ibaraki, Japan

- P1-125** **Hyperglycemia causes the reduction of numbers and sizes of abdominal motoneurons in STZ rats**
Naomi Ohshiro¹, Ken Muramatsu², Sei-ichi Sasaki³, Masatoshi Niwa¹
¹Kyorin University ²Department of Physical Therapy, Health Science University
³Center for Medical Sciences, Ibaraki Prefectural University of Health Sciences

- P1-126** **Statistical analysis of global spontaneous activity of central neurons in *Drosophila* larvae**
Youngtaek Yoon¹, Ken Nakae³, Hiroshi Kohsaka², Shin Ishii³, Akinao Nose^{1,2}
¹University of Tokyo ²Dept Complexity Sci, Univ of Tokyo, Tokyo, Japan ³Dept Systems Sci, Kyoto Univ, Kyoto, Japan

Posture and Gait

- P1-127** **Neuronal activity in supplementary motor area of the Japanese monkey walking on a treadmill**
Katsumi Nakajima, Akira Murata, Masahiko Inase
Kinki Univ.
- P1-128** **Characteristics of sitting posture stability in stroke patients during optokinetic stimulation**
Junya Komagata¹, Shiori Watanabe², Ken Muramatsu¹, Yutaka Suzuki³, Toshihiro Kitama³
¹Department of Physical Therapy, Health Science University, Yamanashi, Japan
²Department of Physical Therapy, Yumura Onsen Hospital, Yamanashi, Japan
³Center for Life Science Research, University of Yamanashi, Yamanashi, Japan
- P1-129** **Fiine stimulus from special underwear provide good reflex and give a well-balanced upper body posture during sitting both at rest and computer work**
Yoriko Atomi¹, Tomoaki Atomi², Kazuya Tanaka², Noboru Hirose², Miho Shimizu¹, Yoshiro Koyama³, Hidetoshi Suzuki⁴
¹Tokyo University of Agriculture and Technology, Tokyo, Japan ²Teikyo University of Science ³RenYou Co., Ltd.
⁴Toray Industries, Inc., Shanghai, China

Rhythmic Motor Pattern Generation

- P1-130** **Search for cholinergic interneurons that regulate larval locomotion in *Drosophila***
Eri Hasegawa, Akinao Nose
Department of Complexity Science and Engineering, Graduate School of Frontier Sciences, The University of Tokyo
Short Talk 2
ST-2-7
9/11 10:00-11:00
- P1-131** **Emergence of coordinated activity in the motor circuits of *Drosophila* embryos**
Tappei Kawasaki¹, Sawako Niki¹, Akinao Nose^{1,2}
¹Dept of Complexity Sci and Eng, Grad Sch of Frontier Sci, Univ of Tokyo, Chiba, Japan
²Dept of phys, Grad Sch of Sci, Univ of Tokyo, Chiba, Japan
Short Talk 1
ST-1-9
9/11 9:00-10:00
- P1-132** **PSD-95 protein expression in rat oro-maxillofacial motoneurons during postnatal development**
Akira Tanaka¹, Kohji Ishihama^{1,3}, Satoshi Wakisaka², Shiho Honma², Mikihiro Kogo¹
¹First Department of Oral and Maxillofacial Surgery, Graduate School of Dentistry Osaka University, Osaka, Japan
²Department of Oral Anatomy and Developmental Biology, Graduate School of Dentistry Osaka University, Osaka, Japan
³Department of Dentistry, Oral and Maxillofacial Surgery, Osaka Police Hospital, Osaka, Japan
- P1-133** **Reciprocal functional interactions between the brainstem and the lower spinal cord**
Itaru Yazawa^{1,2}
¹Dept of Physical Therapy, Prefectural University of Hiroshima Faculty of Health and Welfare, Hiroshima, Japan
²Lab of Neural Control, NINDS/NIH, Bethesda, MD, USA

Cerebellum

- P1-134** **Evaluation of cerebellar dependent predictive optokinetic eye movements in goldfish**
Shuntarou Miki¹, Baker G Robert², Yutaka Hirata¹
¹Dept Computer Sci, Chubu Univ Grad Sch of Engin, Aichi, Japan
²Dept Physiol and Neurosci, New York Univ Sch of Med, New York, NY, USA
Short Talk 2
ST-2-8
9/11 10:00-11:00
- P1-135** **Complex spike response characteristics of Purkinje cells in the cerebellar uvula during optokinetic stimulation**
Toshihiro Kitama¹, Junya Komagata²
¹Center for Life Science Research, Univ of Yamanashi, Yamanashi, Japan
²Dept of Physical Therapy, Health Science University, Yamanashi, Japan

- P1-136** Mossy fiber activity in the cerebellar hemisphere during a step-tracking movement task with random delay period
Takahiro Ishikawa¹, Saeka Tomatsu², Shinji Kakei¹
¹Tokyo Metropolitan Inst. of Med. Sci., Tokyo, Japan ²Inst. of Neurosci, National Ctr. of Neurology and Psychiatry, Tokyo, Japan
- P1-137** Projection patterns of individual spinocerebellar axons in the mouse
Yuanjun Luo¹, Kazuma Sasamura¹, Radhika Pooja Patel^{1,2}, Izumi Sugihara¹
¹Tokyo Medical and Dental University Graduate School, Tokyo, Japan ²Imperial College School of Medicine, London, UK

Short Talk 1
ST-1-10
9/11 9:00-10:00

Basal Ganglia

- P1-138** Topological projections of direct and indirect pathway neurons in the neostriatum to the GPe
Shinichiro Okamoto¹, Hiroyuki Hioki¹, Jaerin Sohn^{1,2}, Fumino Fujiyama^{3,4}, Takeshi Kaneko¹
¹Dept Morphol Brain Sci, Grad Sch of Med, Kyoto Univ, Kyoto, Japan ²DC2 Research Fellow of Japan Society for Promotion of Science
³Laboratory of Neural Circuitry, Grad Sch Brain Science, Doshisha University, Kyoto, Japan ⁴CREST, JST
- P1-139** The topography of striatopallidal projections and calbindin immunoreactive subdivisions
Kazuko Mizutani¹, Fuyuki Karube¹, Yoon Mi Oh¹, Yasutake Nakano¹, Fumino Fujiyama^{1,2}
¹Laboratory of Neural Circuitry, Grad Sch of Brain Science, Doshisha Univ ²CREST, JST
- P1-140** Immunohistochemical compartments of the globus pallidus and their projection patterns
Yoon Mi Oh¹, Kazuko Mizutani¹, Yasutake Nakano¹, Tomo Unzai^{1,2}, Fuyuki Karube¹, Fumino Fujiyama^{1,2}
¹Laboratory of Neural Circuitry, Grad Sch Brain Science, Doshisha University, Kyoto, Japan ²CREST, JST, Tokyo, Japan
- P1-141** Glutamatergic and GABAergic Control of Monkey Pallidal Activity during Performance of a Motor Task
Nobuya Kaneko¹, Nobuhiko Hatanaka¹, Sayuki Takara^{1,2}, Masahiko Takada³, Atsushi Nambu¹
¹Div of System Neurophysiol, NIPS, Okazaki, Japan
²Bio-function Imaging Team, Center for Life Science Technologies, RIKEN, Kobe, Japan
³Systems Neurosci Sec, Primate Res Inst, Kyoto Univ, Inuyama, Japan
- P1-142** Physiological roles of corticostriatal pathways in the basal ganglia
Hiromi Sano¹, Kenta Kobayashi², Shigeki Kato³, Kazuto Kobayashi³, Atsushi Nambu¹
¹Division of System Neurophysiology, NIPS, Aichi, Japan ²Section of Viral Vector Development, NIPS, Aichi, Japan
³Dept Mol Gen, Fukushima Med Univ, Fukushima, Japan
- P1-143** Chemical Diversity and spatial distribution of neurons in the entopeduncular nucleus of the mouse
Yuta Miyamoto, Takaichi Fukuda
Dept Anat and Neurobiol, Univ of Kumamoto, Kumamoto, Japan
- P1-144** A prospective study of striosome/matrix mosaic formation in the developing striatum
Yasuto Tanabe^{1,2}, Kazuya Hagimoto², Saki Takami², Fujio Murakami²
¹Kyoto Univ Hospital, Dep. of Neurology ²Osaka Univ, Grad. school of Front. Biosci.
- P1-145** Characterization of the expression of integral membrane protein GPR155 in the mouse striatum reveals its relation with D1 receptor-expressing striatal projection neurons
Yuji Yamashita, Stefan Trifonov, Masato Maruyama, Masahiko Kase, Tetsuo Sugimoto
Dept. of Anat. and Brain Sci., Kansai Med. Univ.
- P1-146** Activation-induced manganese-enhanced MRI unravels pathological state of Parkinson's disease
Satomi Kikuta¹, Yukiyo Nakamura², Yukio Yamamura², Yuchio Yanagawa³, Atsushi Tamura¹, Noriyasu Homma¹, Hajime Tamura¹, Jiro Kasahara², Makoto Osana¹
¹Tohoku Univ. Grad. Sch. Med., Sendai, Japan ²Grad. Sch. Fac. Pharm. Sci., The Univ. of Tokushima, Tokushima, Japan
³Gunma Univ. Grad. Sch. Med., Maebashi, Japan
- P1-147** Effect of Caspr3 deficiency on mouse behavior
Haruna Hirata¹, Aki Takahashi², Kazutada Watanabe^{1,3}, Tsuyoshi Koide², Yasushi Shimoda¹
¹Dept Bioeng, Nagaoka Univ Tech, Niigata, Japan ²Mouse Genomics Resource Lab, Natl Inst Genetics, Shizuoka, Japan
³Nagaoka Natl Coll Tech, Niigata, Japan
- P1-148** The subthalamic nucleus neurons mostly innervate interneurons in the rat neostriatum
Yoshinori Koshimizu, Kouichi C Nakamura, Takahiro Furuta, Takeshi Kaneko
Dept. of Morphol., Brain Sci., Grad.Sch. of Med., Kyoto Univ.

Voluntary Movements

- P1-149** Developmental changes in distribution of corticospinal axons in the mouse spinal cord : Comparison among multiple cortical areas
Hiroshi Kameda¹, Naoyuki Murabe¹, Satoshi Fukuda¹, Hiroaki Mizukami², Keiya Ozawa², Masaki Sakurai¹
¹Dept Physiol, Teikyo Univ Sch Med, Tokyo, Japan ²Div Genet Therapeutics, Ctr for Mol Med, Jichi Med Univ, Tochigi, Japan
- P1-150** Population characteristics of spike synchrony in rat motor cortices during movement task
Rie Kimura^{1,2,4}, Yutaka Sakai¹, Akiko Saiki^{1,2}, Yoko Fujiwara-Tsukamoto^{1,2,3}, Yoshikazu Isomura^{1,2}
¹Brain Sci Inst, Tamagawa Univ, Tokyo, Japan ²JST-CREST, Tokyo, Japan ³Grad Sch Brain Sci, Doshisha Univ, Kyoto, Japan ⁴Division of Visual Information Processing, NIPS, Okazaki, Japan
- P1-151** Different modulation of common motor information in rodent primary and secondary motor cortices
Akiko Saiki^{1,2}, Rie Kimura^{1,2}, Toshikazu Samura^{1,3}, Yoko Fujiwara-Tsukamoto^{1,2,4}, Yutaka Sakai¹, Yoshikazu Isomura^{1,2}
¹Brain Science Institute, Tamagawa University, Tokyo, Japan ²JST-CREST, Tokyo, Japan ³Dept Applied Molecular Biosci, Grad Sch Med, Yamaguchi Univ, Yamaguchi, Japan ⁴Grad Sch Brain Sci, Doshisha Univ, Kyoto, Japan
- P1-152** Automatic synchronization of movements with the rhythm in a repetitive button press task
Short Talk 2
ST-2-9
9/11 10 : 00-11 : 00
Shigehiro Miyachi
Kyoto University
- P1-153** Muscle synergies converging from distinct premotor projection patterns via parallel descending systems
Tomomichi Oya¹, Tomohiko Takej^{1,3}, Kazuhiko Seki^{1,2}
¹Dept Neurophysiol, NCNP, Tokyo, Japan ²PRESTO, JST, Tokyo, Japan ³Ctr for Neurosci Studies, Queen's Univ, Kingston, Canada
- P1-154** Local field potentials in monkey prefrontal cortex during a shape-manipulation task
Short Talk 2
ST-2-10
9/11 10 : 00-11 : 00
Norihiro Kawaguchi^{1,2}, Kazuhiro Sakamoto³, Kohei Yagi¹, Masashi Aoki², Hajime Mushiaki^{1,4}
¹Dept. of Physiol., Tohoku Univ. Sch. of Med. ²Dep of Neurology, Tohoku Univ. Sch. of Med., Miyagi, Japan ³Research Institute of Electrical Communication, Tohoku Univ., Miyagi, Japan ⁴CREST, JST, Tokyo, Japan
- P1-155** The role of subcallosal fascicle and frontal aslant tract in movement and speech
Masashi Kinoshita¹, Nicolas M. De Champfleure², Yutaka Hayashi¹, Hugues Duffau³
¹Dept Neurosurg, Univ of Kanazawa, Ishikawa, Japan ²Dept Neuroradiol, Univ of Montpellier, Montpellier, France ³Dept Neurosurg, Univ of Montpellier, Montpellier, France
- P1-156** Behaviour- and layer-dependent synchrony in motor cortex during volitional arm movement
Short Talk 2
ST-2-11
9/11 10 : 00-11 : 00
Thomas Sharp¹, Hideaki Shimazaki¹, Yoshikazu Isomura², Tomoki Fukai¹
¹RIKEN Brain Science Institute ²Tamagawa University Brain Science Institute
- P1-157** Architecture of whisker movement related neurons in rat primary motor cortex
Ken-ichi Shibata, Takahiro Furuta, Daichi Hirai, Takeshi Kaneko
Dept Morphol Brain Sci, Grad Sch of Med, Kyoto Univ, Kyoto, Japan

Oculomotor System

- P1-158** Decreased susceptibility to pilocarpine in Rac-GAP α -chimaerin deficient mice
Eri Takeuchi¹, Tomomi Hatanaka¹, Erina Sasagawa², Takuji Iwasato³, Shigeyoshi Itohara⁴, Akira Katoh¹
¹Institute of Innovative Science and Technology, Tokai Univ, Kanagawa, Japan ²Dept Appl Biochem, Tokai Univ, Kanagawa, Japan ³Div of Neurogenet, NIG, Shizuoka, Japan ⁴Lab for Behav Genet, RIKEN BSI, Saitama, Japan
- P1-159** Distinct expression patterns of nicotinic receptor subtypes in neurons exhibiting distinct neurotransmitter phenotypes in the medial vestibular and prepositus hypoglossi nuclei
Yue Zhang, Yuchio Yanagawa, Yasuhiko Saito
Genet. and Behavioral Neurosci., Gunma Univ. Grad. Sch. of Med., Maebashi, Gunma, Japan
- P1-160** Analysis of eye blink and eye movement around voluntary and involuntary eye blink
Fumiaki Tanaka¹, Yuta Hamasaki¹, Syumpei Asahara¹, Ken-ichi Okada^{1,2}, Yuri Kitamura³, Masayuki Watanabe⁴, Yasushi Kobayashi^{1,2,5}
¹Graduate School of Frontier Biosciences, Osaka University ²Center for Information and Neural Networks, National Institute of Information and Communications Technology, Suita, Japan ³Department of Social and Environmental Medicine, Graduate School of Medicine ⁴New Zealand Brain Research Institute, Christchurch, New Zealand. ⁵Osaka University Research Center for Behavioral Economics, Suita, Japan

- P1-161** **Microsaccade rate reflects mental fatigue**
Shumpei Asahara¹, Fumiaki Tanaka¹, Yuta Hamasaki¹, Ken-ichi Okada^{1,2}, Yuri Kitamura³, Masayuki Watanabe⁴, Yasushi Kobayashi^{1,2,5}
¹Graduate School of Frontier Biosciences, Osaka University
²Center for Information and Neural Networks, National Institute of Information and Communications Technology, Suita, Japan
³Department of Social and Environmental Medicine, Graduate School of Medicine, Osaka University, Suita, Japan
⁴New Zealand Brain Research Institute, Christchurch, New Zealand
⁵Osaka University Research Center for Behavioral Economics, Suita, Japan
- P1-162** **Auditory attention could affect the positioning-control of microsaccade**
Makoto Yoneya¹, Hsin-I Liao¹, Shunsuke Kidani¹, Shigeto Furukawa¹, Makio Kashino^{1,2}
¹NTT Communication Science Lab, Nippon Telegraph and Telephone Corp, Kanagawa, Japan
²Dept Information Processing, Tokyo Institute of Technology, Kanagawa, Japan
- P1-163** **Ocular following responses of monkeys to competing motion of isoluminant color grating and luminance grating**
Kiyoto Matsuura^{1,2}, Kenichiro Miura¹, Kenji Kawano¹
¹Grad. Schl. Med., Kyoto Univ., Kyoto, Japan ²Kyoto Fushimi Shimizu Hospital, Kyoto, Japan
- P1-164** **Pupillary Response Reflects Subjective Salience of Sound**
Hsin-I Liao, Shunsuke Kidani, Makoto Yoneya, Makio Kashino, Shigeto Furukawa
NTT Communication Science Laboratories

Visual System

- P1-165** **Expression pattern of voltage-gated sodium channel subtypes in dopaminergic amacrine cells in the rat retina**
Yuko Kaneko^{1,2}, Kayo Fujimaki-Aoba², Shu-ich Watanabe²
¹Fac Health and Medical Care, Saitama Medical Univ, Saitama, Japan ²Dept Physiol, Fac Med, Saitama Medical Univ, Saitama, Japan
- P1-166** **Functional segregation of gap-junctionally connected retinal amacrine cells and regulation of channel opening of their electrical synapses**
Soh Hidaka
Dept.of Physiol., Fujita Health Univ.Sch.of Med.
- P1-167** **Photoreceptor ribbon synapse contributes to the spatiotemporal frequency property of late-phase optokinetic responses in mice**
Yuko Sugita^{1,2,5}, Fumiyouki Araki^{3,4}, Taro Chaya^{1,2,3}, Kenji Kawano⁵, Takahisa Furukawa^{1,2,3}, Kenichiro Miura⁵
¹Lab. Mol & Dev Biology, Protein Inst, Osaka Univ, Osaka, Japan ²JST, CREST, Osaka, Japan ³Dept. Dev Biology, OBI, Osaka, Japan
⁴Dept.Ophthalmology, Univ Tokyo, Tokyo, Japan ⁵Dept. Integ Brain Sci, Grad Sch. Med, Kyoto Univ, Kyoto, Japan
- P1-168** **Light-evoked cooperative spike discharges of retinal ganglion cells during eye movements**
Akihiro Matsumoto, Masao Tachibana
Dept Psychol, Univ of Tokyo, Tokyo, Japan
- P1-169** **Homology of the mesopallium in the bird identified by gene expression of the neocortical marker cholecystokinin**
Yasuro Atoji
Gifu University
- P1-170** **Underlying mechanisms of temporal shrinkage of receptive field of relay cells in the dorsal lateral geniculate nucleus of the cat**
Akihiro Kimura^{1,3}, Satoshi Shimegi^{1,2}, Hiromichi Sato^{1,2}
¹Grad. Sch. of Medicine, Osaka Univ. ²Graduate School of Frontier Biosciences, Osaka University, Japan
³Osaka Health Science University
- P1-171** **Response selectivity of thalamocortical axons in mouse primary visual cortex**
Satoru Kondo¹, Kenichi Ohki^{1,2}
¹Department of Molecular Physiology, Graduate School of Medical Sciences, Kyushu University ²CREST, JST
- P1-172** **Two-photon imaging of lateral interaction in the superficial layer of the superior colliculus**
Masatoshi Kasai¹, Tadashi Isa^{1,2}
¹Dept Develop Physiol, National Institute for Physiological Sciences, Aichi, Japan
²Dept Life Sci, The Grad Univ for Advanced Studies, Kanagawa, Japan
- P1-173** **Learning-driven enhancement of top-down control in the primary visual cortex**
Hiroshi Makino, Takaki Komiyama
University of California, San Diego, USA

Short Talk 1
ST-1-12
9/11 9:00-10:00

- P1-174** Gap junctions mediate the dendritic linkage among parvalbumin-containing GABAergic neurons both within and across the columnar space in layer 4 of the visual cortex
Takaichi Fukuda
Dept Anat and Neurobiol, Grad Sch Med Sci, Kumamoto Univ
- P1-175** Neuronal circuit underlying fine-scale functional columns in the neocortex
Shun Tsuruno¹, Kaori Kiso², Naomi Matsumoto³, Toshihiko Hosoya¹
¹BSI, RIKEN, Saitama, Japan ²Dept Med, Univ of Tokyo, Tokyo, Japan ³National Inst of Biomedical Innovation, Osaka, Japan
- P1-176** Deep layer *in vivo* Ca² imaging of neuronal activity in awake mice
Hisato Maruoka, Taisuke Yoneda, Seiichiro Sakai, Nao Nakagawa, Mai Saeki, Toshihiko Hosoya
RIKEN Brain Science Institute
- P1-177** Contribution of diacylglycerol lipase- α to developmental plasticity in mouse V1
Katsuro Kameyama¹, Taisuke Yoneda¹, Takahiro Gotou¹, Keiko Terata¹, Mami Nakanishi¹, Kenji Sakimura², Masanobu Kano³, Yoshio Hata¹
¹Div Integrative Biosci, Tottori Univ Grad Sch Med Sci, Yonago, Japan
²Dept Cellular Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan ³Dept Neurophysiol, Tokyo Univ Grad Sch Med, Tokyo, Japan
- P1-178** Image statistics explaining natural texture selectivity in macaque V4
Gouki Okazawa¹, Satohiro Tajima^{2,3}, Hidehiko Komatsu^{1,4}
¹National Institute for Physiological Sciences, Aichi, Japan ²RIKEN Brain Science Institute, Saitama, Japan ³JSPS, Tokyo, Japan
⁴Dept Life Sci, SOKENDAI, Aichi, Japan
- P1-179** Spatial representation of moving visual stimulus across saccadic eye movements by MT/MST neurons
Naoko Inaba, Kenji Kawano
Kyoto University
- P1-180** Frequency-dependent spatiotemporal profiles of visual responses in ECoG signals recorded from awake monkeys
Kana Takaura¹, Naotsugu Tsuchiya^{2,3}, Naotaka Fujii¹
¹RIKEN BSI, Saitama, Japan ²Monash University, Melbourne, Australia ³JST, Tokyo, Japan
- P1-181** A subspace mapping for 3D spectral receptive field of MT neurons
Mikio Inagaki¹, Kota S. Sasaki^{1,2}, Hajime Hashimoto¹, Izumi Ohzawa^{1,2}
¹Grad Sch Frontier Biosciences, Osaka Univ, Osaka, Japan ²CiNet, Osaka, Japan
- P1-182** Neuronal and Behavioral Performance of Motion Discrimination in *Drosophila melanogaster*
Yoshinori Suzuki^{1,2}, Toru Aonishi¹, Yoichi Seki³, Hiroyoshi Miyakawa³, Takako Morimoto³
¹Tokyo Institute of Technology ²JSPS Research Fellow DC ³Tokyo University of Pharmacy and Life Sciences

Short Talk 2
ST-2-12
9/11 10:00-11:00

Pain, Itch and Their Disorders

- P1-183** Mechanical factors in lengthening contraction initiating muscular mechanical hyperalgesia in rats
Koei Hayashi¹, Masahiro Abe¹, Akihiro Yamanaka², Kazue Mizumura³, Toru Taguchi¹
¹Dept. Neurosci. II, Res. Inst. Environ. Med., Nagoya Univ., Nagoya, Japan
²Med. Inform. Dept., Vitacain Pharmaceutical Co. Ltd., Osaka, Japan ³Coll. Life Health Sci., Chubu Univ., Kasugai, Japan
- P1-184** The axonal transport and analgesic effect of newly developed Botulinum neurotoxin type A
Kotaro Maruhama¹, Yoshizo Matsuka², Yumiko Yamamoto³, Ryuji Terayama¹, Tomosada Sugimoto¹
¹Dept of Oral Function and Anatomy, Grad Sch of Med, Dent and Pharm Sci, Okayama Univ, Okayama, Japan
²Dept Stomatognathic Function and Occlusal Reconstruction, Tokushima Univ, Tokushima, Japan
³Dept of Bacteriology, Grad Sch of Med, Dent and Pharm Sci, Okayama Univ, Okayama, Japan
- P1-185** Altered pain behavior observed in mice lacking interleukin-27
Toshiharu Yasaka¹, Tomoko Sasaguri², Yuzo Murata¹, Hiromitsu Hara³, Asako Ishikawa², Tsugumi Fujita¹, Eiichi Kumamoto¹, Sadahiko Masuko¹, Naomi Hirakawa², Hiroki Yoshida³
¹Dept Anat and Physiol, Faculty Med, Saga Univ, Saga, Japan ²Dept Anesth and Critical Med, Faculty Med, Saga Univ, Saga, Japan
³Dept Biomol Sci, Faculty Med, Saga Univ, Saga, Japan
- P1-186** Alleviation of behavioral hypersensitivity in mouse models of inflammatory pain with two structurally different casein kinase 1 (CK1) inhibitors
Takashi Kurihara^{1,2}, Eri Sakurai², Masayasu Toyomoto³, Isao Kii³, Daisuke Kawamoto¹, Toshihide Asada¹, Tsutomu Tanabe², Megumu Yosimura⁴, Masatoshi Hagiwara³, Atsuro Miyata¹
¹Dept Pharmacol, Grad Sch Med and Dent Sci, Kagoshima Univ.
²Dept Pharmacol and Neurobiol, Grad Sch Med, Tokyo Med and Dent Univ ³Dept Anat and Devel Biol, Grad Sch Med, Kyoto Univ
⁴Grad Sch Health Sci, Kumamoto Health Sci Univ

Short Talk 1
ST-1-13
9/11 9:00-10:00

P1-187

Short Talk 1
ST-1-14
9/11 9:00-10:00

Acute uterine irritation provokes painful colonic motility via transient receptor potential A1-dependent spinal NR2B phosphorylation in rats

Tzer-Bin Lin

Department of Physiology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan

P1-188

In vivo calcium imaging of spinal dorsal horn neurons in response to cutaneous sensory stimulation toward different skin points

Kazuhiko Nishida, Shinji Matsumura, Seiji Ito

Dept Med Chem, Kansai Med Univ, Osaka, Japan

P1-189

Peripheral nerve injury activates convergent nociceptive input to dorsal horn neurons from neighboring intact nerve

Ryuji Terayama¹, Yuya Yamamoto^{1,2}, Noriko Kishimoto^{1,2}, Kotaro Maruhama¹, Masahide Mizutani^{1,2}, Seiji Iida^{1,2}, Tomosada Sugimoto¹

¹*Dept of Oral Funct and Anat, Okayama Univ Grad Sch Med, Dent and Pharmaceu Sci, Okayama, Japan*

²*Dept of Oral and Maxillofac Reconst Surg, Okayama Univ Grad Sch Med, Dent and Pharmaceu Sci, Okayama, Japan*

P1-190

Effect of sex steroid hormone on kappa opioid receptor-mediated antinociception of TMJ-responsive neurons in superficial laminae at spinomedullary junction of ovariectomized female rats

Akimasa Tashiro, Yasuhiro Nishida

Department of Physiology National Defense Medical College

P1-191

Role of CGRP in inflammatory pain-induced potentiation in the central amygdala

Kei Shinohara^{1,2,3}, Ryo Ikeda¹, Yukari Takahashi^{2,3}, Hiroki Kurihara⁴, Keishi Marumo¹, Fusao Kato^{2,3}

¹*Dept. Orthop., Jikei Univ. Sch. Med., Tokyo, Japan* ²*Dept. Neurosci., Jikei Univ. Sch. Med., Tokyo, Japan*

³*Center for Neuroscience of Pain, Jikei Univ. Sch. Med., Tokyo, Japan*

⁴*Dept. Mol. Cell Biol., Grad. Sch. Med., Univ. of Tokyo, Tokyo, Japan*

P1-192

Short Talk 2
ST-2-13
9/11 10:00-11:00

Astrocytic activation in the anterior cingulate cortex is critical for sleep disorder under neuropathic pain

Akira Yamashita^{1,2}, Michiko Narita², Naoko Kuzumaki², Akihiro Yamanaka¹, Minoru Narita^{1,3}

¹*Dept. Neurosci.2, RIEM, Nagoya Univ.* ²*Dept. Pharmacol., Hoshi Univ., Tokyo, Japan*

³*Life-Science Tokyo Advanced Research Center (L-StaR), Tokyo, Japan*

P1-193

Short Talk 1
ST-1-15
9/11 9:00-10:00

Odor-induced Analgesic Effect Mediated by Hypothalamus Orexinergic Neurons

Ran Yamaguchi¹, Shogo Tashiro^{2,3}, Katsuko Kajiya¹, Yuichi Kanmura³, Tomoyuki Kuwaki²,

Hideki Kashiwadani²

¹*Dept Biochem Nutri Chem, Facul Agri, Kagoshima Univ, Kagoshima, Japan*

²*Dept Physiol, Grad Sch Med Dent Sciences, Kagoshima Univ, Kagoshima, Japan*

³*Dept Anesthesiol, Grad Sch Med Dent Sciences, Kagoshima Univ, Kagoshima, Japan*

Autonomic Nervous System

P1-194

Centrally administered bombesin activates hemoglobin-containing pre-sympathetic neurons in rat hypothalamic paraventricular nucleus

Kenjiro Tanaka¹, Takahiro Shimizu², Motoaki Saito², Kazunari Yuri¹

¹*Dept Neurobiol Anat, Kochi Med Sch, Kochi Univ, Japan* ²*Dept Pharmacol, Kochi Med Sch, Kochi Univ, Japan*

P1-195

Respiratory rhythm generation in the brainstem-spinal cord preparation of Pax6 mutant rats

Hiroshi Onimaru¹, Shih Tien Lin¹, Keiko Ikeda², Noriko Osumi³

¹*Dept. of Physiol., Showa Univ.Sch.of Med.* ²*Division of Biology, Hyogo College of Medicine, Hyogo, Japan*

³*Department of Developmental Neuroscience, Tohoku University School of Medicine, Sendai*

P1-196

The effects of lidocaine on the respiratory neuronal activity in brainstem preparations of the newborn rats

Tomoharu Shakuo, Hiroshi Onimaru

Department of Physiology, Showa University School of Medicine

P1-197

Responses of higher brain function and ventilation to mild and severe hypoxia

Kotaro Takeda^{1,2}, Isato Fukushi^{2,3,4}, Mayu Kuniya⁵, Youhei Hasebe^{2,6}, Yoshihiro Muraoka^{2,5},

Jouji Horiuchi³, Yasumasa Okada²

¹*Fujita Memorial Nanakuri Institute, Fujita Health University, Mie, Japan*

²*Clinical Research Center, National Hospital Organization Murayama Medical Center, Tokyo, Japan*

³*Department of Biomedical Engineering, Graduate School of Science and Engineering, Toyo University, Saitama, Japan*

⁴*Planning Division, Dental Support Co., Ltd., Chiba, Japan* ⁵*School of Human Sciences, Waseda University, Saitama, Japan*

⁶*Department of Pediatrics, School of Medicine, University of Yamanashi, Yamanashi, Japan*

- P1-198** Lateral periaqueductal gray neurons innervate cholinergic neurons in the pedunculopontine tegmental nucleus of the rat
Tatsuro Oka, Shigefumi Yokota, Hirohiko Asano, Yukihiko Yasui
Dept Anat & Morphol Neurosci, Shimane Univ Sch of Med, Shimane, Japan
- P1-199** Orexinergic fibers are in contact with KÖlliker-Fuse neurons projecting to the ventrolateral medulla and phrenic and hypoglossal nuclei in the rat
Shigefumi Yokota, Tatsuro Oka, Hirohiko Asano, Yukihiko Yasui
Shimane University School of Medicine
- P1-200** Orexinergic modulation on respiratory neuron in parabrachial nucleus under hypoxic/hypercapnic condition
Akiko Arata¹, Mari Shiga¹, Shigefumi Yokota², Akihiro Yamanaka³
¹*Dept. of Physiol, Hyogo College of Medicine, Nishinomiya, Japan*
²*Dept. of Anatomy & Morphological Neuroscience, Shimane Univ. School of Med. Izumo, Japan*
³*Dept. of Neuroscience II, Research Institute of Environmental Medicine Nagoya Univ., Nagoya, Japan*
- P1-201** The entrainment of heart rate to acoustic tempo
Ken Watanabe¹, Yuuki Ooishi², Makio Kashino^{1,2,3}
¹*Tokyo Institute of Technology* ²*NTT CS Labs, Kanagawa, Japan* ³*CREST, JST, Kanagawa, Japan*
- P1-202** Cardiovascular autonomic function in patients with epilepsy
Rajesh Kumar Goit¹, Bishnu Hari Paudel²
Short Talk 2 ST-2-14 9/11 10:00-11:00
¹*Nepalgunj Medical College, Nepal* ²*B P Koirala Institute of Health Sciences, Nepal*
- P1-203** Study on appropriate parameters for the postocclusive reactive hyperemia test using Diffuse Correlation Spectroscopy
Keitaro Nagano¹, Ryohei Ouchi², Sho Tsujimoto¹, Taro Taguchi¹, Yuta Takahashi¹, Yumie Ono^{1,2}
¹*Graduate School of Science and Technology, Meiji University, Kanagawa, Japan*
²*School of Science and Technology, Meiji Univ., Kanagawa, Japan*

Instinctive Behavior

- P1-204** Neural mechanisms underlying odor preference choice in *Drosophila* larva
Yusuke Dairyo¹, Makoto Kanai², Kazuo Emoto¹
¹*Department of Biological Sciences, Graduate School of Science, The University of Tokyo* ²*New York Univ, New York, USA*
- P1-205** Enhancement of sexual receptivity in *Drosophila* virgin female lacking Insulin-like peptides
Kazuki Watanabe, Takaomi Sakai
Dept Biol Sci, Tokyo Metropolitan Univ, Tokyo, Japan
- P1-206** Activation of Early Growth Response Protein 1 (egr1) in Loser Zebrafish
Sok-Keng Tong, Ming-Yi Chou, Mikako Takahoko, Hitoshi Okamoto
RIKEN Brain Science Institute, Wakoshi, Japan
- P1-207** "Cerebellin 1" outside the cerebellum: Cbln1 regulates fear memory
Shintaro Otsuka¹, Kohtaro Konno², Manabu Abe³, Junko Motohashi¹, Kenji Sakimura³, Masahiko Watanabe², Michisuke Yuzaki¹
Short Talk 1 ST-1-16 9/11 9:00-10:00
¹*Dept. of Physiol., Sch. of Med., Keio Univ.* ²*Department of Anatomy, Hokkaido University Graduate School of Medicine, Sapporo*
³*Department of Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan*
- P1-208** Instinctive behavioral changes in prenatal nicotine exposure mice
Shu-Chuan Yang¹, Jheng-Ya Ye², Kun-Ruey Shieh²
¹*General Education Center, Tzu Chi College of Technology, Hualien, Taiwan*
²*Department of Physiology/Institute of Physiological and Anatomical Medicine, Tzu Chi University, Hualien, Taiwan*
- P1-209** Different Instinctive behaviors between Taiwanese Native Rodent, Formosan Wood Mouse (*Apodemus semotus*), and Common Laboratory Mouse, C57BL/6 (*Mus musculus*)
Kun-Ruey Shieh¹, Shu-Chuan Yang², Hsien-Yong Lai³
¹*Department of Physiology, Tzu Chi University, Hualien, Taiwan*
²*General Education Center, Tzu Chi College of Technology, Hualien, Taiwan*
³*Division of Anesthesiology, Mennonite Christian Hospital, Hualien, Taiwan*
- P1-210** Difference in favorable taste-related brain activity between hunger and satiety states
Yuta Takahashi¹, Yusuke Seki², Yumie Ono^{1,2}
¹*Graduate School of Science and Technology, Meiji University, Kanagawa, Japan*
²*School of Science and Technology, Meiji University, Kanagawa, Japan*

Sleep and Biological Rhythms

- P1-211** The involvement of recurrent inhibitory network in the Diurnal variation of neuronal rhythm and synaptic plasticity in rat hippocampal slices
 Short Talk 1
 ST-1-17
 9/11 9 : 00-10 : 00
 Hiroki Nakatsuka, Kiyohisa Natsume
Kyushu Institute of Technology
- P1-212** The differences of the spatiotemporal patterns between carbachol-induced theta waves and disinhibition-induced epileptic discharges in rat hippocampal slices
 Short Talk 2
 ST-2-15
 9/11 10 : 00-11 : 00
 Itsuki Kageyama, Ayumi Hashimoto, Kiyohisa Natsume
Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Fukuoka, Japan.
- P1-213** The inhibitory actions of orexin on noradrenergic neurons via GABAergic transmission in the locus coeruleus
 Junya Fukuoka¹, Takeshi Kanda¹, Masashi Yanagisawa^{1,2}
¹III, Univ of Tsukuba, Ibaraki, Japan ²University of Texas Southwestern Medical Center, TX, USA
- P1-214** Rapid resetting of the suprachiasmatic clock in vasopressin receptor V1a and V1b double-knockout mice under jet lag
 Yulin Chen, Toru Suzuki, Yoshiaki Yamaguchi, Hitoshi Okamura
Dept. of Syst. Biol., Grad. Sch. of Pharm. Sci., Kyoto Univ., Kyoto, Japan
- P1-215** Sleep-wake state-dependent changes in expression of Ca²⁺ permeable AMPA receptors in adolescent rat barrel cortex
 Akihiro Karashima¹, Aritaka Nakamura¹, Norihiro Katayama¹, Hiroshi Tsubokawa², Mitsuyuki Nakao¹
¹Grad Sch Info Sci, Tohoku Univ, Miyagi, Japan ²Dept Health Sci, Tohoku Fukushi Univ, Miyagi, Japan
- P1-216** Role of amygdala subnuclei in the regulation sleep and waking and of autonomic nervous system during REM sleep
 Short Talk 2
 ST-2-16
 9/11 10 : 00-11 : 00
 Kunihiko Nishimura, Naoto Haruyama, Toshifumi Aoyagi, Yoshimasa Koyama
Dept Sci and Technol, Fukushima Univ, Fukushima, Japan
- P1-217** The role of amygdala in blood pressure fluctuation during REM sleep
 Naoto Haruyama, Hiroki Oonami, Kunihiko Nishimura, Yoshimasa Koyama
Dept Sci Technol, Fukushima Univ, Fukushima, Japan
- P1-218** Food-anticipatory feeding activity rhythm regulated by food-entrainable oscillator in the Japanese catfish, *Plotosus japonicus*
 Hiroki Sueyoshi, Takanori Ikenaga, Masanori Kasai
Chem. and Biosci. of Sci. Course, Grad. Sch. of Sci. and Engineer., Kagoshima Univ., Kagoshima Japan
- P1-219** Different feeding schedule affects sleep pressure
 Tetsuya Shiuchi^{1,2}, Airi Otsuka^{1,3}, Kanna Oura^{1,4}, Noriyuki Shimizu¹, Sachiko Chikahisa¹, Hiroyoshi Sei¹
¹Dept Integ Physiol, Inst Health Biosci, The Univ of Tokushima Grad Sch, Tokushima, Japan ²JST, PRESTO, Saitama, Japan
³Dept Food Sci, The Univ of Tokushima Facul Med ⁴Student Lab, Facul of Med, The Univ of Tokushima, Tokushima, Japan
- P1-220** Spatiotemporal properties of neocortical burst activity in sevoflurane-anesthetized rats
 Tomio Hayama
Dept. of Morphological and Physiological Sciences, Faculty of Life Sciences, Kumamoto University

Motivation and Emotion

- P1-221** Prenatal music influences maternal and offspring behavior
 Yurika Takano¹, Shinya Yanagita^{2,3}, Natsuko Kubota³, Tomomi Matsuzawa¹, Ken Takeda³
¹Dept. of Pharmaceut. Sci., Tokyo Univ. of Sci., Chiba, Japan ²Dept. of Sci. and Technol., Tokyo Univ. of Sci., Chiba, Japan
³Res. Inst. for Sci. and Technol., Tokyo Univ. of Sci., Chiba, Japan
- P1-222** Social Isolation Induces Parental Behavior in Sexually Naive Male Mice
 Chitose Orikasa^{1,2}, Kentaro Nagaoka², Yasuhiko Kondo³, Yasuo Sakuma⁴, Shiro Minami¹
¹Inst. of Development and Aging Science, Nippon Med.Sch. ²Tokyo Univ. Agri. and Tech., Tokyo, Japan
³Teikyo Univ. of Sci., Tokyo, Japan ⁴Univ. Tokyo Health Sci., Tokyo, Japan
- P1-223** Auditory conditioned stimulus asymmetrically activates central amygdala in male rats
 Daichi Takahashi, Yasushi Kiyokawa, Yukari Takeuchi, Yuji Mori
Lab of Vet Ethol, Univ of Tokyo, Tokyo, Japan

P1-224

Short Talk 2

ST-2-17

9/11 10:00-11:00

The effect of social and thermal environment on development of multivariate-biological rhythms in infant common marmosetGenta Karino^{1,2,3}, Wakako Tsugawa¹, Koji Sode¹, Takayuki Murakoshi³, Tetsuya Kunikata², Hideo Yamanouchi², Shun Nakamura¹, Mamiko Koshiba^{2,3}¹Dept Biotech and Life Sci, Tokyo University of Agriculture and Technology, Tokyo, Japan²Dept Pediatr, Saitama Medical University, Saitama, Japan ³Dept Biochem, Saitama Medical University, Saitama, Japan

P1-225

Dependence of behavioral performance on material categories in the object grasping task of monkeyIsao Yokoi^{1,2}, Atsumichi Tachibana^{1,3}, Takafumi Minamimoto⁴, Naokazu Goda^{1,2}, Hidehiko Komatsu^{1,2}¹National Institute for Physiological Sciences, Okazaki, Aichi, Japan²The Graduate University for Advanced Studies (SOKENDAI), Okazaki, Aichi, Japan³Dokkyo Medical University School of Medicine, Mibu, Tochigi, Japan⁴Molecular Imaging Center, National Institute of Radiological Sciences, Chiba-shi, Chiba, Japan

P1-226

Monkeys' Preference for Visual Items and Orbitofrontal Neural Activities

Shintaro Funahashi, Wakana Nakamoto

Kokoro Research Center, Kyoto Univ.

P1-227

Neurons responsive to faces in the perigenual portion of the anterior cingulate cortex of monkeys

Naho Konoike, Katsuki Nakamura

Primate Research Institute, Kyoto University

P1-228

Neural mechanisms of integrating others' outcomes to make one's own decisionsHaruaki Fukuda^{1,2}, Shinsuke Suzuki^{1,3,4}, Ning Ma¹, Norihiro Harasawa¹, Kenichi Ueno⁵, Justin L Gardner⁶, Noritaka Ichinohe⁷, Masahiko Haruno⁸, Kang Cheng^{5,9}, Hiroyuki Nakahara¹¹Lab For Int Theor Neurosci, RIKEN BSI, Japan ²Dept of Gen Syst Studies, Univ of Tokyo, Japan³Div of Humanities & Social Sci, Caltech, CA, USA ⁴JSPS fellow, Grad School of Letters, Hokkaido University⁵MRI Support Unit, RIKEN BSI, Japan ⁶Lab for Human Systems Neuroscience, RIKEN BSI, Japan⁷Dept of Ultrastructural Res, Natl Inst of Neurosci, NCNP, Japan ⁸Center for Info and Neural Networks, NICT, Japan⁹Lab for Cognitive Brain Mapping, RIKEN BSI, Japan

P1-229

Short Talk 1

ST-1-18

9/11 9:00-10:00

Neural correlates of coping strategy for boredomSugiko Hanawa¹, Motoaki Sugiura^{1,2}, Takayuki Nozawa³, Rui Nouchi^{2,3}, Ryoichi Yokoyama^{1,4}, Yuka Kotozaki³, Tsuyoshi Araki³, Ryuta Kawashima^{1,3}¹IDAC, Univ of Tohoku, Sendai, Japan ²IRIDeS, Univ of Tohoku, Sendai, Japan ³SAIRC, Univ of Tohoku, Sendai, Japan⁴JSPS, Tokyo, Japan**Reward and Decision Making**

P1-230

Behavioral choice in *C. elegans* chemotaxis to alkaline pH

Takashi Murayama, Toshihiro Sassa, Ichiro Maruyama

OIST, Okinawa, Japan

P1-231

Organization of monosynaptic inputs to the serotonin and dopamine neuromodulatory systemsSachie K Ogawa¹, Jeremiah Y Cohen^{1,2}, Dabin Hwang¹, Naoshige Uchida¹, Mitsuko Watabe-Uchida¹¹Dept Mol Cell Biol, Harvard University, Cambridge, MA, USA²Dept Neuroscience, The Johns Hopkins University School of Medicine, Baltimore, MD, USA

P1-232

Optogenetic control of central serotonergic neurons affects anxiety and impulsivityYu Ohmura¹, Kenji F Tanaka², Iku Tsutsui-Kimura^{1,2}, Tomomi Tsunematsu^{3,4}, Akihiro Yamanaka³, Mitsuhiro Yoshioka¹¹Dept Neuropharm, Hokkaido University, Hokkaido, Japan ²Dept Neuropsych, Keio University, Tokyo, Japan³Dept Neurosci II, Nagoya University, Aichi, Japan⁴University of Strathclyde, Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS), Glasgow, UK

P1-233

Multi-unit activity in the medial prefrontal cortex involved in decision making in the elevated plus-maze testTomoko Shimizu¹, Chihiro Tsukakoshi¹, Saramu Momma¹, Takashi Mikami², Akira Mitani¹¹Neurorehabilitation, Dept Human Health Sciences, Graduate School of Medicine, Kyoto University, Kyoto, Japan²Biotex Reserch Laboratory, Kyoto, Japan

P1-234

Optogenetically evoked aversion via dopamine D2 receptorsTeruko Danjo^{1,2}, Kenji Yoshimi³, Satoshi Yawata², Shigetada Nakanishi²¹RIKEN Brain Science Institute ²Department of Systems Biology, Osaka Bioscience Institute, Osaka, Japan³Department of Neurophysiology, Juntendo University School of Medicine, Tokyo, Japan

P1-235

Neural representation of task-level and motor information in the cortico-basal ganglia loopsTomohiko Yoshizawa^{1,2}, Makoto Ito², Kenji Doya^{1,2}¹NAIST, Nara, Japan ²Neural Computation Unit, OIST, Okinawa, Japan

P1-236

Short Talk 2
ST-2-18

9/11 10:00-11:00

Monitoring action bias and external demands in the centromedian nucleus of thalamus

Ko Yamanaka¹, Yukiko Hori², Yasumasa Ueda³, Takafumi Minamimoto², Minoru Kimura¹

¹Tamagawa Univ Brain Sci Inst, Tokyo, Japan ²Mol Img Ctr, Natl Inst Radiol Sci, Chiba, Japan

³Dept Physiol, Kansai Med Univ, Osaka, Japan

P1-237

Short Talk 1
ST-1-19

9/11 9:00-10:00

The lateral habenula and anterior cingulate cortex in primates differentially represent past negative outcome and subsequent behavioral shift

Takashi Kawai^{1,2,3,5}, Hiroshi Yamada^{3,4}, Nobuya Sato², Masahiko Takada¹, Masayuki Matsumoto^{3,4}

¹Systems Neurosci Sec, PRI, Kyoto Univ, Inuyama, Japan ²Grad Sch Humanities, Kwansai Gakuin Univ, Nishinomiya, Japan

³Grad Sch Comprehensive Human Sci, Univ Tsukuba, Tsukuba, Japan ⁴Div Biomed Sci, Faculty Med, Univ Tsukuba, Tsukuba, Japan

⁵JSPS Research Fellow, Tokyo, Japan

P1-238

Heterogeneous reward signals of midbrain dopamine neurons in over-trained monkeys

Kazuki Enomoto¹, Naoyuki Matsumoto², Masahiko Haruno³, Minoru Kimura¹

¹Brain Science Institute, Tamagawa Univ, Tokyo, Japan

²Fac of Environmental and Symbiotic Sci, Pref Univ of Kumamoto, Kumamoto, Japan ³CiNet, NICT, Osaka, Japan

P1-239

Short Talk 1
ST-1-20

9/11 9:00-10:00

Single neurons coding temporally discounted outcome value for formulation of decision in caudate nucleus

Yukiko Hori¹, Erika Kikuchi¹, Yuji Nagai¹, Tetsuya Suhara¹, Barry J Richmond²,

Takafumi Minamimoto^{1,2,3}

¹Department of Molecular Neuroimaging, NIRS, Chiba ²NIMH, NIH, DHHS, USA ³PRESTO, JST, Tokyo

P1-240

The behavioral and physiological impact of aversive information in the monkeys

Kae Nakamura¹, Kenichi Tokita², Yasumasa Ueda¹

¹Dept. of physiol., Kansai Med. Univ., ²RIKEN BSI Kuroda Unit

P1-241

Single unit activity in the monkey orbitofrontal cortex related to reward value processing during decision-making

Tsuyoshi Setogawa¹, Takashi Mizuhiki^{1,2}, Fumika Akizawa², Ryosuke Kuboki², Narihisa Matsumoto³,

Munetaka Shidara^{1,2}

¹Faculty of Medicine, Univ. of Tsukuba, Tsukuba, Ibaraki, Japan

²Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, Tsukuba, Ibaraki, Japan ³Human Tech. Res. Inst., AIST, Tsukuba, Japan

P1-242

Differential roles of posterior medial and dorsolateral prefrontal cortex in the search of response tactics

Akitaka Sasagawa¹, Youhei Komakine¹, Hajime Mushiake², Yoshiya Matsuzaka²

¹Sch Med, Tohoku Univ, Miyagi, Japan ²Dept Physiol, Grad Sch of Med, Tohoku Univ, Miyagi, Japan

Attention and Perceptual Integration

P1-243

A support vector machine based approach for lever pressing prediction using rats hippocampal activity

Norifumi Tanaka^{1,2}, Toru Aonishi², Capi Genci³, Kouji Usui^{1,4}, Shigenori Kawahara^{1,4}

¹Grad. Sch. Innovative Life Science, Univ. Toyama ²Interdisciplinary Grad. Sch. Science and Engineering, Tokyo Inst. Technology

³Dpt. Electrical and Electronic Systems Engineering, Fac. Engineering, Univ. Toyama

⁴Dpt. Life Sciences and Bioengineering, Fac. Engineering, Univ. Toyama

P1-244

Short Talk 2
ST-2-19

9/11 10:00-11:00

A 3D video analysis system for object exploration in rats

Jumpei Matsumoto¹, Takashi Uehara², Susumu Urakawa¹, Yusaku Takamura¹, Tomiki Sumiyoshi³,

Michio Suzuki⁴, Taketoshi Ono¹, Hisao Nishijo¹

¹System emotional science, Univ. Toyama, Toyama, Japan

²Dept. of Neuropsychiatry, Kanazawa Med. Univ., Uchinada-cho, Ishikawa, Japan

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⁴Dept. of Neuropsychiatry, Univ. of Toyama, Toyama, Japan

P1-245

Attentional Neural Networks Activated by a Simple Task Design and the Effect of Genetic Variations in Human Brain

Kazuhiro Yamada^{1,2}, Kosuke Fujii², Chihiro Kuroki¹, Jotaro Akiyosi³, Yoshihisa Kawano²

¹Dept of Neurophysiology, University of Oita Faculty of Medicine ²Kawano Neurosurg Hosp, Oita, Japan

³Dept Psychiat, Univ of Oita, Yufu, Japan

P1-246

Assessment of attention bias in response to the threatening stimuli

Emi Yamano¹, Masaaki Tanaka¹, Akira Ishii¹, Yasuyoshi Watanabe^{1,2}

¹Dept. of Physiol., Osaka City Univ. Grad. Sch. of Med. ²RIKEN Center for Life Science Technologies

P1-247 Unsuccessful audio-visual integration in middle temporal gyrus leads to a reduction of temporal accuracy of dance stepsTatsuya Suzuki¹, Yasunori Nomoto¹, Sotaro Shimada¹, Jack Noah², Atsumichi Tachibana³, Shaw Bronner⁴, Yumie Ono¹¹Department of Electronics and Bioinformatics, Meiji University, Kawasaki, Japan²Department of Psychiatry, Yale University School of Medicine, New Haven, CT, USA³Department of Histology and Neurobiology, Dokkyo Medical University School of Medicine, Tochigi, Japan⁴ADAM Center, Northeastern University, Boston, MA, USA**P1-248 The imitation model presented from the 1st-person view, but not from the 3rd-person view, provides kinesthetic information of observed action: an fMRI study**Rui Watanabe¹, Takahiro Higuchi¹, Yoshiaki Kikuchi²¹Dept HPS, Univ of Tokyo Metropolitan, Tokyo, Japan ²Dept FHS, Univ of Tokyo Metropolitan, Tokyo, Japan**Spatial and Temporal Cognition****P1-249 Enriched environment ameliorates molarless-induced learning impairment**Hiroko Kondo¹, Minoru Kurahashi¹, Ayumi Suzuki¹, Mika Onishi¹, Chika Murabayashi¹, Mitsuo Inuma¹, Daisuke Mori², Huayue Chen³, Kin-Ya Kubo⁴¹Dept. Pediatric Dent., Asahi Univ. Sch. Dent. ²Dept. Prosthodontics., Asahi Univ. Sch. Dent. ³Gifu Univ. Sch. Med.⁴Seijoh Univ. Grad. Sch. Health Care Studies**P1-250 The evaluation of visual temporal resolution in the behaving mouse**

Junpei Mita, Satoshi Yokota, Syohei Ikuta, Shingo Takizawa, Takuma Arimura, Yuichiro Nomura, Daichi Uchida, Akira Amano, Kazuhiro Shimonomura, Chieko Koike

Department of Life Science, University of Ritsumeikan, Shiga, Japan

P1-251 Theta oscillation in hippocampus plays a role for duration discrimination in ratsTomoaki Nakazono¹, Tomomi Sano¹, Susumu Takahashi², Yoshio Sakurai¹¹Dept Psychol, Kyoto Univ, Kyoto, Japan ²Neural Circuitry, Brain Sci., Doshisa Univ., Kyoto, Japan**P1-252 Hippocampal-habenular interaction in the freely behaving mouse**

Thomas J. McHugh, Roman Boehringe, Denis Polygalov, Hitoshi Okamoto

RIKEN Brain Science Institute

P1-253 Neuronal correlates of temporal prediction in the primate central thalamus

Kei Matsuyama, Masaki Tanaka

Laboratory of Systems Neuroscience, Hokkaido University Graduate School of Medicine

Short Talk 1
ST-1-21
9/11 9:00-10:00**P1-254 Depth perception from moving cast shadow in macaque monkey**Saneyuki Mizutani^{1,2,4}, Narumi Katsuyama^{1,4}, Nobuo Usui^{1,4}, Hidehiro Mizusawa^{3,4}, Masato Taira^{1,4}¹Dept. Cog. Neuobiology, TMDU, Tokyo, Japan ²Dept. Neurology, TMDU, Tokyo, Japan ³National Center Hospital, Tokyo, Japan⁴Center for Brain Integration Research, TMDU, Tokyo, Japan**P1-255 Information Processing for Duration Discrimination of Different Sensory Stimuli in Monkey Prefrontal Cortex**

Atsushi Chiba, Ken-ichi Oshio, Masahiko Inase

Kinki Univ., Facult. of Med.

P1-256 The role of the premotor cortex on Bayesian estimation in tactile temporal order judgment: a transcranial magnetic stimulation studyShigeki Takeuchi¹, Hirofumi Sekiguchi¹, Makoto Miyazaki²¹Jobu Univ ²Yamaguchi UnivShort Talk 2
ST-2-20
9/11 10:00-11:00**P1-257 The effect of caffeine administration on spatial cognition using choice reaction time task**

Eito Miyashita

Social Medical Corporation Soukokuai Gyoda General Hospital

P1-258 The effect of drinking alcohol on spatial cognition using choice reaction time task

Nao Saito

Gunma PAZ University

P1-259 Investigation of EEG cross-frequency coupling in statistical learning of natural imagesHong-Hsaing Liu^{1,2}, Yi-Ling Chien², Wen-Sung Lai^{1,3,4}, Yi-Li Tseng⁵¹National Taiwan University, Taiwan ²Department of Psychiatry, National Taiwan University Hospital, Taiwan³Graduate Institute of Brain and Mind Sciences, National Taiwan University, Taiwan⁴Neurobiology and Cognitive Science Center, National Taiwan University, Taiwan⁵Department of Electrical Engineering, Fu Jen Catholic University, Taiwan

Learning and Long-term Memory

- P1-260** **Development of lateralized predation behavior and morphological asymmetry in a scale-eating cichlid fish**
Yuichi Takeuchi¹, Michio Hori², Yoichi Oda³
¹Dept Anat, Univ of Toyama, Toyama, Japan ²Dept Zool, Kyoto Univ, Kyoto, Japan ³Div Biol Sci, Nagoya Univ, Nagoya, Japan
- P1-261** **Adult neurogenesis and the hippocampal learning capacity**
Md Jahangir Alam^{1,2}, Takashi Kitamura³, Noriaki Ohkawa^{1,2}, Takashi Kondo⁴, Kaoru Inokuchi^{1,2}
¹Dept of Biochem, Grad Sch of Med and Pharm Sci, Univ of Toyama ²CREST, JST
³RIKEN-MIT Center for Neural Circuit Genetics at the Picower Institute for Learning and Memory, MIT, Cambridge, USA
⁴Dept of Radiological Sci, Grad Sch of Med and Pharm Sci, Univ of Toyama
- P1-262** **Chronic hypobaric hypoxia exposure modulates hippocampal synaptic plasticity: Enriched environment as a therapeutic approach**
Short Talk 2
ST-2-21
9/11 10 : 00-11 : 00
Vishal Jain, Dipti Prasad, Shashi Bala Singh, Govindasamy Ilavazhagan
Dept of Neurobiology, Defence Institute of Physiology and Allied Sciences, Delhi, India
- P1-263** **A novel GPCR steroid receptor mediates non-genomic steroid action on neuronal plasticity in *Drosophila***
Hiroshi Ishimoto¹, Zhe Wang², Chun-Fang Wu^{2,3}, Toshihiro Kitamoto^{3,4}
¹Division of Biological Science, Graduate School of Science, Nagoya University
²Department of Biology, College of Liberal Arts and Sciences, University of Iowa, Iowa City, IA, USA
³Interdisciplinary Programs in Genetics and Neuroscience, University of Iowa, Iowa City, IA, USA
⁴Department of Anesthesia, College of Medicine, University of Iowa, Iowa City, IA, USA
- P1-264** **Mapping brain neurons involved in apterous-dependent long-term memory in *Drosophila***
Sho Inami, Takaomi Sakai
Department of Biological Sciences, Tokyo Metropolitan Univ.
- P1-265** **Analysis of a subset of CREB reporter positive neurons involved in *Drosophila* olfactory memory**
Yutaro Ueoka^{1,2}, Daisuke Yamazaki^{1,2}, Toshiharu Ichinose³, Maki Otsubo^{1,2}, Makoto Hiroi^{1,2}, Tetsuya Tabata^{1,2}
¹Dept Bio Sci, Univ of Tokyo, Tokyo, Japan ²Inst of Mol Cel Biosci, Univ of Tokyo, Tokyo, Japan
³Dept of Bio Neurosci, Tohoku Univ, Miyagi, Japan
- P1-266** **Memory Updating in *C. elegans***
Short Talk 2
ST-2-22
9/11 10 : 00-11 : 00
Ichiro Aoki¹, Kunio Ihara², Ikue Mori¹
¹Dept Sci, Nagoya Univ, Aichi, Japan ²Center for Gene Res, Nagoya Univ, Aichi, Japan
- P1-267** **NR2B-dependent neural plastic changes constitute the initial step of juvenile learning**
Tomoharu Nakamori^{1,2,3,4}, Katsushige Sato⁴, Masae Kinoshita⁵, Kohichi Tanaka⁶, Hiroko Ohki-Hamazaki¹
¹College of Liberal Arts and Sciences, Kitasato University, Kanagawa, Japan ²JSPS Fellows, Tokyo, Japan
³Department of Anatomy, Kitasato University School of Medicine, Kanagawa, Japan
⁴Department of Health and Nutrition Sciences, Komazawa Women's University, Tokyo, Japan
⁵Laboratory for Developmental Gene Regulation, RIKEN Brain Science Institute, Saitama, Japan
⁶Laboratory of Molecular Neuroscience, Tokyo Medical and Dental University, Tokyo, Japan
- P1-268** **Intermediate hyperpallium apicale, a dorsal posterior part of visual Wulst, is necessary for filial imprinting in domestic chicks**
Naoya Aoki¹, Shinji Yamaguchi¹, Takaaki Kitajima¹, Toshiya Matsushima², Koichi J Homma¹
¹Sch Pharm Sci, Teikyo Univ, Tokyo, Japan ²Dept Biol, Fac Sci, Hokkaido Univ, Hokkaido, Japan
- P1-269** **The mechanisms of learning dependent odor preference changes following olfactory conditioning**
Short Talk 1
ST-1-22
9/11 9 : 00-10 : 00
Shintaro Nagano¹, Kohei Ueno¹, Yuki Kawabata², Minoru Saitoe¹
¹Tokyo Metropolitan Institute of Medical Science ²Tokyo Metropolitan University
- P1-270** **Artificial association of information residing in hippocampus and amygdala**
Noriaki Ohkawa^{1,2}, Yoshito Saitoh^{1,2}, Akinobu Suzuki^{1,2}, Shuhei Tsujimura^{1,2}, Emi Murayama^{1,2}, Hirofumi Nishizono³, Mina Matsuo³, Yukari Takahashi⁴, Masashi Nagase⁴, Yae K. Sugimura⁴, Ayako M. Watabe^{4,5}, Fusao Kato^{4,5}, Kaoru Inokuchi^{1,2}
¹Dept Biochem, Grad Sch Med Pharm Sci, Univ of Toyama ²CREST, JST ³Div of Animal Exp Lab, Life Sci Res Cen, Univ of Toyama
⁴Dept Neurosci, Jikei Univ Sch of Med ⁵Nagoya Univ Grad Sch of Med

- P1-271** **Dynamics of cortical ensemble and single-neuron activities in layers 2/3 and 5a of the primary motor cortex during learning of a motor task**
Yoshito Masamizu^{1,2}, Yasuhiro R Tanaka^{1,2}, Yasuyo H Tanaka^{1,2}, Riichiro Hira^{1,2}, Fuki Ohkubo^{1,2,3}, Kazuo Kitamura^{4,5}, Yoshikazu Isomura⁶, Takashi Okada⁷, Masanori Matsuzaki^{1,2,3}
¹Div Brain Circuits, National Institute for Basic Biology, Aichi, Japan ²JST, CREST, Saitama, Japan
³The Graduate University of Advanced Studies, Kanagawa, Japan ⁴Dept Neurophysiol, Univ of Tokyo, Tokyo, Japan
⁵JST, PREST, Saitama, Japan ⁶Brain Science Institute, Tamagawa University, Tokyo, Japan
⁷Department of Biochemistry and Molecular Biology, Nippon Medical School, Tokyo, Japan
- P1-272** **Memory Formation and Retrieval by Neuronal Silencing**
Kojiro Hara, Hiroshi Nomura, Yuji Ikegaya
Lab Chem Pharmacol, Grad Sch Pharmaceut Sci, Univ Tokyo
- P1-273** **Dynamic convergence of two distinct memory traces through their repetitive retrieval**
Jun Yokose¹, Masanori Nomoto^{1,2}, Reiko Okubo-Suzuki^{1,2}, Akinobu Suzuki^{1,2}, Kaoru Inokuchi^{1,2}
¹Department of Biochemistry, Faculty of Medicine, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Toyama, Japan ²CREST, JST
- P1-274** **The 5-HT_{3A} receptor is essential for fear extinction**
Makoto Kondo, Yukiko Nakamura, Yusuke Ishida, Shoichi Shimada
Department of Neuroscience and Cell Biology, Graduate School of Medicine, Osaka University
- P1-275** **Influence of acute stress on auditory fear conditioning is mediated by glucocorticoid receptors in the lateral amygdala**
Ran Inoue, Ayumi Tanaka-Hayashi, Hisashi Mori
Dept Neurosci, University of Toyama, Toyama, Japan
- P1-276** **Frontal association cortex is engaged in stimulus integration during associative learning**
Zohal Baraki¹, Hiroshi Nomura¹, Daisuke Nakayama¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Laboratory of Chemical Pharmacology, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan
²Center for Information and Neural Networks, Suita City, Osaka, Japan
- P1-277** **Prefrontal dopamine controls fear reinstatement through the inactivation of extinction circuits**
Natsuko Imamura (hitora)¹, Hiroshi Nomura¹, Yuki Miura¹, Chie Teshirogi¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Laboratory of Chemical Pharmacology, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan
²Center for Information and Neural Networks, Osaka, Japan
- P1-278** **Roles of poly ADP-ribosylation in reconsolidation and extinction of contextual fear memory**
Hiroyoshi Inaba¹, Akinori Tsukagoshi¹, Satoshi Kida^{1,2}
¹Dept. of Bioscience, Tokyo Univ. of Agriculture, Tokyo, Japan ²CREST, JST, Saitama, Japan
- P1-279** **Time-dependent regulation of memory retrieval by forebrain circadian clock**
Shunsuke Hasegawa^{1,2}, Hiroshi Hosoda¹, Yue Zhang¹, Miho Ohta¹, Toshiyuki Tanimizu¹, Paul W Frankland³, Sheena A Josselyn³, Satoshi Kida^{1,2}
¹Dept. Biosci., Tokyo Univ. of Agric., Tokyo, Japan ²JST, CREST, Tokyo, Japan ³Univ. of Toronto, Toronto, Canada
- P1-280** **Long-term structural changes in the brain areas related to sustained motivation for learning of novel repertoire in adult marmosets**
Yumiko Yamazaki^{1,2}, Keigo Hikishima^{3,4}, Masakado Saiki², Masayuki Inada², Erika Sasaki^{3,4}, Roger Lemon⁵, Cathy Price⁶, Hideyuki Okano^{3,7}, Atsushi Iriki²
¹Advanced Res Centers, Keio University ²Lab. Symbol Cog Dev, RIKEN BSI, Saitama, Japan ³Dept Physiol, Keio Univ, Tokyo, Japan
⁴Central Inst Exptl Animals, Kanagawa, Japan ⁵Sobell Dept Motor Neurosci Movement Disorders, UCL Inst Neurol, London, UK
⁶Wellcome Trust Ctr Neuroimaging, Univ Col London, London, UK ⁷RIKEN Keio Joint Res Lab, RIKEN BSI, Saitama, Japan
- P1-281** **Pharmacological actions of inhibitors of cerebellar long-term depression on motor leaning of common marmosets**
Soichi Nagao, Mari Anzai
Lab for Motor Learning Control, RIKEN BSI
- P1-282** **Spatial pattern similarity of ECoG responses represents associative memory in the primate medial temporal lobe**
Ken Adachi¹, Keisuke Kawasaki², Hirohito Sawahata³, Takeshi Matsuo⁴, Takafumi Suzuki⁵, Kei Majima⁶, Hisashi Tanigawa⁷, Atsuhiko Iijima¹, Yukiyasu Kamitani⁶, Isao Hasegawa^{2,7}, Kiyoshi Nakahara⁸
¹Grad Sch of Sci and Tech, Niigata Univ, Niigata, Japan ²Niigata Univ Grad Sch of Med and Dent Sci, Niigata, Japan
³Toyoashi Univ of Tech, Aichi, Japan ⁴The Univ of Tokyo Sch of Med, Tokyo, Japan ⁵CiNet, Osaka, Japan ⁶ATR, Kyoto, Japan
⁷Cent for Transdisciplinary Res, Niigata Univ, Niigata, Japan ⁸Res Inst, Kochi Univ of Tech, Kochi, Japan

Short Talk 1
ST-1-23
9/11 9:00-10:00

Alzheimer's Disease, Other Dementia, Aging

- P1-283** **High Fat Diet Induces Pathological Changes in Orexin Neurons in an NO-dependent Manner**
Hiroshi Katsuki¹, Mizuki Nobunaga¹, Kanae Obukuro¹, Yuki Kurauchi², Akinori Hisatsune², Takahiro Seki¹, Masato Tsutsui³
¹Dept Chemico-Pharmacol Sci, Grad Sch Pharm Sci, Kumamoto Univ, Kumamoto, Japan
²Program for Leading Graduate Schools "HIGO Program", Kumamoto Univ, Kumamoto, Japan
³Dept Pharmacol, Grad Sch Med, Univ of the Ryukyus, Okinawa, Japan
- P1-284** **TDP43 and FUS/TLS Protein Expressions in the Preconditioned Hippocampus Following Repeated Transient Ischemia**
Toru Yamashita, Miao Son, Kousuke Matsuzono, Kentaro Deguchi, Koji Abe
Dept of Neurology, Grad.Sch.of Med. Okayama Univ.
- P1-285** **Integrated analysis among miRNA/mRNA expression in the brain of Alzheimer's model mouse and the target mRNA profiles by RIP-Chip**
Sayuri Higaki¹, Masashi Muramatsu^{1,2}, Akio Matsuda³, Kenji Matsumoto³, Makoto Michikawa^{4,5}, Shumpei Niida¹
¹BioBank Omics Unit, Natl Cent Geriat Gerontol, Aichi, Japan ²Dept Cancer Genet, Roswell Park Cancer Inst, Buffalo, USA
³Dept Immunol Allergy, Natl Res Inst Child Health Dev, Tokyo, Japan ⁴Dept Alzheimers Dis Res, Natl Cent Geriat Gerontol, Aichi, Japan
⁵Dept Biochem, Grad Med Sci, Nagoya City Univ, Aichi, Japan
- P1-286** **GM1 regulates apoptosis via β secretase cleavage of APP**
Tokiaki Yamaguchi¹, Yamauchi Yoshio¹, Matsumoto Yasuyuki¹, Yuhsuke Ohumi¹, Furukawa Keiko², Furukawa Koichi¹
¹Div. of Biochem., Inst. of Med., Univ. of Nagoya, Nagoya, Japan
²Dept. Biomed. Sci., College of Life and Health Sci., Univ. of Chubu, Nagoya, Japan
- P1-287** **Endocytic disturbance did not affect PS1 localization and γ -secretase complex formation**
Naoya Ueda, Katsuhiko Yanagisawa, Nobuyuki Kimura
Dept AD Res, CAMD, National Center for Geriatrics and Gerontology, Aichi, Japan
Short Talk 1
ST-1-24
9/11 9:00-10:00
- P1-288** **Inhibition of clathrin-mediated endocytosis prevents amyloid β -induced growth cone collapse, axonal atrophy and memory impairment**
Tomoharu Kuboyama, Young-A Lee, Hiroaki Nishiko, Chihiro Tohda
Div of Neuromedical Sci, Inst of Natural Med, Univ of Toyama
Short Talk 2
ST-2-23
9/11 10:00-11:00
- P1-289** **Effects of neuroprotective agents on oxidative stress in association with Alzheimer's disease in vitro**
Masakazu Miyamoto^{1,2}, Mika Ogata¹, Megumi Asada^{1,2}, Shun Shimohama³, Ryosuke Takahashi², Kengo Uemura², Ayae Kinoshita¹
¹Dept. Human Health Sci. Grad. Sch. Med. Kyoto Univ. Kyoto ²Dept. Neuro. Kyoto Univ. Grad. Sch. Med
³Dept.Neurol.Sapporo Med.Univ
- P1-290** **Impairment of hippocampal GABAergic network in a type 2 diabetes-Alzheimer's disease model mice was ameliorated by the treatment with β -alanyl-L-histidine**
Jun Kaneko, Megumi Shibahara, Kohta Kimura, Bruno Herculano, Tatsuhiro Hiatsune
Grad.Sch.of Frontier Scis., The Univ.of Tokyo
- P1-291** **Stimulation of adult hippocampal neurogenesis by galantamine in mice: roles of M1 muscarinic and α 7 nicotinic receptors**
Kosuke Higashino¹, Yuki Kita¹, Kazuki Asada¹, Erika Takano¹, Yukio Ago¹, Kazuhiro Takuma¹, Toshio Matsuda^{1,2}
¹Laboratory of Medicinal Pharmacology, Graduate School of Pharmaceutical Sciences, Osaka University
²United Graduate School of Child Development, Osaka University
- P1-292** **Increased synaptic density and improved spatial memory in N-cadherin shedding deficient knock-in mice**
Megumi Asada^{1,2}, Masakazu Kubota¹, Yasuha Noda¹, Natumi Ageta⁴, Ayumi Suwa¹, Masakazu Miyamoto², Yoshitaka Tashiro⁵, Hodaka Yamakado², Hirofumi Yamashita², Shun Shimohama³, Ryoshuke Takahashi², Kengo Uemura², Makoto Kinoshita⁴, Ayae Kinoshita¹
¹Dept Med, Human Health Sci. Grad. Sch. Kyoto Univ. Kyoto, Japan ²Dept. Neuro. Kyoto Univ. Grad. Sch. Med. Kyoto, Japan
³Dept. Neuro. Sapporo Med. Univ. Sapporo, Japan
⁴Division of Biological Science, Graduate School of Science, Nagoya University, Nagoya Japan
⁵SK project · MIC Kyoto Univ. Grad. Sch. Med
- P1-293** **Cross-seeding effects of amyloid β -protein and α -synuclein**
Kenjiro Ono, Ryoichi Takashi, Tokubei Ikeda, Masahito Yamada
Department of Neurology and Neurobiology of Aging, Kanazawa University Graduate School of Medical Science

P1-294 The physiological function of tau in synaptic plasticity

Mamiko Suzuki, Tetsuya Kimura

Department of Aging Neurobiology, National Center for Geriatrics and Gerontology, Aichi, Japan

Parkinson's Disease and Related Disorders**P1-295 Impairment of contextual fear memory in 1-methyl-4-phenyl-1, 2, 3, 6, tetrahydropyridine(MPTP)-induced mouse model for Parkinson's disease**Short Talk 1
ST-1-25
9/11 9:00-10:00Ken-ichi Kinoshita¹, Yoshikage Muroi², Toshiaki Ishii^{1,2}¹Doctoral Course of the United Graduate School of Veterinary Science, Gifu University, Gifu, Japan²the Laboratory of Pharmacology, School of Veterinary Science, Obihiro University of Agriculture and Veterinary Medicine, Hokkaido, Japan**P1-296 Anxiety-like behavior in mice lacking a Parkinson's disease risk factor, BST1/CD157**Short Talk 2
ST-2-24
9/11 10:00-11:00

Haruhiro Higashida, Olga Lopatina

Kanazawa Univ Res Cent for Child Mental Development, Kanazawa, Japan

P1-297 Repression of neuronal cell death by secreted DJ-1 from astrocytesKazuko Takahashi-Niki¹, Yumi Watahiki¹, Hirotake Kitaura¹, Takeshi Niki², Hiroyoshi Ariga¹¹Grad Sch Pharm Sci, Hokkaido Univ ²Grad Sch Agr, Hokkaido Univ**P1-298 Microglial activation and memory impairment in early Parkinson's disease**Short Talk 2
ST-2-25
9/11 10:00-11:00Tatsuhiko Terada¹, Masamichi Yokokura³, Satoshi Kono², Takashi Konishi², Yasushi Hosoi², Makiko Sakao², Tomoyasu Bunai², Hiroaki Miyajima², Etsuji Yoshikawa⁴, Masami Futatsubashi⁴, Yasuomi Ouchi¹¹Hamamatsu University School of Medicine ²First Department of Medicine, Hamamatsu University School of Medicine³Department of Psychiatry, Hamamatsu University School of Medicine ⁴Central Research Laboratory, Hamamatsu Photonics K.K.**P1-299 Analysis of glia response regulator via neuronal exosome**Hironori Kawahara¹, Tatsusada Okuno², Hideki Mochizuki², Rikinari Hanayama¹¹Immune Network, IFRc, Osaka Univ, Osaka, Japan ²Dept Neurology, Osaka Univ, Osaka, Japan**P1-300 Hepcidin rescues mitochondrial damage in a Parkinson's disease animal model**Ya Ke¹, Tuo Liang¹, Wing-Ho Yung¹, Zhong-Ming Qian²¹School of Biomedical Science, The Chinese University of HongKong, PR China²Laboratory of Neuropharmacology, Fudan University School of Pharmacy, Shanghai, PR China**P1-301 Transgenic flies expressing dementia with Lewy bodies-linked human β -Synuclein exhibit neurodegenerative phenotypes**Yoshiki Takamatsu¹, Kazunari Sekiyama¹, Yoshiko Honda², Tohru Kodama², Makoto Hashimoto¹¹Parkinson PJ, Tokyo Metropol Inst Med Sci, Tokyo, Japan ²Sleep PJ, Tokyo Metropol Inst Med Sci, Tokyo, Japan**P1-302 Cystatin C causes neuronal inclusions of α -synuclein in multiple system atrophy**

Yasuyo Suzuki, Chenghua Jin, Ikuru Yazawa

Lab Research Resources, Natl center for Geriatrics and Gerontology, Aichi, Japan

P1-303 Arachidonic acid promotes α -synuclein toxicity through FABP-3 in the dopaminergic neuronsKohji Fukunaga¹, Norifumi Shioda¹, Yuji Owada²¹Dept Pharmacol, Grad Sch of Pharm Scis, Tohoku Univ, Sendai Japan ²Dept Organ Anat, Grad Sch Med Yamaguchi Univ, Ube Japan**P1-304 Searching for a Lewy body in a mutated α -Synuclein (A30P) transgenic marmoset**Reona Kobayashi¹, Chikako Hara-Miyauchi^{1,2}, Fumiko Ozawa¹, Junko Takahashi-Fujigasaki³,Junko Okahara⁴, Erika Sasaki^{1,4}, Hirotake James Okano^{1,2}, Hideyuki Okano¹¹Department of Physiology Keio University School of Medicine²Division of Regenerative Medicine, The Jikei University School of Medicine³Division of Neuropathology, The Jikei University School of Medicine ⁴Central Institute for Experimental Animals**P1-305 Pathological phenotype of the familial Parkinson's disease using induced pluripotent stem cells**Short Talk 1
ST-1-26
9/11 9:00-10:00Etsuro Ohta^{1,2}, Tomoko Nihira³, Yoichi Imaizumi⁴, Wado Akamatsu⁴, Makiko Nagai⁵, Kayoko Takahashi⁶, Manabu Ohyama⁷, Masayuki Amagai⁷, Yoshikuni Mizuno³, Hideki Mochizuki⁸, Fumiya Obata^{1,2}, Hideyuki Okano⁴¹Dept Immunol, Kitasato Univ of Allied Health Sci, Kanagawa, Japan²R & D Center for Cell Design, Institute for Regenerative Medicine and Cell Design, Kitasato Univ, Kanagawa, Japan³Dept Neuro-Regenerative Medicine, Kitasato Univ, Kanagawa, Japan ⁴Dept Physiol, Keio Univ Sch of Med, Tokyo, Japan⁵Dept Neurology, Kitasato Univ, Kanagawa, Japan ⁶Dept Med Lab, Kitasato Univ Hospital, Kanagawa, Japan⁷Dept Dermatol, Keio Univ Sch of Med, Tokyo, Japan ⁸Dept Neurol, Osaka Univ Sch of Med, Osaka, Japan**P1-306 Mechanism by which 8-oxoguanine causes dopaminergic neurodegeneration in aged mice**Zijing Sheng^{1,2}, Yusaku Nakabeppu^{1,2}¹Division of Neurofunctional Genomics, Department of Immunobiology and Neuroscience, Medical Institute of Bioregulation, Kyushu University ²Nucleotide pool research center, Kyushu University

P1-307 **Parkinson's disease-associated protein Vps35 regulates neuronal activities, which are modulated by Parkinson's-disease associated protein kinase LRRK2**
Tsuyoshi Inoshita¹, Yujiro Umezaki², Yuka Hosaka³, Nobutaka Hattori^{2,3}, Yuzuru Imai^{1,3}
¹Dept Research for Parkinson's Disease, Juntendo Univ Graduate School of Medicine, Tokyo, Japan
²Research Institute for Diseases of Old Age, Juntendo Univ Graduate School of Medicine, Tokyo, Japan
³Dept of Neurology, Juntendo Univ Graduate School of Medicine, Tokyo, Japan

P1-308 **A novel insertion mutation of MAPT causes FTDP-17**
Hiroyuki Morino¹, Yukiko Matsuda¹, Keiko Hiraki¹, Takashi Kurashige², Yuishin Izumi³, Yuu Yamasaki², Tetsuya Takahashi², Hirofumi Maruyama², Hidefumi Ito⁴, Hideshi Kawakami¹
¹Dept of Epidemiology, Research Institute for Radiation Biology and Medicine, Hiroshima Univ
²Dept of Clinical Neuroscience & Therapeutics, Institute of Biomedical & Health Sciences, Hiroshima Univ
³Dept of Clinical Neuroscience, Graduate School of Med, Univ of Tokushima Graduate School
⁴Dept of Neurology, Graduate School of Med, Wakayama Med Univ

Polyglutamine Diseases, ALS, SCD, Other Neurodegenerative Disorder

P1-309 **The effect of methylation inhibitor on the cytoplasmic mislocalization of ALS-linked FUS/TLS mutant**
Atsushi Yamaguchi, Keisuke Takanashi, Keiko Kitajo
Dept. of Neurobiology, Graduate School of Medicine, Chiba University

P1-310 **Development of biomarkers in peripheral blood cells of ALS model mice**
Minami Hasegawa, Chikako Hara, Hirotsuka James Okano
Jikei University School of Medicine

P1-311 **Analysis of intracellular distribution of TDP-43 mRNA in affected spinal motor neuron with ALS**
Taisuke Kato¹, Akihito Koyama², Akihiro Sugai³, Yasuko Toyoshima⁴, Akiyoshi Kakita⁵, Hitoshi Takahashi⁴, Osamu Onodera¹
¹Dept Mol Neurosci, Brain Res inst, Niigata Univ, Niigata, Japan
²Niigata Univ Center for Transdisciplinary Res, Niigata Univ, Niigata, Japan
³Dept Neurol, Brain Res inst, Niigata Univ, Niigata, Japan
⁴Dept Pathol, Brain Res inst, Niigata Univ, Niigata, Japan
⁵Dept Pathol Neurosci, Brain Res inst, Niigata Univ, Niigata, Japan

P1-312 **TDP-43 is autoregulated by multiple excisions of introns in exon6 and reservation of mRNA in nucleus by TDP-43**
Akihito Koyama¹, Akihiro Sugai², Taisuke Kato², Takuya Konno², Tomohiko Ishihara³, Masatoyo Nishizawa², Osamu Onodera³
¹Center for Transdisciplinary Research, Niigata Univ, Niigata, Japan
²Dept. of Neurology, Brain Research Institute, Niigata Univ, Niigata, Japan
³Dept. of Molecular Neuroscience, Brain Research Institute, Niigata Univ, Niigata, Japan

P1-313 **The role of Von Hippel-Lindau protein in the formation of TDP-43 inclusions in ALS**
Tsukasa Uchida, Akemi Shodai, Toshihumi Morimura, Shinsui Tatsumi, Ryosuke Takahashi, Makoto Urushitani
Dept of Neurology Kyoto Univ. Hospital

P1-314 **Noncompetitive AMPA-receptor antagonist perampnel rescues TDP-43 mislocalization in mechanistic ALS model mice**
Hui Lin Chai^{1,2}, Shin Kwak^{1,2,3}, Takenari Yamashita^{1,2}
¹Div of Clin Biotech Ctr for Dis Biol and Integr Med, Grad Sch of Med, Univ of Tokyo, Tokyo, Japan
²Dept Neurol, Grad Sch of Med, Univ of Tokyo, Tokyo, Japan
³Clin Res Cent Med, Intl Univ Health Welfare, Chiba, Japan

P1-315 **Electron microscopic observation of intranuclear aggregation of TDP-43 in mouse cerebral cortex produced by *in utero* electroporation**
Megumi Akamatsu¹, Hiroshi Takuma¹, Takenari Yamashita², Takuya Okada³, Kazuko Keino-Masu³, Hartmut Oehring⁴, Shin Kwak², Masayuki Masu³, Gustav F Jirikowski⁴, Akira Tamaoka¹
¹Dept Neurol, Univ of Tsukuba, Ibaraki, Japan
²Dept Clin Biotechnol, Univ of Tokyo, Tokyo, Japan
³Dept Mol Neurobiol, Univ of Tsukuba, Ibaraki, Japan
⁴Dept Anatomy II, Friedrich-Schiller Univ Jena, Jena, Germany

P1-316 **Neuronal dysfunction caused by TDP-43 overexpression in a transgenic zebrafish ALS model**
Kazuhide Asakawa¹, Koichi Kawakami^{1,2}
¹National Institute of Genetics
²SOKENDAI

P1-317 **Latent neurogenic potential in adult rat spinal cord with motor neuron degeneration**
Hitoshi Warita¹, Tomomi Shijo¹, Kensuke Ikeda¹, Hiroya Ono¹, Masaaki Kato¹, Naoki Suzuki¹, Hiroshi Funakoshi², Masashi Aoki¹
¹Dept Neurol, Univ of Tohoku, Sendai, Japan
²Center for Advanced Research and Education, Asahikawa Medical University, Asahikawa, Japan

- P1-318** **Axonal degeneration and cell death of Purkinje cells in the cerebellum of shambling mice with deficient formation of paranodal junctions**
 Short Talk 2
 ST-2-26
 9/11 10:00-11:00
 Hiroki Oohori, Yoshiko Takagishi
Res Ins Environ Med, Nagoya Univ, Nagoya, Japan
- P1-319** **Pioglitazone suppresses neuronal and muscular degeneration caused by polyglutamine-expanded androgen receptors**
 Madoka Iida¹, Masahisa Katsuno¹, Hideaki Nakatsuji¹, Hiroaki Adachi², Naohide Kondo¹, Yu Miyazaki¹, Genki Tohnai¹, Hirohisa Watanabe¹, Masahiko Yamamoto³, Ken Kishida⁴, Gen Sobue¹
¹Dept Neurol, Nagoya Univ, Aichi, Japan
²Dept Neurol, Univ of Occupational and Environmental Health, School of Medicine, Fukuoka, Japan
³Dept Speech Pathology and Audiology, Aichi-Gakuin Univ School of Health Science, Aichi, Japan
⁴Dept Metabolic Med, Osaka Univ, Osaka, Japan
- P1-320** **Transcriptional profiling of FACS-purified striatal medium spiny neurons in early pathological phase of Huntington disease model mice**
 Haruko Miyazaki^{1,2,3}, Fumitaka Oyama^{2,4}, Yoshihiro Kino^{1,2,3}, Masaru Kurosawa^{1,2,3}, Mizuki Kurosawa^{2,5}, Tomomi Shimogori³, Nobutaka Hattori⁶, Nobuyuki Nukina^{1,2,3}
¹Dept Neuroscience for Neurodegenerative Disorders, Grad Sch of med Juntendo Univ, Tokyo, Japan
²Lab Structural Neuropathology, RIKEN BSI, Saitama, Japan
³Lab Molecular Mechanisms of Thalamus Development, RIKEN BSI, Saitama, Japan
⁴Dept Applied Chemistry, Kogakuin Univ, Tokyo, Japan
⁵Lab Molecular Membrane Neuroscience, RIKEN BSI, Saitama, Japan
⁶Dept Neurology, Grad Sch of med Juntendo Univ, Tokyo, Japan

Myopathy, Neuromuscular Disorder, Neuropathy, Spinal Disease

- P1-321** **Overexpression of LARGE suppresses muscle regeneration in model mice of muscular dystrophy**
 Fumiaki Saito¹, Motoi Kanagawa², Miki Ikeda¹, Hiroki Hagiwara^{1,3}, Toshihiro Masaki^{1,3}, Hidehiko Ohkuma¹, Yuki Katanosaka⁴, Teruo Shimizu⁵, Masahiro Sonoo¹, Tatsushi Toda², Kiichiro Matsumura¹
¹Dept Neurol, Teikyo Univ, Tokyo, Japan
²Dept of Neurol/Mol Brain Sci, Univ of Kobe, Kobe, Japan
³Dept of Med Sci, Teikyo Univ of Sci, Uenohara/Tokyo, Japan
⁴Dept of Cardiovascul Physiol, Okayama Univ, Okayama, Japan
⁵Dept of Sport and Med Sci, Teikyo Univ
- P1-322** **Specific phenotypes of motor neurons derived from spinal muscular disease**
 Naohiro Egawa^{1,2}, Michiko Yoshida¹, Takako Enami¹, Kayoko Tsukita^{1,2}, Keiko Imamura^{1,2}, Tatsutoshi Nakahata¹, Ryosuke Takahashi³, Megumu Saito¹, Haruhisa Inoue^{1,2}
¹Department of Cell Growth and Differentiation, CiRA, Kyoto University
²JST CREST, Japan Science and Technology Agency, Saitama, Japan
³Department of Neurology, Graduate School of Medicine, Kyoto University, Kyoto, Japan
- P1-323** **Metabolic relationship between periaqueductal gray and rostral ventromedial medulla reflects chronic neuropathic pain**
 Geehoon Chung¹, Chang-Eop Kim², Jun Kim², Sang Jeong Kim^{1,2}
¹Department of Brain&Cognitive Sciences, College of Natural Sciences, Seoul National University, Seoul, Korea
²Department of Physiology, College of Medicine, Seoul National University, Seoul, Korea
- P1-324** **RNA splicing regulated by USP15 is involved in neuromuscular functions**
 Short Talk 2
 ST-2-27
 9/11 10:00-11:00
 Jaehyun Kim, Fuminori Tsuruta, Tomoki Chiba
Grad Sch of Life and Env Sci, Univ of Tsukuba, Tsukuba, Japan

Demyelinating Disorders

- P1-325** **Clinical significance of cortical lesions in patients with multiple sclerosis**
 Futoshi Matsushita¹, Hirotaaka Kida¹, Ken-ichi Tabei¹, Masayuki Satoh¹, Chizuru Nakano¹, Keita Matsuura², Yuichiro Ii³, Ryogen Sasaki³, Akira Taniguchi³, Yugo Narita³, Masayuki Maeda⁴, Hidekazu Tomimoto^{1,3}
¹Dept Dementia Prevention and Therapeutics, Mie Univ, Mie, Japan
²Dept Neurol, Suzuka Kaisei Hosp, Mie, Japan
³Dept Neurol, Mie Univ, Mie, Japan
⁴Dept Radiol, Mie Univ, Mie, Japan
- P1-326** **Fingolimod prevent blood-brain barrier disruption**
 Hideaki Nishihara, Fumitaka Shimizu, Yasuteru Sano, Masaaki Abe, Toshihiko Maeda, Mariko Ooishi, Hironori Sano, Takashi Kanda
Dept Neurology and Clinical Neuroscience, Univ of Yamaguchi, Yamaguchi, Japan

- P1-327** **Blood-borne molecules promote oligodendrocyte precursor cell (OPC) proliferation in vitro**
Mariko Kuroda, Rieko Muramatsu, Toshihide Yamashita
Department of Molecular Neuroscience, Graduate School of Medicine, Osaka University
- P1-328** **CNS myelin morphology in the acute phase of experimental autoimmune encephalomyelitis**
Yoshio Bando¹, Hiroki Bochimoto², Koichi Murakami¹, Tatsuhide Tanaka¹, Tsuyoshi Watanabe², Shigetaka Yoshida¹
¹*Dept Functional Anatomy and Neuroscience, Asahikawa Medical Univ, Hokkaido, Japan*
²*Dept Microscopic Anatomy and Cell biology, Asahikawa Medical Univ, Hokkaido, Japan*
- P1-329** **Stem cells from human exfoliated deciduous teeth-conditioned media ameliorate experimental autoimmune encephalomyelitis**
Chiaki Shimojima¹, Akihito Yamamoto¹, Shijie Jin³, Hideyuki Takeuchi², Hisashi Hattori¹, Akio Suzumura², Minoru Ueda¹
¹*Department of Oral and Maxillofacial Surgery, Nagoya University Graduate School of Medicine*
²*Department of Neuroimmunology, Research Institute of Environmental Medicine, Nagoya University*
³*Department of Neuroscience and Pathobiology, Research Institute of Environmental Medicine, Nagoya University*
- P1-330** **Adipocyte-derived molecules contribute to the proliferation of oligodendrocytes precursor cells (OPC)**
Ken Matoba, Rieko Muramatsu, Toshihide Yamashita
Department of Molecular Neuroscience, Graduate School of Medicine, Osaka University

Neuroprotection, Neurotoxicity and Neuroinflammation

- P1-331** **Astrocyte-derived TGF- β 1 accelerates disease progression in ALS mice by regulating the neuroprotective inflammatory response of microglia and T cells**
Short Talk 1
ST-1-27
9/11 9 : 00-10 : 00
Fumito Endo, Okiru Komine, Koji Yamanaka
Department of Neuroscience and Pathobiology, Research Institute of Environmental Medicine, Nagoya University
- P1-332** **Aquaporin 4 has a neuroimmunological role in reactive astrocytes in collaboration with cytokine inducer, osteopontin**
Short Talk 2
ST-2-28
9/11 10 : 00-11 : 00
Hiroko Ikeshima-Kataoka^{1,2}, Sayaka Inui¹, Manae Imamura¹, Yoichiro Abe¹, Masato Yasui¹
¹*Dept Pharmacol & Neurosci, Keio Univ Sch Med, Tokyo, Japan* ²*Faculty Sci & Eng, Waseda Univ, Tokyo, Japan*
- P1-333** **STAT3 signaling in perilesional nestin-expressing reactive astrocyte is required for cortical recovery after closed-head injury**
Short Talk 1
ST-1-28
9/11 9 : 00-10 : 00
Airi Watanabe, Mitsuhiro Morita
Kobe Univ Dept Biol
- P1-334** **Effects of arsenic exposure on proliferation and cell death of primary astrocytes in mice**
Haruka Soutome¹, Fumihiko Maekawa², Kyaw Htet Aung¹, Keiko Nohara², Shinji Tsukahara¹
¹*Division of Life Science, Graduate School of Science and Engineering, Saitama University, Saitama City, Japan*
²*Molecular Toxicology Section, Center for Environmental Health Sciences, National Institute for Environmental Studies, Tsukuba, Japan*
- P1-335** **Involvement of macrophage scavenger receptor with collagenous structure (MARCO) in migrations and purinergic Ca²⁺ responses in murine microglial cells**
Masayuki Ikeda^{1,2}, Ayami Hashimoto¹, Honami Akechi¹, Kurumi Yamoto¹, Kouhei Takeuchi²
¹*Graduate School of Science and Engineering, University of Toyama* ²*Graduate School of Innovative Life Science, University of Toyama*
- P1-336** **Difference in the binding of PET tracers [11C]DPA713 and [11C]PK11195 for activated microglial in the living human brain**
Short Talk 2
ST-2-29
9/11 10 : 00-11 : 00
Masamichi Yokokura¹, Yasuomi Ouchi², Kiyokazu Takebayashi¹, Etsuji Yoshikawa³, Masami Futatsubashi³, Yasuhide Iwata¹, Tatsuhiro Terada², Kyoko Nakaizumi¹, Norio Mori¹
¹*Dept Psychiatry, Hamamatsu Univ Sch of Med, Hamamatsu, Japan.*
²*Dept Biofunctional Imaging, Hamamatsu University School of Medicine, Hamamatsu, Japan.*
³*Hamamatsu Photonics KK, Hamamatsu, Japan*
- P1-337** **Estimation of immunogenicity of transplantation therapy with iPSC cells by PET imaging**
Short Talk 1
ST-1-29
9/11 9 : 00-10 : 00
Sayuki Takara¹, Hiroshi Mizuma¹, Takuya Hayashi¹, Hisashi Doi¹, Chiho Takeda¹, Aya Mawatari¹, Mieko Tsuji¹, Daisuke Doi², Asuka Mirzane², Tetsuhiro Kikuchi², Jun Takahashi², Hirotaka Onoe¹
¹*Riken* ²*Center for iPSC Cell Research and Application (CiRA), Kyoto University*
- P1-338** **Nitric oxide induced Schannoma cell death in hypoxia**
Shunichiro Nakamura, Hiroko Inoue
Waseda University, Tokyo, Japan

- P1-339** Possible involvement of neuroinflammation in prolonged suppression of rat spontaneous activity by monofluoroacetate, an inhibitor for TCA cycle
Masanori Yamato, Satoshi Kume, Guanghua Jin, Yukiharu Miyashige, Masayuki Nakano, Yasuhisa Tamura, Asami Eguchi, Yosky Kataoka
Cellular Function Imaging Team, RIKEN CLST, Hyogo, Japan
- P1-340** Functional analyses of monocyte-derived plasmacytoid dendritic cells transmigrated across the inflamed blood-brain barrier endothelium
Takahiro Katayama, Akiko Nakano, Ifergan Igal, Kebir Hania, Marc-Andre Lecuyer, Jorge Ivan Alvarez, Alexandre Prat
CHUM Res Center, Univ of Montreal, Montreal, Canada
- P1-341** Effects of developmental exposure to diesel engine exhaust origin secondary organic aerosol on social and learning behavior in adult mice
Win-Shwe Tin-Tin^{1,2}, Fumihiko Maekawa¹, Chaw Kyi-Tha-Thu², Yuji Fujitani¹, Rie Yanagisawa¹, Akiko Furuyama¹, Shinji Tsukahara², Keiko Nohara¹, Hiroshi Nitta¹, Seishiro Hirano¹
¹National Institute for Environmental Studies, Tsukuba, Japan
²Division of Life Science, Graduate School of Science and Engineering, Saitama University, Saitama, Japan
- P1-342** Homeostatic maintenance of neuronal activity by the transcription factor Nrf1 (NFE2L1)
Shota Okamoto, Hiroaki Taniguchi, Yui Kanazawa, Akira Kobayashi
Lab. for Genetic Code, Grad. Sch. of Life & Med. Sci., Doshisha Univ., Kyoto, Japan
- P1-343** Methylxanthines (theophylline and caffeine) suppress neurogenesis in the immature brain
Yoshiaki Sato¹, Keiko Nakanishi², Miharuru Ito¹, Masahiro Hayakawa¹
¹Div. of Neonatology, Center for Maternal-Neonatal Care, Nagoya Univ. Hospital, Aichi, Japan
²Dept. of Perinatology, Inst. for Developmental Research, Aichi Human Service Center, Aichi, Japan
- P1-344** Amiodarone neurotoxicity in vitro
Naoko Niimi¹, Masami Tsukamoto^{1,2}, Hiroko Yanagisawa¹, Kazuhiko Watabe¹, Kazunori Sango¹
¹ALS/Neuropathy PJ, Tokyo Metr Inst Med Sci, Tokyo
²Div Diabetes, Metab & Endocrinol, Dep Intern Med, The Jikei Univ Sch Med, Tokyo

Epilepsy, Headache, Vertigo

- P1-345** Pharmacological correction of gating defects in the voltage gated Ca(v)2.1 channel due to a Familial Hemiplegic Migraine Mutation
Akira Inagaki¹, Amy Lee²
¹Graduate School of Medical Sciences, Nagoya City University, Nagoya, Japan
²Department of Molecular Physiology and Biophysics, Carver College of Medicine, University of Iowa, Iowa City, USA
- P1-346** Growth hormone modulates Arc signaling correlated with behavioral response
Paitoon Srimontri¹, Haruna Hirota¹, Yoshio Hirabayashi², Keiko Kato¹
Short Talk 2 ST-2-30 9/11 10:00-11:00
¹Kyoto Sangyo University, Kyoto, Japan ²Brain Science Institute, RIKEN, Saitama, Japan
- P1-347** Neuritin induces activity-dependent axonal branch formation through FGF signaling
Tadayuki Shimada¹, Tomoyuki Yoshida², Kanato Yamagata¹
Short Talk 1 ST-1-30 9/11 9:00-10:00
¹Neural Plasticity Project, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
²Dept of Mol. Neurosci., Univ. of Toyama, Toyama, Japan
- P1-348** Enhanced kindling development in synaptic vesicle protein 2A-mutant (Sv2a^{L1740}) rats
Kentarō Tokudome¹, Takahiro Okumura¹, Tomoji Mashimo², Naofumi Kunisawa¹, Saki Shimizu¹, Ryo Terada¹, Tadao Serikawa^{1,2}, Masashi Sasa^{1,3}, Yukihiko Ohno¹
¹Lab. Pharmacol., Osaka Univ. Pharma. Sci, Osaka, Japan ²Inst. Lab. Animals, Kyoto Univ. Sch. Med, Kyoto, Japan
³Nagisa Clinic, Osaka, Japan
- P1-349** Evaluation of the Lgi1^{L385R/+} rat as ADLTE model
Naohiro Fumoto^{1,2,3}, Tomoji Mashimo³, Atsushi Masui⁴, Saeko Ishida³, Yuto Mizuguchi⁴, Shoko Minamimoto⁴, Akio Ikeda^{2,5}, Ryosuke Takahashi², Tadao Serikawa^{3,4}, Yukihiko Ohno⁴
Short Talk 1 ST-1-31 9/11 9:00-10:00
¹Dept Neurol, Minami-Okayama Med Ctr, Hayashima, Japan ²Dept Neurol, Grad Med, Univ of Kyoto, Kyoto, Japan
³Inst Lab Animals, Grad Med, Univ of Kyoto, Kyoto, Japan ⁴Lab Pharmacol, Osaka Univ of Pharm Sci, Takatsuki, Japan
⁵Dept Epilepsy, Movement Disorders and Physiol, Grad Med, Univ of Kyoto, Kyoto, Japan
- P1-350** Brain region-specific roles of glial glutamate transporter GLT1
Junya Sugimoto¹, Yukiko Itou¹, Miho Soma¹, Wanpeng Cui¹, Akira Mitani², Masatoshi Nomura³, Ryoichi Takayanagi³, Hidenori Aizawa¹, Kohichi Tanaka^{1,4,5}
¹Laboratory of Molecular Neuroscience, Medical Research Institute, Tokyo Medical and Dental Univ, Tokyo, Japan.
²Human Health Science, Graduate School of Medicine, Kyoto Univ, Kyoto, Japan.
³Department of Medicine and Bioregulatory Science, Graduate School of Medical Sciences, Kyushu Univ, Fukuoka, Japan
⁴The Center for Brain Integration Research, Tokyo Medical and Dental Univ, Tokyo, Japan. ⁵JST CREST, Saitama, Japan.

- P1-351** **The suppression of epileptic form activities by carbachol-induced β oscillation in rat hippocampal slices**
 Short Talk 1
 ST-1-32
 9/11 9:00-10:00
 Toyohiro Sawada, Kiyohisa Natsume
Kyushu Institute of Technology
- P1-352** **Status epilepticus changes the level of inhibitory neuron**
 Keisuke Nakajima, Sayaka Hirai, Shinobu Hirai, Haruo Okado
Tokyo Metropolitan Institute of Medical Science
- P1-353** **Analysis of brain regions responsible for nicotine-induced convulsions**
 Naofumi Kunisawa, Saki Shimizu, Yuto Mizuguchi, Takahiro Okumura, Kentaro Tokudome, Miyuki Ohtaka, Hisao Chikamochi, Yuichi Takakubo, Tadao Serikawa, Yukihiro Ohno
Lab. Pharmacol., Osaka Univ. Pharm. Sci, Osaka, Japan
- P1-354** **Seizure suppression by means of self-regulation of scalp-recorded slow cortical potentials: treatment trial in intractable partial epilepsy**
 Short Talk 2
 ST-2-31
 9/11 10:00-11:00
 Tomoyuki Fumuro^{1,2,3}, Riki Matsumoto³, Masako Kinoshita⁴, Masao Matsuhashi^{2,5}, Akihiro Shimotake¹, Takefumi Hitomi^{1,6,7}, Ryosuke Takahashi¹, Hidenao Fukuyama², Akio Ikeda³
¹Dept Neurol, Kyoto Univ, Kyoto, Japan ²LIMS, C-PIER, Kyoto Univ, Kyoto, Japan
³Dept Epilepsy, Movement Disorders and Physiol, Kyoto Univ, Kyoto, Japan ⁴Dept Neurol, Utano Hp, Kyoto, Japan
⁵HBRC, Kyoto Univ, Kyoto, Japan ⁶Dept Respir Care and Sleep Contr Med, Kyoto Univ, Kyoto, Japan
⁷Dept Clin Lab Med, Kyoto Univ, Kyoto, Japan
- P1-355** **Changes in Glutamate and metabolite levels during focal brain cooling in epilepsy patients**
 Takao Inoue¹, Sadahiro Nomura¹, Masami Fujii¹, Yeting He¹, Yuichi Maruta¹, Hiroyasu Koizumi¹, Eiichi Suehiro¹, Hirochika Imoto¹, Takeshi Yamakawa², Michiyasu Suzuki¹
¹Dept Neurosurg, Yamaguchi Univ Grad Sch Med, Yamaguchi, Japan ²Fuzzy Logic Syst Inst, Fukuoka, Japan
- P1-356** **Diffuse brain dysfunction in Japanese benign adult familial myoclonus epilepsy**
 Takefumi Hitomi¹, Katsuya Kobayashi², Takayuki Kondo², Riki Matsumoto³, Kiyohito Terada⁴, Masutaro Kanda⁵, Ryosuke Takahashi², Akio Ikeda³
¹Dept Clin Lab Med, Kyoto Univ Grad Sch of med, Kyoto, Japan ²Dept Neurol, Kyoto Univ Grad Sch of med, Kyoto, Japan
³Dept Epilepsy, Movement Disorders and Physiol, Kyoto Univ Grad Sch of med, Kyoto, Japan
⁴Dept Epilepsy, National Epilepsy Center, Shizuoka Insti of Epilepsy and Neurological Disorders, Shizuoka, Japan
⁵Dept of Neurol, Takeda General Hospital, Kyoto, Japan
- P1-357** **The prophylactic effect of early treatment with furosemide on autosomal dominant nocturnal frontal lobe epilepsy**
 Junko Yamada^{1,2}, Gang Zhu³, Motohiro Okada⁴, Shinichi Hirose⁵, Yuko Shiba², Keisuke Migita², Shinya Ueno², Sunao Kaneko⁵
¹Department of Biomedical Sciences Division of Medical Life Sciences Hirosaki University Graduate School of Health Sciences, Aomori, Japan
²Department of Neurophysiology, Hirosaki University Graduate School of Medicine, Aomori, Japan
³Department of Psychiatry, The First Affiliated Hospital of China Medical University, Shenyang, China
⁴Division of Neuroscience, Graduate School of Medicine, Mie University, Tsu, Japan
⁵Department of Pediatrics and Research Institute for the Molecular Pathomechanisms of Epilepsy, Fukuoka University, Fukuoka, Japan
⁶North Tohoku Epilepsy Center, Minato Hospital, Hachinohe, Japan
- P1-358** **Slow cortical potential shift as a candidate marker for the efficacy of vagus nerve stimulation for seizure suppression**
 Borgil Bayasgalan¹, Masao Matsuhashi^{4,5}, Riki Matsumoto², Naoki Nakano³, Akihiro Shimotake¹, Tomoyuki Fumuro⁵, Takeharu Kunieda⁶, Amami Kato³, Ryosuke Takahashi¹, Akio Ikeda²
¹Department of Neurology, Kyoto University Graduate School of Medicine
²Department of Epilepsy, Movement Disorders and Physiology ³Department of Neurosurgery, Kinki University School of Medicine
⁴Human Brain Research Center, Kyoto University Graduate School of Medicine
⁵Research and Educational Unit of Leaders for Integrated Medical System, Kyoto University
⁶Department of Neurosurgery, Kyoto University Graduate School of Medicine
- P1-359** **Involvement of brain serotonergic system in migraine pathophysiology**
 Yilong Cui, Yasuyoshi Watanabe
Division of Bio-function Dynamics Imaging, RIKEN Center for Life Science Technologies

Schizophrenia

- P1-360** **EGF/ErbB1 stimulation as neonate negatively regulates neurochemical development and fast-spiking property of the parvalbumin positive GABAergic neurons in mice frontal cortex**
 Hisaaki Namba, Hiroyuki Nawa
Dept Mol Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan

- P1-361** Differences in the muscarinic effects of the antipsychotic clozapine and its metabolite N-desmethylozapine between excitatory and inhibitory hippocampal neurons
Yuto Sugawara, Tetsuo Ota, Takako Ohno-Shosaku
Graduate School of Medical Science, Kanazawa Univ.
- P1-362** Evaluating the therapeutic potential of lithium on the alleviation of neuromorphological and behavioral deficits in AKT-promoted P19 embryonal carcinoma cells and Akt1 mouse model of schizophrenia
Short Talk 2
ST-2-32
9/11 10:00-11:00
Da-Zhong Luo¹, Chia-Yuan Chang¹, Tsu-Wei Wang², Wen-Sung Lai^{1,3,4}
¹Dept Psy, NTU, Taipei, Taiwan (TW) ²Dept Life Science, NTNU, Taipei, TW
³Graduate Institute of Brain and Mind Sciences, NTU, Taipei, TW ⁴Neurobiology and Cognitive Science Center, NTU, Taipei, TW
- P1-363** Maternal immune challenge in mice leads different gene expression and DNA methylation between male and female offspring
Zhiqian Yu¹, Ryo Funayama², Kazuko Ueno³, Naoki Nariai³, Kaname Kojima³, Chiaki Ono¹, Yoshiyuki Kasahara¹, Yoshie Kikuchi¹, Masao Nagasaki³, Keiko Nakayama², Hiroaki Tomita^{1,4}
¹Department of Biological Psychiatry, Tohoku University ²Cell Proliferation, Tohoku University
³Biomedical Information Analysis, Tohoku University ⁴Tohoku Medical Megabank, Tohoku University
- P1-364** DISC1/Neuregulin-1 and Schizophrenia
Daisuke Mori^{1,2,3}, Kozo Kaibuchi²
¹Brain & Mind Research Center, Nagoya University ²Pharmacology, Univ of Nagoya, Japan ³Psychiatry, Univ of Nagoya, Japan
- P1-365** Genetical interaction of DISC1 and autism spectrum disorder genes in fruit fly
Short Talk 1
ST-1-33
9/11 9:00-10:00
Himani Pandey, Kazuki Kurita, Yuko Yoshimura, Katsuo Furukubo-Tokunaga
Tsukuba University
- P1-366** DISC1 genetically interacts with a mental retardation gene in glutamatergic synaptogenesis in *Drosophila*
Short Talk 2
ST-2-33
9/11 10:00-11:00
Kazuki Kurita, Daisuke Tanaka, Yuko Arai, Katsuo Furukubo-Tokunaga
Graduate School of Life and Environmental Sciences, University of Tsukuba
- P1-367** Impairment of feed-forward motor control in patients with schizophrenia
Yui Kikuchi^{1,2}, Mitsugu Yoneda¹, Ryosuke Echigo¹, Sayuri Nakagawa¹, Yasuharu Koike³, Takako Ohno-Shosaku¹
¹Fac. Health Sci. Kanazawa Univ., Kanazawa, Japan ²Kanazawa University Hospital ³P&I Lab, Tokyo Tech., Yokohama, Japan

Neural Network Modeling

- P1-368** Parameter Estimation of Nav1.6 Channel Model by Differential Evolution Algorithm
Katsunori Kitano¹, Hayato Yamagishi²
¹Dept Human & Comput Intel, Ritsumeikan Univ, Shiga, Japan ²Grad Sch Inform Sci & Eng, Ritsumeikan Univ, Shiga, Japan
- P1-369** Theoretical study on spike-timing probability in a pair of pre-post synaptic neurons
Safura Rashid-Shomali¹, Majid Nili Ahmadabadi^{1,2}, Hideaki Shimazaki³, S Nader Rasuli⁴
¹School of Cognitive Sciences, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran
²School of ECE, College of Engineering, University of Tehran, Tehran, Iran ³RIKEN Brain Science Institute, Wako, Saitama, Japan
⁴Department of Physics, University of Guilan, Rasht, Iran
- P1-370** Learning Higher-order Structures of Input by Excitatory and Inhibitory Spike-Timing-Dependent Plasticity
Naoki Hiratani^{1,2,3}, Tomoki Fukai^{1,2,4}
¹RIKEN Brain Science Institute, Saitama, Japan ²Dept Complex Sci & Eng, Chiba, Japan ³JPSP, Tokyo, Japan
⁴JST CREST, Tokyo, Japan
- P1-371** Information Maximization of Neural Networks in Reinforcement Learning
Short Talk 1
ST-1-34
9/11 9:00-10:00
Takashi Hayakawa^{1,3}, Takeshi Kaneko¹, Toshio Aoyagi^{2,3}
¹Dept Morphol Brain Sci, Kyoto Univ, Kyoto, Japan ²Dept App Analysis & Comp Dynamics, Kyoto Univ, Kyoto, Japan
³JST CREST, Saitama, Japan
- P1-372** A reservoir model for prefrontal activity during sensory-guided probabilistic decision-making
Tomoki Kurikawa, Tomoki Fukai
RIKEN Brain Science Institute
- P1-373** Independent noise input enhances synchronous firing between neurons with different electrophysiological property
Short Talk 1
ST-1-35
9/11 9:00-10:00
Go Uchida, Manabu Tanifuji
RIKEN, BSI, Saitama, Japan

Neuroinformatics

P1-374 Reproducible spatial activity pattern in cortical network burst: characterization with non-negative matrix factorization

Yuichiro Yada^{1,2,3}, Akihiro Sanada^{1,2}, Ryohei Kanzaki^{1,2}, Hirokazu Takahashi^{1,2}

¹Dept. Mechano-Informatics, Univ. of Tokyo, Tokyo, Japan ²RCAST, Univ. of Tokyo, Tokyo, Japan ³JSPS, Tokyo, Japan

Learning Theory

P1-375 Dopamine modulates the accuracy of PCA performed using a combination of STDP and a spiking neuron

Takuya Isomura^{1,2}, Kiyoshi Kotani³, Yasuhiko Jimbo³

¹Dept Human Envir, Univ of Tokyo, Tokyo, Japan ²JSPS, Tokyo, Japan ³Dept Precision Eng, Univ of Tokyo, Tokyo, Japan

Neuronal Data Analysis

P1-376 Development and applications of spike sorting system that can decompose arbitrarily overlapped neural spikes

Tatsuya Haga^{1,2}, Kunihiko Mabuchi³

¹RIKEN Brain Science Institute, Wako, Japan ²Research Fellow of the Japan Society for the Promotion of Science, Tokyo, Japan

³Graduate School of Information Science and Technology, The University of Tokyo, Tokyo, Japan

P1-377 Spike sorting from noisy non-stational neuronal data in high-count channel probes

Takashi Takekawa^{1,2}, Keisuke Ota^{3,4}, Masanori Murayama³, Tomoki Fukai²

¹Faculty of Informatics, Kogakuin Univ ²Neural Circuit Theory, RIKEN BSI, Wako, Japan

³Behavioral Neurophysiol, RIKEN BSI, Wako, Japan ⁴Research Fellow, JSPS, Tokyo, Japan

P1-378 Probabilistic Enhancement of EEG Component Using Prior Distribution of Correlations Between Channels

Short Talk 2

ST-2-34

9/11 10:00-11:00

Hayato Maki, Tomoki Toda, Sakti Sakriani, Neubig Graham, Satoshi Nakamura

Nara Institute of Science and Technology

P1-379 Functional near-infrared spectroscopy (fNIRS) with higher spatial resolution using fewer optodes

Toru Yamada, Keiji Matsuda, Takayuki Iwano, Shinji Umeyama

National Institute of Advanced Industrial Science and Technology

P1-380 Comparison of fNIRS signal and BOLD signal by simultaneous measurement of fNIRS and fMRI

Takayuki Iwano, Toru Yamada, Keiji Matsuda, Shinji Umeyama

Human Technology Res. Inst., AIST, Ibaraki, Japan

P1-381 Spatial-temporal representations of cortical currents estimated from MEG data during overt/covert visual pursuit

Short Talk 1

ST-1-36

9/11 9:00-10:00

Ken-ichi Morishige^{1,2}, Tomohiro Inoue¹, Nobuo Hiroe³, Masa-Aki Sato³, Mitsuo Kawato⁴

¹Dept Intelligent Systems Design Engineering, Toyama Pref. Univ, Toyama, Japan ²ATR Cognitive Mechanisms Labs., Kyoto, Japan

³ATR Neural Information Analysis Labs., Kyoto, Japan ⁴ATR Brain Information Communication Research Laboratory Group, Kyoto, Japan

Molecular, Biochemical, and Genetic Techniques

P1-382 Development of Tango system for the monitoring of 5-HT_{2c}R activity

Yoshihisa Watanabe¹, Atsushi Tsujimura¹, Miku Aoki^{1,2}, Katsutoshi Taguchi¹, Masaki Tanaka¹

¹Kyoto Pref Univ of Med, Kyoto, Japan ²Dept of Dental Med, Kyoto Pref Univ of Med, Kyoto, Japan

P1-383 Evaluation of a reporter rat line which conditionally expresses red fluorescent protein (tdTomato) under Cre-loxP system

Hiroyuki Igarashi^{1,2}, Kyo Koizumi^{2,3}, Ryosuke Kaneko^{2,4}, Keiko Ikeda⁵, Hiroshi Onimaru⁶,

Yuchio Yanagawa^{2,4}, Shin-ichi Muramatsu⁷, Toru Ishizuka^{2,3}, Hiromu Yawo^{1,2,3}

¹Dept Physiol and Pharmacol, Tohoku Univ, Sendai, Japan ²CREST, JST ³Dept Dev Biol and Neurosci, Tohoku Univ, Sendai, Japan

⁴Gunma Univ Grad Sch of Med, Maebashi, Japan ⁵Hyogo College of Med, Nishinomiya, Japan

⁶Dept Physiol, Showa Univ Sch of Med, Tokyo, Japan ⁷Dept Med, Jichi Medical Univ, Tochigi, Japan

- P1-384** Optimizing the junction of fusion glycoprotein for the transduction efficiency of a lentiviral vector for neuron-specific retrograde gene transfer
Shigeki Kato¹, Kenta Kobayashi², Kazuto Kobayashi^{1,3}
¹Dept. Mol. Genet., Fukushima Med. Univ. ²Sec. Viral Vector Dev., NIPS ³CREST/JST
- P1-385** Targeted mutagenesis in primary cultured neurons mediated by lentiviral vector carrying CRISPR/Cas9 system
Natsuki Matsushita¹, Sachi Matsushita¹, Takeshi Imamura^{1,2,3}
¹Translational Res Ctr, Ehime Univ Hospital, Ehime, Japan ²Ehime Univ Grad Sch Med, Ehime, Japan
³Ehime Univ Proteo-Science Ctr, Ehime, Japan
- P1-386** Ultra-rapid generation of Pax6 mutant mice via CRISPR/Cas9-mediated genome engineering
Yukiko U. Inoue, Takayoshi Inoue
Dept Biochem and Cellular Biol, National Institute of Neuroscience, Tokyo, Japan
- P1-387** Dissociating function of habenula nuclei in vertebrate behavior
Charlotte Emma Lupton^{1,2}, Suresh Jesuthasan^{1,3}
*Short Talk 1
ST-1-37
9/11 9:00-10:00*
¹Institute of Molecular and Cellular Biology, A*STAR, Singapore ²Animal and Plant Science, University of Sheffield, England
³National University of Singapore, Singapore
- P1-388** Simple and efficient generation of knock-in transgenic zebrafish using CRISPR/Cas9 system
Yukiko Kimura¹, Shin-ichi Higashijima^{1,2}
¹Okazaki Institute for Integrative Bioscience, National Institutes of Natural Sciences, Okazaki, Japan
²National Institute for Physiological Sciences, National Institutes of Natural Sciences, Okazaki, Japan

Genome Informatics, Proteomics, and Systems Biology

- P1-389** Genomic responses in mouse models greatly mimic human inflammatory diseases: In defense of mouse models for studying human disorders
Keizo Takao¹, Tsuyoshi Miyakawa^{1,2}
¹National Institute for Physiological Sciences ²Fujita Health Univ. Toyoake, Japan

Ion Channels and Excitable Membranes

- P2-001** **Electrophysiological properties of voltage-gated sodium channel β 4 subunit in the mouse striatum**
 Ritsuko Inoue¹, Haruko Miyazaki², Nobuyuki Nukina², Masami Miura¹
 Short Talk 3 ST-3-1
 9/12 9:00-10:00
¹Neurophysiol Res Group, Tokyo Metropolitan Inst of Gerontology, Tokyo, Japan
²Dept of Neurosci for Neurodegenerative Disorders, Juntendo Univ Grad Sch of Med, Tokyo, Japan
- P2-002** **Neuron-type-specific gene deletion reveals a previously unrecognized Nav1.1 distribution in excitatory neurons**
 Ikuo Ogiwara¹, Takuji Iwasato^{2,3,4}, Tetsushi Yamagata¹, Emi Mazaki¹, Yuchio Yanagawa^{5,6}, Nobuaki Tamamaki⁷, Shigeyoshi Itohara^{2,8}, Kazuhiro Yamakawa¹
¹Lab Neurogenet, RIKEN BSI, Saitama, Japan ²Lab Behav Genet, RIKEN BSI, Saitama, Japan
³Div Neurogenet, Natl Inst Genet, Shizuoka, Japan ⁴Dept Genet, Grad Univ Advanced Studies (SOKENDAI), Shizuoka, Japan
⁵Dept Genet and Behav Neurosci, Gunma Univ Grad Sch Med, Gunma, Japan ⁶JST CREST, Tokyo, Japan
⁷Dept Morphol Neural Sci, Grad Sch Med Sciences, Kumamoto Univ, Kumamoto, Japan ⁸FIRST, JST, Tokyo, Japan
- P2-003** **The effect of sodium channel on aquaporin-4 expression induced by ethanol**
 Ryuichi Katada, Kana Sugimoto, Takahiro Sato, Kentaro Nakama, Hidenori Yoshizawa, Motonori Yoshida, Hiroshi Matsumoto
 Dept Legal Medicine, Univ of Osaka, Osaka, Japan
- P2-004** **Effects of Calmodulin in Modulating the Ca_v2.2**
 Chih-Hung Chi, Chien-Yuan Pan
 Dept LS, Nat Taiwan Univ, Taipei, Taiwan(R.O.C.)
- P2-005** **Ca_v2 channel subtype-dependent Ca²⁺ nano-/micro-domain signaling at rat cerebellar granule cell axons**
 Shin 'ichiro Satake^{1,2}, Keiji Imoto^{1,2}
¹National Institute for Physiological Sciences (NIPS), Okazaki, Japan
²The Graduate University for Advanced Studies (SOKENDAI), Okazaki, Japan
- P2-006** **Carrageenan-induced inflammation increase Cav3.2 expression within distinct subgroups of mouse DRG neurons**
 Short Talk 4 ST-4-1
 9/12 10:00-11:00
 Masaya Watanabe, Takashi Ueda, Yasuhiro Shibata, Mariko Hoshikawa, Natsuko Kumamoto, Shinya Ugawa
 Dept. of Neurobiol. and Anat., Grad. Sch. of Med. Sci., Nagoya City University
- P2-007** **Effects of two new scorpion toxins from Buthotus schach on calcium spikes and neuronal excitability**
 Short Talk 3 ST-3-2
 9/12 9:00-10:00
 Zahra Ghasemi^{1,2}, Hanieh Tamadon², Hedieh Fasihi², Hossein Vatanpour³, Mahyar Janahmadi²
¹Dep Med, Tarbiat Modares Univ, Tehran, Iran
²Neurophysiology Research Center and department of Physiology, Medical School, Shahid Beheshti University of Medical sciences, Tehran, Iran
³Department of Toxicology and Pharmacology, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Tehran, Iran
- P2-008** **Influence of anesthetic agents on HCN channels in vivo recorded nerve excitability testing**
 Yusuke Osaki, Hiroyuki Nodera, Yoshimitsu Shimatani, Banzrai Chimeglkham, Ryuji Kaji
 Tokushima University
- P2-009** **1,8-cineole induces burst firing in snail neurons by suppressing potassium currents**
 Jafar Vatanparast, Zahra Zeraatpisheh
 Shiraz University, Iran
- P2-010** **Effects of slow K⁺ current on the spike threshold of a neuron**
 Short Talk 4 ST-4-2
 9/12 10:00-11:00
 Ryota Kobayashi^{1,2}, Katsunori Kitano³
¹Principles of Informatics Research Division, National Institute of Informatics
²Dept. Informatics, Grad. Univ. for Advanced Studies, Japan ³Ritsumeikan Univ, Japan
- P2-011** **Modulation of TASK Currents by the Activity of cGMP-Dependent Protein Kinase**
 Mitsuru Saito¹, Chie Tanaka¹, Kazuharu Furutani², Makoto Okazawa³, Hiroki Toyoda¹, Hajime Sato¹, Yoshihisa Kurachi², Younghan Kang¹
¹Dept. Neurosci. & Oral Physiol., Osaka Univ. Grad. Sch. Dent., Osaka, Japan
²Div. Mol. Cell. Physiol., Osaka Univ. Grad. Sch. Med., Osaka, Japan
³Dept. Vasc. Physiol., Nat. Cereb. & Cardiovasc. Center Res. Inst., Osaka, Japan
- P2-012** **Ryanodine Receptor Dependent Firing Prolongation in the Striatum**
 Hiroyuki Ohta¹, Risa Tamura¹, Akimasa Tashiro¹, Yuji Morimoto^{1,2}, Yasuhiro Nishida¹
¹Dept Physiol, National Defense Medical College, Saitama, Japan
²Dept Integrative Phys, National Defense Medical College, Saitama, Japan

- P2-013** **Melatonin protects rat cerebellar granule cells against electromagnetic field-induced increases in Na⁺ currents through intracellular Ca²⁺ release**
 Short Talk 3
 ST-3-3
 9/12 9 : 00-10 : 00
 Dongdong Liu, Zhen Ren, Guang Yang, Qianru Zhao
Department of Physiology and Biophysics, Fudan University, Shanghai, China
- P2-014** **Structural basis for the membrane association of ankyrinG: the ion channel anchoring protein**
 Yuichiro Fujiwara¹, Matsuyuki Shirota^{2,4,5}, Megumi Kobayashi¹, Kohei Takeshita³, Atsushi Nakagawa³, Kengo Kinoshita^{2,5}, Yasushi Okamura¹
¹*Integrative Physiology, Grad Sch of Med., Osaka University* ²*Systems Bioinformatics, Grad Sch of Inf. Sci., Tohoku University*
³*Supramolecular Crystallography, Protein Inst., Osaka University*
⁴*United Centers for Advanced Research and Translational Medicine, Grad Sch of Med., Tohoku University*
⁵*Tohoku Medical Megabank Organization, Tohoku University*
- P2-015** **Function of voltage-gated proton channels in mouse microglia**
 Takafumi Kawai¹, Yoshifumi Okochi¹, Nana Miyawaki¹, Yoshio Imura², Yuko Furukawa¹, Kenji Sakimura³, Schuichi Koizumi², Yasushi Okamura¹
¹*Lab. of Integr. Physiol., Grad. Sch. of Med., Osaka Univ.* ²*Dept. Neuropharmacol., Univ Yamanashi.*
³*Dept. of Cellular Neurobiology, Brain Research Institute, Niigata Univ.*

Neurotransmitters, Gliotransmitters, and Modulators

- P2-016** **Astrocytic acidification causes excess glutamate release and ischemic brain damage**
 Kaoru Beppu, Ko Matsui
Div of Interdisciplinary Medical Science, Center for Neuroscience, Dept Med, Univ of Tohoku, Miyagi, Japan
- P2-017** **Dual imaging of SVs and DCVs exocytosis**
 Short Talk 3
 ST-3-4
 9/12 9 : 00-10 : 00
 Yui Nakajima¹, Yo Shinoda¹, Teiichi Furuichi^{1,2}
¹*Dept. of Appl. Biol. Sci., Fac. of Sci. and Technol., Tokyo Univ. of Sci., Chiba, Japan* ²*RIKEN Brain Science Institute, Saitama, Japan*
- P2-018** **Rapid observation of neurotransmitter release in mature rat cerebellar slices using the enzyme-linked photo assay systems**
 Short Talk 4
 ST-4-3
 9/12 10 : 00-11 : 00
 Kazunori Watanabe¹, Taichi Harada¹, Naohiro Hozumi², Sachiko Yoshida¹
¹*Dept Environ & Life Sci, Toyohashi Univ of Technology, Aichi, Japan*
²*Dept Electrical & Electronic Info Eng, Toyohashi Univ of Technology, Aichi*
- P2-019** **The elevation of intracellular Zn²⁺ concentration by dopamine in cultured cortical neurons**
 Short Talk 3
 ST-3-5
 9/12 9 : 00-10 : 00
 Hui-Hsing Hung, Chien-Yuan Pan
National Taiwan University
- P2-020** **Two adenosine release mechanisms in rat hippocampus**
 Short Talk 4
 ST-4-4
 9/12 10 : 00-11 : 00
 Yuki Fujii, Kunihiko Yamashiro, Mitsuhiro Morita
Kobe Univ Dept Biol
- P2-021** **Development of an acetylcholine ion-selective electrode and its application to the brain**
 Kenta Urakawa, Ayaka Wakasa, Nagisa Yoshida, Takashi Katsu, Tsuyoshi Inoue
Dept of biophys Chem, Grad Sch of Med Dent and Pharm Sci, Okayama Univ
- P2-022** **mRNA expression profile of all expressed serotonin receptors subtypes and distribution of serotonergic terminations in the marmoset brain**
 Rammohan Shukla, Akiya Watakabe, Tetsuo Yamamori
Department of Brain Biology, National Institute for Basic Biology
- P2-023** **Stimulatory and inhibitory effect of excitatory and inhibitory neurotransmitters on testicular function**
 Hassan Younes¹, Fatma Ali Mohamed¹, Yoshiyuki Kubota², Mohamed Ismail³, Eid Abd-Elhameed⁴
¹*Dept physiology, Faculty of veterinary medicine, South Valley University, Qena, Egypt*
²*Division of Cerebral Circuitry, National Institute for Physiological Sciences; Okazaki, Japan*
³*Internal medicine Department, faculty of veterinary medicine, South Valley University; Qena, Egypt*
⁴*Physiology Department, faculty of veterinary medicine, Beni-Suef University; Beni-Suef, Egypt*

Synapse

- P2-024** **New hippocampal anatomy by optogenetics "Input and output circuits of CA2"**
Keigo Kohara¹, Michele Pignatelli¹, Alexander J Rivest¹, Hae-Yoon Jung¹, Takashi Kitamura¹, Junghyup Suh¹, Dominic Frank¹, Koichiro Kajikawa¹, Nathan Mise², Yuichi Obata², Ian R Wickersham³, Susumu Tonegawa¹
¹RIKEN-MIT Center for Neural Circuit Genetics at the Picower Institute for Learning and Memory, Department of Biology and Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA.
²RIKEN BioResource Center, Tsukuba, Ibaraki, Japan.
³Genetic Neuroengineering Group, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA.
- P2-025** **Serotonin inhibits the excitatory inputs in the dentate granule cells from the lateral perforant path but not the medial perforant path**
Kanakano Nozaki, Reika Kubo, Yasuo Furukawa
Hiroshima University
- P2-026** **Localization changes of cell adhesion proteins, neurexin and neuroligin-2, during hippocampal inhibitory synapse development**
Toshihiko Kuriu¹, Hisayo Sadamoto¹, Yuchio Yanagawa^{2,3}, Shiro Konishi¹
¹Dept Neurophysiol, Tokushima Bunri Univ, Kagawa, Japan
²Dept Genetic and Behavioral Sci, Gunma Univ Grad Sch of Med, Gunma, Japan
³Japan Science and Technology Agency, CREST, Tokyo, Japan
- P2-027** **Real-time fluorescence imaging of quantum dot-loaded single synaptic vesicles**
Masashi Ohmachi¹, Tomoyuki Takahashi^{1,2}
¹Cellular and Molecular Synaptic Function Unit, Okinawa institute of science and technology graduate university, Okinawa, Japan
²Doshisha University Graduate School of Brain Science, Kyoto, Japan
- P2-028** **Synaptic Vesicle distance from Ca²⁺ channel cluster perimeter determines the time course of transmitter release at the calyx of Held**
Yukihiro Nakamura¹, Jason S Rothman², Zuxin Chen³, Brati Das^{3,4}, Angus Silver², Tomoyuki Takahashi^{5,6}, Samuel M Young Jr³, David A DiGregorio¹
¹Dynamic Neuronal Imaging, Dept Neurosci, Institut Pasteur, Paris, France ²Dept Neurosci, Physiol & Pharmacol, UCL, London, UK
³Mol Mechanisms of Synaptic Func, MaxPlanck Florida Institute, Jupiter, FL, USA
⁴Biol & Neurosci, Florida Atlantic Univ, Jupiter, FL, USA ⁵Mol Synaptic Func, Grad School of Brain Sciences, Doshisha Univ, Kyoto, Japan.
⁶Cell & Mol Synaptic Func, Okinawa Institute of Science and Technology Grad Univ
- P2-029** **IP₃R1 regulates cerebellar circuits by maintaining the spine morphology of Purkinje cells in adult mice**
Takeyuki Sugawara¹, Chihiro Hisatsune¹, Tung Dinh Le², Tsutomu Hashikawa³, Moritoshi Hirono², Mitsuharu Hattori⁴, Soichi Nagao², Katsuhiko Mikoshiba^{1,5}
¹Lab. for Developmental Neurobiology, RIKEN Brain Science Institute ²Lab. for Motor Learning Control, RIKEN Brain Science Institute
³Lab. for Neural Architecture, RIKEN Brain Science Institute
⁴Department of Biomedical Science, Graduate School of Pharmaceutical Sciences, Nagoya City University
⁵Calcium Oscillation Project, ICORP-SORST
- P2-030** **Homeostatic control of GABA synaptic structure by intracellular calcium**
Fumihiro Niwa¹, Hiroko Bannai^{1,2}, Sherwood W Mark^{1,5,6}, Misa Arizono^{1,6,7}, Akitoshi Miyamoto¹, Kotomi Sugiura¹, Sabine Levi³, Antoine Triller⁴, Katsuhiko Mikoshiba¹
¹Dev. Neurobiol, RIKEN BSI, Saitama, Japan ²Dept. Biol. Sci. Nagoya Univ, Aichi, Japan ³IFM, Paris, France ⁴IBENS, Paris, France
⁵Inserm U862, Neurocentre Magendie, Bordeaux, France ⁶Universite de Bordeaux, Bordeaux, France
⁷IINS, CNRS UMR 5297, Bordeaux, France
- P2-031** **Dendritic integration producing directional selectivity in wind-sensitive projection interneurons**
Ruriko Mitani¹, Hiroto Ogawa²
¹Biosystem Sci, Grad Sch Life Sci, Hokkaido Univ, Hokkaido, Japan ²Dept Bio Sci, Fac Sci, Hokkaido Univ, Hokkaido, Japan
- P2-032** **Proteomic screening for substrates of protein kinases activated by dopamine stimulation**
Shinichi Nakamuta¹, Taku Nagai², Tomoki Nishioka¹, Mutsuki Amano¹, Akinori Nishi³, Kozo Kaibuchi¹
¹Dept. of Cell Pharmacology, Grad. Sch. of Med., Nagoya Univ.
²Dept. Neuropsychopharmacol. & Hosp. Pharm., Grad. Sch. of Med., Nagoya Univ. ³Dept. of Pharmacology, Sch. of Med., Kurume Univ.
- P2-033** **Analysis of beta-secretase activity using hippocampal slice cultures**
Yuji Kamikubo, Takashi Sakurai
Juntendo University
- P2-034** **Histone deacetylase is involved in the decrease of drebrin cluster density induced by amyloid beta oligomers**
Yuta Ishizuka, Hideo Shimizu, Tomoaki Shirao
Dept Neurobiol and Behav, Gunma Univ Grad Sch Med, Gunma, Japan

P2-035 Systematic analysis of purification process of postsynaptic densities (PSDs) and postsynaptic membrane rafts (PSRs)Tatsuo Suzuki¹, Liying Zhao¹, Weiheng Guo¹, Hiroyuki Sakagami²
¹Shinshu Univ. Grad. Sch. Med. ²Dept. Anatomy, Kitasato Univ. Sch. Med.**P2-036 Analysis of Functional domains in Centaurin gamma 1A at *Drosophila* larval Neuromuscular Junctions**Sakiko Kosugi¹, Akira Shimizu¹, Mizuho Homma¹, Satoko Hakeda-Suzuki², Takashi Suzuki², Hiroyoshi Miyakawa¹, Takako Morimoto¹
¹Lab of Cellular Neurobiology, Sch of Life Sci, Tokyo Univ of Pharm and Life Sci, Tokyo, Japan
²Core division of Advanced Science, Grad. Schl. of Bioscience & Biotechnology, Tokyo Institute of Technology, Yokohama, Japan**Synaptic Plasticity****P2-037 Activity-dependent reduction of Ca²⁺ responses through AL-MB synaptic transmission in the isolated *Drosophila* brain**Shoma Sato¹, Kohei Ueno², Takaomi Sakai¹
¹Department of Biological Sciences, Tokyo Metropolitan Univ., Tokyo, Japan
²Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan**P2-038 The mechanism of hetero-synaptic interaction based on spatiotemporal intracellular calcium dynamics**Daiki Futagi¹, Katsunori Kitano²
¹Grad Sch of Info Sci and Eng, Univ of Ritsumeikan, Shiga, Japan
²Dept of Human and Computer Intelligence, Univ of Ritsumeikan, Shiga, Japan**P2-039 Binomial distribution analysis of short-term synaptic plasticity at the frog neuromuscular junction: n increases in facilitation and p increases in potentiation**Naoya Suzuki
Nagoya Univ.**P2-040 Protein synthesis inhibitors do not block long-term depression (LTD) in CA1 field of hippocampal slices induced electrically or chemically in either juvenile or adult rats**Abdul Karim Abbas¹, Sameh Mohammad²
¹Inst. Neuroscience and Physiology, University of Gothenburg, Sweden ²School of Life Sciences, Skövde University, Sweden**P2-041 Dendritic spine dynamics of CA1 pyramidal neurons in the long-lasting synaptic suppression after repeated LTD inductions**Sho Hasegawa, Keiko Tominaga-Yoshino, Akihiko Ogura
Lab. Synaptic Plasticity, Osaka Univ. Grad. Sch. Frontier Biosciences, Osaka, Japan**P2-042 Exploration of Presynaptic Tag Contributed to Synaptic Specificity of LTP**Short Talk 4
ST-4-7
9/12 10:00-11:00Shinpei Saito¹, Yo Shinoda¹, Tetsushi Sadakata², Tomoki Nishioka³, Kozo Kaibuchi³, Teiichi Furuichi¹
¹Dept. of Appl. Biol. Sci., Fac of Sci. and Technol., Tokyo Univ. of Sci., Chiba, Japan
²Adv. Sci. Res. Leaders Develop. Unit, Gumma Univ. Gumma, Japan ³Dept Cell Pharmacology, Univ of Nagoya, Nagoya, Japan**P2-043 Molecular heterogeneity of perineuronal nets and regulation of neuronal circuits in the hippocampus**Jun Yamada, Shozo Jinno
Dept of Dev Mol Anat, Grad Sch of Med Sci, Kyushu Univ, Fukuoka, Japan**P2-044 Semaphorin3A mediates learning-induced synaptic delivery of AMPAR to hippocampal CA3-CA1 synapses**Aoi Takahashi Jitsuki¹, Naoya Yamashita^{1,3}, Susumu Jitsuki², Yoshio Goshima¹, Takuya Takahashi²
¹Dept. of Mol. Pharmacol. & Neurobiol, Grad. Sch. of Med., Yokohama City Univ.,
²Dept. Physiol., Yokohama city Univ. Grad. Sch. Med. Yokohama City Univ., ³Department of Biology, Johns Hopkins University, USA**P2-045 LTP at hilar mossy cell-dentate granule cell synapses increases excitation/inhibition balance and modulates dentate output**Yuki Hashimoto-dani, Andres E Chavez, Pablo E Castillo
Dept Neurosci, Albert Einstein Col. Med. NY**P2-046 Regulation of backpropagating action potential along hippocampal CA1 dendrites by long-term synaptic modifications: an optical imaging study with voltage-sensitive dye**Masashi Kondo^{1,2}, Kenji Morita¹, Takeshi Aihara²
¹Grad. school of Education, Univ of Tokyo, Tokyo, Japan ²Grad. school of Brain Sciences, Tamagawa Univ., Tokyo, Japan

- P2-047** **A role for mDia, a Rho-regulated actin nucleator, in chronic stress-induced behavioral changes and synaptic plasticity**
Yuichi Deguchi¹, Masaya Harada¹, Ryota Shinohara¹, Michael Lazarus², Yoan Cherasse², Yoshihiro Urade², Dai Watanabe³, Tomoyuki Furuyashiki¹, Shuh Narumiya¹
¹Medical Innovation Center, Kyoto University Graduate School of Medicine, Kyoto, Japan
²International Institute for Integrative Sleep Medicine (WPI-IIS), University of Tsukuba, Japan
³Dept Biological Science, Kyoto University Graduate School of Medicine, Kyoto, Japan
- P2-048** **Effect of chronic fluoxetine on the morphology of perforant path synapse in the dentate gyrus : 3D ultrastructural analyses using FIB/SEM**
Yosuke Kitahara¹, Keisuke Ohta², Takahide Shuto¹, Mahomi Kuroiwa¹, Naoki Sotogaku¹, Hiroshi Hasuo³, Akinobu Togo⁴, Kei-ichiro Nakamura², Akinori Nishi¹
¹Dept. of Pharmacol., Kurume Univ. Sch. of Med, Kurume, Fukuoka, Japan ²Dept. of Anat., Kurume Univ. Sch. of Med, Fukuoka, Japan
³Dept. of Physiol., Kurume Univ. Sch. of Med, Fukuoka, Japan
⁴Center Unit of Electron Microscopy, Kurume Univ. Sch. of Med, Kurume, Japan
- P2-049** **Allopregnanolone increases the density of drebrin clusters along dendrite**
Hideo Shimizu, Yuta Ishizuka, Tomoaki Shirao
Dept of Neurobiol & Behav, Gunma Univ Grad Sch of Med, Gunma, Japan
- P2-050** **Topographical precision in the thalamocortical projection achieved by cannabinoid signalings in the developing barrel cortex**
Chiaki Itami¹, Fumitaka Kimura²
¹Dept Physiol, Saitama Med Univ, Saitama, Japan ²Osaka Univ.Grad.Sch.of Med.

Signal Transduction and Modulation

- P2-051** **Enhanced CICR and SOCE in Layer 3 Pyramidal Cells in the Barrel Cortex of PRIP-DKO Mice**
Tsutomu Kawano¹, Hiroki Toyoda¹, Mitsuru Saito¹, Hajime Sato¹, Takashi Kanematsu², Masato Hirata³, Youngnam Kang¹
¹Dept. Neurosci. & Oral Physiol., Osaka Univ. Grad. Sch. Dent., Osaka, Japan
²Dept. Dent. Pharmacol., Grad. Sch. Biomed. Scis., Hiroshima Univ., Hiroshima, Japan
³Lab. Mol. Cell. Biochem., Fac. Dent. Sci., Kyushu Univ., Fukuoka, Japan
- P2-052** **Intracellular magnesium increase induced by neural activity in rat hippocampal neurons**
Ryu Yamanaka¹, Yutaka Shindo¹, Takamasa Karube¹, Ryo Tanamoto¹, Kohji Hotta², Kohji Suzuki¹, Kotaro Oka¹
¹School of Fundamental, Science and Technology, Graduate School of Science and Technology, Keio University
²School of Integrated Design Engineering, Graduate School of Science and Technology, Keio University
- P2-053** **Robustness of spontaneous network activity against reduced AMPA receptor activity**
Tomoe Ishikawa¹, Takuya Sasaki¹, Chiaki Kobayashi¹, Kazuki Okamoto¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Lab Chem Pharmacol, Grad Sch Pharmaceut Sci, Univ Tokyo, Tokyo, Japan
²Center for Information and Neural Networks, Osaka, Japan
- P2-054** **PACAP-induced BDNF gene expression in neurons - A study using bioluminescence signal imaging**
Mamoru Fukuchi¹, Yosuke Maehata¹, Hironori Izumi², Ayumi Tanaka², Ran Inoue², Hisashi Mori², Akiko Tabuchi¹, Masaaki Tsuda¹
¹Dept Biol Chem, Fac Pharm Sci, University of Toyama ²Dept Mol Neurosci, Fac Med, University of Toyama
- P2-055** **Transforming-growth factor- β induces matrix metalloproteinase-9 activation in human brain pericyte**
Yoko Takahashi¹, Takakuni Maki², Noriko Osumi¹, Ken Arai²
¹Dept Dev Neurosci, Tohoku Uni, Miyagi, Japan
²Neuroprotection Res Lab, Dep Radiology and Neurology, Massachusetts General Hospital and Harvard Medical School
- P2-056** **The novel depalmitoylating enzyme family regulates bi-directional trafficking of HRas between the Golgi apparatus and the plasma membrane**
Tatsuro Murakami^{1,2,3}, Atsushi Sekiya^{1,2,3}, Yuko Fukata^{1,2}, Masaki Fukata^{1,2}
¹Div Membrane Physiol, Dept Cell Physiol, National Institute for Physiological Sciences (NIPS)
²Dept Physiol Science, School of Life Science, The Graduate Univ for Advanced Studies [SOKENDAI] ³JSPS Research Fellow
- P2-057** **FEZ1, a binding partner for DISC1, regulates axonal transport**
Akiko Sumitomo¹, Ayumi Saka¹, Sayaka Mauchi¹, Takatoshi Hikida¹, Takeshi Sakurai¹, Akira Sawa², Toshifumi Tomoda¹
¹Kyoto University Graduate School of Medicine, Kyoto, Japan
²Johns Hopkins Univ. Grad. Sch. of Med., Dept. of Psychiatry, Baltimore, MD, USA

- P2-058** mGluR1 α -mediated excitation of cerebellar GABAergic interneurons requires both G protein-dependent and Src-ERK1/2-dependent signaling pathways
Hideo Kubota¹, Soichi Nagao², Kunihiko Obata³, Moritoshi Hirono^{2,3,4}
¹Materials Management, Medical Hospital, Tokyo Medical and Dental Univ, Tokyo, Japan
²Laboratory for Motor Learning Control, RIKEN Brain Science Institute, Saitama, Japan
³Obata Research Unit, RIKEN Brain Science Institute, Saitama, Japan
⁴Organization for Advanced Research and Education, Doshisha University, Kyoto, Japan
- P2-059** Fetal application of HDAC inhibitors changes the development of Purkinje cell dendrites and network formation in rat cerebellar cortex
Daiki Katsumata¹, Hideki Muramoto¹, Naohiro Hozumi², Yukiko Fueta³, Susumu Ueno³, Yuko Sekino⁴, Sachiko Yoshida¹
¹Dept Environ & Life Sci, Toyohashi Univ of Technology, Aichi, Japan ²Electrical & Electronic Info Eng, Toyohashi Univ of Tech, Aichi
³Univ of Occupational and Environmental Health, Kitakyushu ⁴National Institute of Health Sciences, Tokyo
- P2-060** Fingolimod regulates PKA/DARPP-32 signaling in striatal medium spiny neurons via neuronal sphingosine-1-phosphate receptor mechanisms
Ken Uematsu^{1,2,3}, Kiichiro Morita^{1,2}, Naohisa Uchimura^{1,2}, Akinori Nishi³
¹Cognitive and Mol. Res. Inst. of Brain Diseases, Kurume Univ. Sch. of Med. ²Dept. Neuropsychi., Kurume Univ. Sch. of Med.
³Dept. Pharmacol., Kurume Univ. Sch. of Med.

Glia and Glia-Neuron Interaction

- P2-061** Comparison of the effects of antidepressants on the microglial activation in LPS-inflammation model
Yuka Kasahara^{1,2}, Koki Fujimori³, Marie Miura^{1,2}, Yukari Mogami², Yuko Sekino², Kaoru Sato², Takeshi Suzuki¹
¹Div Basic Biol Sci, Fac Pharm, Keio Univ ²Div Pharmacol, Natl Inst Health Sci ³Dept Physiol, Keio Univ, Sch Med
- P2-062** Changes of microglial characters in response to extracellular stimulation
Tatsuhide Tanaka, Koichi Murakami, Yoshio Bando, Shigetaka Yoshida
Department of Functional Anatomy and Neuroscience, Asahikawa medical University
- P2-063** MAP kinase cascade in M-CSF-triggered microglial proliferation
Shinichi Yamamoto¹, Shinichi Kohsaka², Kazuyuki Nakajima¹
¹Dept. of Bioinformatics, Faculty of Engineering, Soka University, Tokyo, Japan
²Dept. of Neurochemistry, National Institute of Neuroscience, Tokyo, Japan
- P2-064** Enlargement of the lateral ventricle and neuronal damage in the septum after selective ablation of NG2-expressing cells in the central nervous system of adult rats
Yasuhisa Tamura, Masayuki Nakano, Asami Eguchi, Masanori Yamato, Satoshi Kume, Yukiharu Miyashige, Yosky Kataoka
Cellular Function Imaging Team, RIKEN Center for Life Science Technologies
- P2-065** Ablation of NG2 glial cells induced apoptosis in hippocampal neurons through TNF α pathway
Masayuki Nakano^{1,2}, Yasuhisa Tamura¹, Asami Eguchi¹, Masanori Yamato¹, Satoshi Kume¹, Yukiharu Miyashige¹, Yosky Kataoka^{1,2}
¹Cellular Function Imaging, Riken CLST, Kobe, Japan ²Dept of Physiol, Grad Sch of Med, Osaka City Univ, Osaka, Japan
- P2-066** NG2-immunoreactive cells contacting with rat mesencephalic trigeminal neurons
Akira Kawata, Tomohiro Kato, Naomi Miyagi, Seiji Akaike, Kazuyoshi Higashi, Osamau Takahashi
Dept Histol, Univ of Kanagawa Dental, Kanagawa, Japan
- P2-067** Morphogenesis of Promyelinating Schwann Cells is Mediated by Hedgehog Signaling Through Primary Cilia
Kentaro Yoshimura, Tomoyuki Arimatsu, Sen Takeda
Dept Anat and Cell Biol, University of Yamanashi, Yamanashi, Japan
- P2-068** Hedgehog signaling modulates GALST expression in astrocytes
Hiroaki Okuda, Kouko Tatsumi, Shoko Morita, Akio Wanaka
Dept Anatomy and Neurosci, Nara Med Univ, Nara, Japan
- P2-069** Activity dependent of structural plasticity of astrocytes in globus pallidus
Kouko Tatsumi, Hiroaki Okuda, Shoko Morita, Akio Wanaka
Dept Anat & Neuroci, Nara Med Univ, Kashihara Nara Japan

- P2-070** **Area-specific dopamine receptor expression in adult mouse astrocytes**
Katsuhiko Nagatomo¹, Sechiko Suga², Yoshio Yamamoto³, Katsuya Yamada¹
¹Department of Physiology, Hirosaki University Graduate School of Medicine, Hirosaki, Japan
²Hirosaki University Health & Welfare, Hirosaki, Japan
³Laboratory of Veterinary Anatomy and Cell Biology, Faculty of Agriculture, Iwate University, Morioka, Japan
- P2-071** **Relation with decrease of thymidine incorporation and cell death by oxidative stress in cultured astrocytes**
Koh-ichi Tanaka^{1,2,3}, Nobue Kitanaka², Junichi Kitanaka², Yuka Yamagiwa¹, Shyohjiro Itoi¹, Tobio Tsukahara², Tomoaki Sato³, Motohiko Takemura², Akemichi Baba¹, Nobuyoshi Nishiyama¹
¹Div Pharmacol, Dept Pharm, Sch Pharm, Hyogo Univ of Health Sci, Hyogo, Japan ²Dept Pharmacol, Hyogo Col of Med, Hyogo, Japan
³Dept Applied Pharmacol, Kagoshima Univ Grad Sch of Med & Dent Sci, Kagoshima, Japan

Stem Cells, Neuronal and Glial Production/Differentiation

- P2-072** **Injury-induced stem cells can differentiate into microglia**
Maiko Kawahara^{1,2}, Miki Kawamura^{2,3}, Takayuki Nakagomi², Rika Sakuma², Hideshi Yagi⁴, Tomohiro Matsuyama²
¹Kwansei Gakuin University, Hyogo, Japan ²Institute for Advanced Medical Sciences, Hyogo College of Medicine, Hyogo, Japan
³Osaka University, Osaka, Japan ⁴Anatomy and Neuroscience, Hyogo Collage of Medicine, Hyogo, Japan
- P2-073** **LPS-induced changes in neural stem cells and microglia proliferation in the circumventricular organs of adult mouse**
Eriko Furube¹, Mitsuhiro Morita², Seiji Miyata¹
¹Dep. of Appl. Biol., Kyoto Inst. of Tech., Kyoto, Japan ²Dept. of Biol., Kobe Univ., Kobe, Japan
- P2-074** **NG2-positive pericytes differentiate into all components of central nervous system after ischemic injury**
Rika Sakuma¹, Takayuki Nakagomi¹, Maiko Kawahara¹, Yukiko Kasahara², Akihiko Taguchi², Yasuhisa Tamura³, Yosky Kataoka³, Tomohiro Matsuyama¹
¹Institute for Advanced Medical Sciences, Hyogo College of Medicine, Hyogo, Japan
²Institute of Biomedical Research and Innovation, Department of Regenerative Medicine Research, Hyogo, Japan
³Division of Bio-function Dynamics Imaging, RIKEN Center for Life Science Technologies, Hyogo, Japan
- P2-075** **Identification of mouse cspg4 enhancer sequence and its regulatory factors in oligodendrocyte lineage cells**
Hitoshi Gotoh^{1,2}, Tadashi Nomura¹, Katsuhiko Ono¹, Akiko Nishiyama²
¹Dept. of Biology, Kyoto Pref. Univ. Med. ²Dept of Phys and Neurobiol, Univ of Connecticut, Storrs, CT USA
- P2-076** **The sulfatide with short chain fatty acids is dominant in the oligodendrogenesis region of the embryonic spinal cord**
Yukie Wada-Hirahara¹, Taketoshi Wakabayashi¹, Tetuji Mori^{1,3}, Taro Koike¹, Yasuharu Takamori¹, Ikuko Yao^{2,4}, Hitoshi Gotoh⁵, Koichi Honke⁶, Katsuhiko Ono⁵, Hisao Yamada¹
¹Dept Anatomy and Cell Science, Kansai Medical University, Osaka, Japan
²Dept Medical Chemistry, Kansai Medical University, Osaka, Japan ³Faculty of Medicine, Univ of Tottori, Tottori, Japan
⁴Medical Photonics Research Center, Hamamatsu University School of Medicine, Shizuoka, Japan
⁵Dept Biology, Kyoto Prefectural University of Medicine, Kyoto, Japan
⁶Dept Biochemistry, Kochi University Medical School, Kochi, Japan
- P2-077** **Proliferating glial cells in the normal young adult rat DRG**
Taro Koike¹, Taketoshi Wakabayashi¹, Tetsuji Mori^{1,2}, Yukie Hirahara¹, Yasuharu Takamori¹, Hisao Yamada¹
¹Department Anatomy and Cell science, Kansai Medical University ²School of Health Science, Faculty of Medicine, Tottori University
- P2-078** **Neural differentiation and characterization of CD31 positive cells derived from the mouse fetal cerebral cortex**
Miki Kawamura^{1,2}, Maiko Kawahara², Rika Sakuma², Hideshi Yagi³, Mitsuyo Maeda⁴, Takayuki Nakagomi², Kazuo Kitagawa⁵, Hideki Mochizuki¹, Tomohiro Matsuyama²
¹Dept Neurol, Osaka Univ Grad School of Med, Osaka, Japan ²Inst for Adv Med Sci, Hyogo Col of Med, Hyogo, Japan
³Dept of Anat and Neurosci, Hyogo Col of Med, Hyogo, Japan
⁴Dept of Regenerat Med and Res, Inst of Biomed Res and Innovat, Hyogo, Japan ⁵Dept of Neurol, Tokyo Women's Med Univ
- P2-079** **Interactions between skeletal muscle cells and motor neurons derived from mouse ES cells-Analysis by a unique co-culture system-**
Yuka Kawabata^{1,2}, Mami Kobayashi², Nana Takenaka^{2,4}, Kie Taguchi³, Shigeko Torihashi^{2,3}
¹Ise Red Cross Hospital, Mie, Japan ²Dept Rehabilitation Sciences, Univ of Nagoya, Aichi, Japan
³Dept Physical Therapy, Univ of Nagoya, Aichi, Japan ⁴Center for iPS Cell Research and Application, Univ of Kyoto, Kyoto, Japan

- P2-080** Oxygen levels contribute to fate specification of neural stem cell during cortical development
Sayako Katada, Mizuki Honda, Kinichi Nakashima
Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan
- P2-081** Cell cycle-independent temporal identity transitions in cortical progenitor cells as revealed by single cell transcriptome analysis
Ayano Kawaguchi¹, Mayumi Okamoto¹, Takaki Miyata¹, Fumio Matsuzaki²
¹*Department of Anatomy and Cell Biology, Nagoya University Graduate School of Medicine, Aichi, Japan*
²*Lab for Cell Asymmetry, CDB, RIKEN, Kobe, Japan*
- P2-082** Systematic analysis of clonal structure and neural network of the Drosophila brain
Masayoshi Ito¹, Naoki Masuda², Kei Ito¹
¹*Inst. of Molecular and Cellular Biosciences, The Univ. of Tokyo* ²*Dept of Engi Math, Univ of Bristol, Bristol, UK*
- P2-083** Bcl11b/Ctip2 controls the fate-choice of olfactory sensory neurons
Hidefumi Nishida¹, Takayuki Enomoto², Akito Fujita¹, Tetsuo Iwata¹, Ryo Kominami³, Makoto Ohmoto⁴, Ichiro Matsumoto⁴, Junji Hirota^{1,2}
¹*Dept. of Bioeng., Grad. Sch. of Biosci. and Biotech., Tokyo Inst. of Tech., Yokohama, Japan*
²*Center for Biological Resources and Informatics, Tokyo Inst. of Tech., Yokohama, Japan*
³*Dept. of Mol. Genet., Grad. Sch. of Med. and Dent. Sci., Niigata Univ., Niigata, Japan*
⁴*Monell Chemical Senses Center, Philadelphia, U. S. A.*

Cell Migration and Layer/Nuclear Formation

- P2-084** Galectin-1 promotes Schwann cells migration
Arata Segawa, Hiroko Inoue
Waseda University
- P2-085** Olfactory placode-derived neurons may join to the superficial neuronal network of the telencephalon
Momoko Miyakawa¹, Shizuko Murakami¹, Yasuo Uchiyama²
¹*Dep Cell Biol and Neurosci, Juntendo Univ Sch of Med, Tokyo, Japan*
²*Dept Cellul and Mol Neuropathol, Juntendo Univ, Grad Sch Med, Tokyo, Japan*
- P2-086** Generation of sexually dimorphic limbic system neuronal populations from Dbx1+ embryonic progenitor pools
Short Talk 4 ST-4-10 9/12 10:00-11:00
Shigeyuki Esumi¹, Kamal Yasmin², Tsutomu Hirata³, Sokolowski Katie², Peijun Li², Shah Nirao⁶, Pierani Alessandra⁴, Huntsman Molly⁵, Nobuaki Tamamaki¹, Corbin Joshua²
¹*Grad. School of Med. Sci., Kumamoto-Univ, Kumamoto City, Japan, Japan*, ²*Children's National Medical Center, Washington DC, USA*
³*Senior Research Fellow Center, Ehime University, Toon, Ehime, Japan* ⁴*Jacques Monod, Universite Paris Diderot, Paris, France*
⁵*University of Colorado School of Medicine, Aurora, CO, USA* ⁶*Department of Anatomy, University of California-San Francisco, CA*
- P2-087** An apoptotic mechanism of retinal mosaic formation
Short Talk 3 ST-3-9 9/12 9:00-10:00
Shih-Fong You, Shih-Kuo Chen
National Taiwan University
- P2-088** Estrogen induced neural migration is important for the sexual differentiation of the rat preoptic area
Tomohiro Hamada¹, Yasuo Sakuma²
¹*Dept Physiol, Nippon Med Sch, Tokyo, Japan* ²*Univ of Tokyo health Sci, Tokyo, Japan*
- P2-089** NRP1-mediated Sema3A signals coordinate laminar formation in the developing optic tectum
Yuji Watanabe^{1,2,3}, Chie Sakuma¹, Hiroyuki Yaginuma¹
¹*Dept Neuroanat & Embryol, Fac Med, Fukushima Medical Univ, Fukushima, Japan*
²*Dept Mol Neurobiol, Grad Sch Life Sci, Tohoku Univ, Sendai, Japan* ³*IDAC, Tohoku Univ, Sendai, Japan*
- P2-090** Functional analysis of shootin1 and shootin2 in brain development
Wataru Yoshida¹, Tadayuki Shimada¹, Michinori Toriyama¹, Colleen F Manning², Kenji Kohno¹, James S Trimmer², Naoyuki Inagaki¹
¹*Grad. Sch. of Biol. Sci., NAIIST, Nara, Japan* ²*Dept. of Neurobiol. Physiol. and Behav., Univ. of California Davis, Davis, California, USA*
- P2-091** ATF5 is involved in development of the cerebral cortex
Short Talk 3 ST-3-10 9/12 9:00-10:00
Ryoko Tanabe, Mariko Umemura, Haruo Nakano, Shigeru Takahashi, Yuji Takahashi
Sch of Life Sci, Tokyo Univ of Pharm & Life Sci, Tokyo, Japan
- P2-092** P53 cofactor JMY regulates neuronal migration during cortical development
Short Talk 4 ST-4-11 9/12 10:00-11:00
Guo-he Tan, Yuan-yuan Liu, Lan-bo-Ling Guo, Ze-qiang Zhang, Lu Wang, Ren-chao Chen, Zhi-qi Xiong
Institute of Neuroscience, Chinses Academy of Sciences, Shanghai, China
- P2-093** Pathophysiological roles of afadin in the brain development
Hideaki Yamamoto¹, Kenji Mandai¹, Tomohiko Maruo¹, Daijiro Konno², Fumio Matsuzaki²
¹*Dept Med, Kobe Univ, Hyogo, Japan* ²*RIKEN CDB, Hyogo, Japan*

- P2-094** **Role of Meis1 in cerebellar development**
Tomoo Owa¹, Shinichiro Taya¹, Tomoki Nishioka², Takuro Nakamura³, Ryo Goitsuka⁴, Koza Kaibuchi², Mikio Hoshino¹
¹*Dept of Biochemistry and Cellular Biology National Institute of Neuroscience NCNP*
²*Dept. of Cell Pharmacology, School of Medicine, Nagoya Univ*
³*Department of Carcinogenesis, Japanese Foundation for Cancer Research*
⁴*Division of Development & Aging, Research Institute for Biological Sciences, Tokyo University of Science*

Axonal/Dendritic Growth and Circuit Formation

- P2-095** **Exploration of genes regulating dendritic spine pruning in the cerebral cortex of the common marmoset**
Tetsuya Sasaki¹, Tomofumi Oga^{1,2}, Keiko Nakagaki¹, Kazuhisa Sakai¹, Kayo Sumida³, Kohei Hoshino⁴, Izuru Miyawaki⁴, Koichi Saito³, Fumikazu Suto¹, Noritaka Ichinohe¹
¹*Dept of Ultrastructural Study, Nat Inst of Neurosci, NCNP, Tokyo, Japan*
²*Lab of Cognitive Neurosci, Grad Sch Frontier Biosci, Osaka Univ, Osaka, Japan*
³*Environmental Health Sci Lab, Sumitomo Chemical Co., Ltd., Osaka, Japan*
⁴*Preclinical Research Lab, Dainippon Sumitomo Pharma Co., Ltd., Osaka, Japan*
- P2-096** **Caspase 6-dependent synapse remodeling in the developing chick ciliary ganglion**
Hidetaka Katow¹, Egawa Ryo¹, Hososhima Shoko¹, Ishizuka Toru^{1,2}, Yawo Hiromu^{1,2,3}
¹*Tohoku University Graduate School of Life Sciences, Sendai, Japan* ²*CREST, JST*
³*Center for Neuroscience, Tohoku University Graduate School of Medicine, Sendai, Japan*
- P2-097** **In vivo imaging of layer 4 neuronal dendrites during thalamocortical reorganization in neonates**
Hidenobu Mizuno^{1,2}, Wenshu Luo^{1,2}, Etsuko Tarusawa³, Yoshikazu M Saito⁵, Takuya Sato¹, Yumiko Yoshimura^{3,4}, Shigeyoshi Itoharu⁵, Takuji Iwasato^{1,2}
¹*Div Neurogenetics, National Institute of Genetics, Shizuoka, Japan* ²*Dept Genetics, SOKENDAI, Shizuoka, Japan*
³*Div Visual Information Processing, National Institute for Physiological Sciences, Aichi, Japan*
⁴*Dept Physiological Sciences, SOKENDAI, Aichi, Japan* ⁵*Lab Behavioral Genetics, RIKEN BSI, Saitama, Japan*
- P2-098** **Toward improving the in vivo imaging system to elucidate the reorganization process of thalamocortical connectivity**
Shingo Nakazawa^{1,2}, Hidenobu Mizuno^{1,2}, Takuji Iwasato^{1,2}
¹*Div Neurogenetics, National Institute of Genetics.* ²*Dept Genetics, SOKENDAI*
- P2-099** **Optical identification of initial expression of synaptic function in the embryonic chick trigeminal sensory nucleus**
Katsushige Sato¹, Yoko Momnose-Sato²
¹*Dept Nutrition Sciences, Komazawa Women's Univ Fac Human Health, Tokyo, Japan*
²*Dept Health and Nutrition, Kanto Gakuin Univ Coll Human Environ Studies*
- P2-100** **Homeostatic maintenance of the large-scale depolarization wave in the developing CNS**
Yoko Momose-Sato¹, Katsushige Sato²
¹*Dept Health and Nutrition, Kanto Gakuin Univ Coll Human Environ Studies*
²*Dept Nutrition Sciences, Komazawa Women's Univ Fac Human Health, Tokyo, Japan*
- P2-101** **Cadherin-7 regulates the circuit connectivity of the cerebellar mossy fiber**
Kenichiro Kuwako, Hideyuki Okano
Department of Physiology, Keio University School of Medicine
- P2-102** **A role for MAP7D1, a novel substrate of DCLK1, in axon elongation**
Hiroyuki Koizumi¹, Hiromi Fujioka², Kazuya Togashi¹, Yasushi Okada³, Joseph G. Gleeson⁴, Kazuo Emoto¹
¹*Lab for Brain Function, Dept Biological Sciences, Grad School of Science, Univ of Tokyo, Japan*
²*Nara Institute of Science and Technology, Nara, Japan*
³*Lab for Cell Polarity Regulation, Quantitative Biology Center RIKEN, Osaka, Japan*
⁴*Neurogenetics Lab, HHMI / Dept Neuroscience, Univ of California San Diego, USA*
- P2-103** **Abnormal glycan diversity of perineuronal nets in mice lacking in the chondroitin sulfate-synthesizing enzymes**
Nozomu Yoshioka^{1,2}, Yumi Watanabe^{1,3}, Kosei Takeuchi^{1,2,4}, Michihiro Igarashi^{1,2}
¹*Dept Neurochem & Mol Cell Biol, Niigata Univ Grad Sch Med Dent Sci* ²*Transdisciplinary Res Ctr Niigata Univ*
³*Div Preventive Med Niigata Univ* ⁴*Dept. of Cell Biol., Aichi Med Univ*
- P2-104** **Expression analysis of Otx2 homeoprotein in mouse postnatal brain**
Tomoya Iijima¹, Isao Matsuo², Sayaka Sugiyama¹
¹*Lab of Neuronal Development, Graduate School of Medical and Dental Science, Niigata University, Niigata, Japan*
²*Development of Molecular Embryology, Osaka Medical Center and Research Institute for Maternal and Child Health, Osaka, Japan*

- P2-105** **Analysis of the Corticospinal Tract Formation in Adult *Sulf1*;*Sulf2* Double Knockout Mice**
Takuya Okada, Nana Kagaya, Kazuko Keino-Masu, Masayuki Masu
Dept Mol Neurobiol, Fac Med, Univ of Tsukuba, Ibaraki, Japan
- P2-106** **Regulation of axonal guidance-related genes by transcription factor Runx3**
Yuki Ogihara^{1,2}, Tomoyuki Masuda^{1,2}, Masaaki Yoshikawa³, Shigeru Ozaki², Kouji Senzaki², Takashi Shiga^{1,2}
¹*Dept Neurobiol, Fac of Med, Univ of Tsukuba, Ibaraki, Japan* ²*Grad Sch of Comprehen Hum Sci, Univ of Tsukuba, Ibaraki, Japan*
³*Div of Anat Sci, Dept of Funct Morphol, Nihon Univ Sch of Med, Tokyo, Japan*
- P2-107** **Asymmetric Dendrite Development in Hippocampal Pyramidal Cells and Dentate Granule Cells in Dissociated Cultures**
Yuu Kure¹, Kazuto Fujishima², Mineko Kengaku^{1,2}
¹*Grad. School of Biostudies, Kyoto Univ., Kyoto, Japan* ²*iCeMS, Kyoto Univ., Kyoto, Japan*
- P2-108** **Sema7A-PlxnCl signaling is essential for triggering activity-dependent synapse formation in the mouse olfactory bulb**
Nobuko Inoue^{1,2}, Hitoshi Sakano², Hiromi Naritsuka³, Hiroshi Kiyonari⁴, Hirohumi Nishizumi¹
¹*Department of Biophysiology and Biochemistry, University of Tokyo*
²*Department of Brain Function, University of Fukui School of Medicine*
³*Department of Physiology, Graduate School of Medicine, The University of Tokyo* ⁴*RIKEN Institute*
- P2-109** **Target-derived Semaphorin3A is essential for targeting Neuropilin1-positive olfactory sensory neurons to the posterior olfactory bulb**
Takahiro Yamazaki, Hitoshi Sakano
Functional Neuroimaging, Faculty of Medical Sciences, University of Fukui
- P2-110** **Facilitatory effects of somatostatin on GnRH neuron migration and olfactory axon fasciculation**
Shizuko Murakami¹, Yasuo Uchiyama²
¹*Dept Cell Biol and Neurosci, Juntendo Univ Sch of Med, Tokyo, Japan*
²*Dept Cellul and Mol Neuropathol, Juntendo Univ Grad Sch of Med, Tokyo, Japan*

Sensorimotor Control

- P2-111** **Optogenetic analysis of the functional role of Mauthner cell on the sound/vibration-evoked fast escapes in larval zebrafish**
Masashi Tanimoto¹, Atsuko Sugimoto¹, Sena Yokomichi¹, Kazuhide Asakawa^{2,3}, Koichi Kawakami^{2,3}, Yoichi Oda¹
¹*Div Biol Sci, Grad Sch Sci, Nagoya Univ, Aichi, Japan* ²*Div Mol Dev Biol, Nat Inst Genet, Shizuoka, Japan*
³*Dept Genet, Grad Univ Adv Stud (SOKENDAI), Shizuoka, Japan*
- P2-112** **Modulation of sensorimotor cortex excitability induced by arm restraint**
Yoshitaka Okamoto^{1,2}, Satoshi Yamamoto^{1,3}, Naoki Takeshita^{1,3}, Yuki Umehara^{1,2}, Megumi Oshima^{1,4}, Masahiko Monma⁵, Yutaka Kohno⁶, Kenji Numata³
¹*Grad Sch Hlth Sci, Ibaraki Prefectural Univ of Hlth Sci, Ibaraki, Japan*
²*Dept Rehabil, Ibaraki Prefectural Univ of Hlth Sci Hospital, Ibaraki, Japan*
³*Dept Phys Ther, Ibaraki Prefectural Univ of Hlth Sci, Ibaraki, Japan* ⁴*Dept Rehabil, Jonan Hospital, Ibaraki, Japan*
⁵*Dept Radiol Sci, Ibaraki Prefectural Univ of Hlth Sci, Ibaraki, Japan*
⁶*Dept Neurology, Ibaraki Prefectural Univ of Hlth Sci Hospital, Ibaraki, Japan*
- P2-113** **Effects of Histamine on synaptic inputs from the mesencephalic trigeminal nucleus to trigeminal motoneurons**
Short Talk 3
ST-3-11
9/12 9 : 00-10 : 00
Chikako Gamba^{1,2}, Kiyomi Nakayama², Shiro Nakamura², Ayako Mochizuki², Mitsuko Inoue¹, Tomio Inoue²
¹*Dept. of Pediatric Dent., Showa Univ. of Dent., Tokyo, Japan* ²*Dept. of Oral Physiol., Showa Univ. Sch. of Dent., Tokyo, Japan*
- P2-114** **Functional asymmetry of interlaminar connections in the superior colliculus revealed by optical imaging**
Short Talk 4
ST-4-14
9/12 10 : 00-11 : 00
Nana Morita¹, Ryohei P. Hasegawa^{1,2}, Kazuyuki Murase¹, Hiroshi Ikeda¹
¹*Graduate School of Engineering, University of Fukui, Fukui, Japan*
²*National Institute of Advanced Industrial Science and Technology(AIST), Tsukuba, Japan*
- P2-115** **LIP neurons accumulate relevant information depending on task demand**
Short Talk 3
ST-3-12
9/12 9 : 00-10 : 00
Yuki Suda, Hironori Kumano, Takanori Uka
Dept Neurophysiol, Grad School of Med, Juntendo Univ, Tokyo, Japan
- P2-116** **Sensory input to the forelimb motor areas in rat: an *in vivo* optical imaging study**
Nobuo Kunori^{1,2}, Ichiro Takashima¹
¹*Neurosci.Res.Inst., National Inst. of Advanced Industrial Sci. & Technol, Ibaraki, Japan*
²*Grad. Sch. Of Comp. Human Sci., Univ. of Tsukuba, Ibaraki, Japan*

- P2-117** **Reconstruction of insect locomotion from descending neural activities using sparse linear regression**
Hiroto Ogawa¹, Tomohiro Shudo², Makoto Someya², Masahiko Haruno³
¹Dept Bio Sci, Fac Sci, Hokkaido Univ, Hokkaido, Japan ²Biosystem Sci, Grad Sch Life Sci, Hokkaido Univ, Hokkaido, Japan
³Center for Information and Neural Network, NICT, Osaka, Japan
- P2-118** **Motion effects of auditory/visual sensory-motor synchronization and an impact of transcranial direct current stimulation (tDCS)**
Kentaro Ono, Yusuke Mikami, Tatsuya Mima, Hidenao Fukuyama
Human Brain Research Center, Graduate School of Medicine, Kyoto University
- P2-119** **Optimal feedback gain indicating the preferred direction**
Yuki Ueyama
Research Institute of National Rehabilitation Center for Persons with Disabilities, Tokorozawa, Japan
- P2-120** **Temporal changes of brain wave during switches in motor imagery**
Hiroshi Yokoyama¹, Isao Nambu¹, Jun Izawa², Yasuhiro Wada¹
Short Talk 4
ST-4-15
9/12 10:00-11:00
¹Nagaoka Univ of Technology, Japan ²NTT CS Labs, Japan
- P2-121** **Withdrawn**
- P2-122** **Correlation of postural sways of two persons in contact and its dissolution by body operation of Japanese martial arts**
Yasuyuki Inoue^{1,2}, Tomohiko Suzuki², Yutaka Sakaguchi²
¹Grad School of Eng, Mie Univ, Mie, Japan ²Grad School of Info Sys, Univ of Electro-Communications, Tokyo, Japan

Sensorimotor Learning/Plasticity

- P2-123** **Reorganization of corticospinal projection after functional recovery from spinal cord injury**
Masahiro Sawada^{1,2}, Kimika Yoshino-Saito^{1,5}, Taihei Ninomiya⁴, Takao Ohishi^{4,8}, Toshihide Yamashita^{6,8}, Masahiko Takada^{4,8}, Hiroataka Onoe³, Yukio Nishimura^{1,7,9}, Tadashi Isa^{1,7}
¹Dept of Neurosurgery, Grad Sch of Kyoto Univ, Kyoto, Japan ²Dept of Neurosurgery, Grad Sch of Kyoto Univ, Kyoto, Japan
³Riken, Cent. for Life Sci. Tech, Kobe, Japan ⁴Sys Neurosci, Primate Res Inst, Kyoto Univ, Inuyama, Aichi, Japan
⁵Dept. Physiol. Keio Univ. Tokyo, Japan ⁶Dept Mol Neurosci, Grad Sch Med, Osaka Univ, Osaka, Japan ⁷Sokendai, Hayama, Japan
⁸JST CREST, Tokyo, Japan ⁹JST PREST, Tokyo, Japan
- P2-124** **Influence of observation of unilateral hand movement on the excitability of the contralateral primary motor cortex: a transcranial magnetic stimulation study**
Satoshi Yamamoto^{1,3}, Yoshitaka Okamoto^{1,2}, Naoki Takeshita^{1,3}, Yuki Umehara^{1,2}, Megumi Ohshima^{1,4}, Masahiko Monma⁵, Yutaka Kohno⁶, Kenji Numata³
¹Grad Sch Hlth Sci, Ibaraki Prefectural Univ of Hlth Sci, Ibaraki, Japan
²Dept Rehabil, Ibaraki Prefectural Univ of Hlth Sci Hospital, Ibaraki, Japan
³Dept Phys Ther, Ibaraki Prefectural Univ of Hlth Sci, Ibaraki, Japan ⁴Dept Rehabil, Jonan Hospital, Ibaraki, Japan
⁵Dept Radiol Sci, Ibaraki Prefectural Univ of Hlth Sci, Ibaraki, Japan
⁶Dept Neurology, Ibaraki Prefectural Univ of Hlth Sci Hospital, Ibaraki, Japan
- P2-125** **Transcranial imaging of cortical activities after sound-shape association in mice**
Tatsuya Yamagishi^{1,2}, Hiroaki Tsukano¹, Daiki Kamatani¹, Ryuichi Hishida¹, Sugata Takahashi², Katsuei Shibuki¹
¹Dept Neurophysiol, Brain Res Inst, Niigata Univ, Niigata, Japan ²Dept Otolaryngol, Sch Med, Niigata Univ, Niigata, Japan
- P2-126** **The influence of feedback modality of error information on motor learning**
Yuki Kaku, Katsumori Takamatsu, Shun-ichi Kuwana
Faculty of Health Sciences, Uekusa Gakuen University.
- P2-127** **Effect of training and detraining on motor function of the fingers in elderly adults**
Tomoko Aoki
Short Talk 3
ST-3-13
9/12 9:00-10:00
Prefectural University of Kumamoto
- P2-128** **Effect of training schedule on the spatial generalization pattern of visuomotor adaptation of reaching movement**
Takuji Hayashi^{1,2}, Daichi Nozaki¹
¹Division of Physical and Health Education, Graduate School of Education, The University of Tokyo ²JSPS research fellow
- P2-129** **Natural variation modifies temperature responses and memory in *C. elegans***
Misaki Okahata, Shoko Furukawa, Akane Ohta, Atsushi Kuhara
Short Talk 3
ST-3-14
9/12 9:00-10:00
Konan University Institute for Integrative Neurobiology
- P2-130** **Ca²⁺ imaging analysis of Olfactory Memory in the *Drosophila* Mushroom Body**
Makoto Hiroi, Tetsuya Tabata
Inst of Mol Cell Biosci, Univ of Tokyo, Japan

- P2-131** **Effects of environmental enrichment on the sensory-motor cortex in mice**
 Mai Inoue^{1,2}, Maya Odagawa¹, Chihiro Homma¹, Kazuyuki Yamada¹, Takumi Akagi¹, Takayuki Suzuki¹, Masanori Murayama^{1,2}
¹BSI, RIKEN, Saitama, Japan ²Tokyo Tech, Tokyo, Japan

Visual System

- P2-132** **Light modulates energy metabolism through melanopsin**
 Chi Chan Lee, Yan Fang Zou, Shih Kuo Chen
 Department of Life Science, National Taiwan University, Taipei, Taiwan
 Short Talk 4 ST-4-16
 9/12 10 : 00-11 : 00
- P2-133** **Pathway-specific inputs of starburst amacrine cells in the mouse retina**
 Toshiyuki Ishii, Makoto Kaneda
 Nippon Medical School
- P2-134** **Measurements of contrast sensitivity in the Royal College of Surgeons Rats**
 Shogo Soma, Naofumi Suematsu, Satoshi Shimegi
 Lab.for Cognitive and Behavioral Neuroscience, Grad. Sch. of Medicine, Osaka Univ.
- P2-135** **The Similarity of Receptive Field Properties in Connections between the Lateral Geniculate Nucleus and the Primary Visual Cortex of the Cat**
 Naofumi Suematsu¹, Tomoyuki Naito¹, Tomomitsu Miyoshi², Hajime Sawai², Hiromichi Sato¹
¹Lab Cogni Behav Neurosci, Osaka Univ, Osaka, Japan ²Dept Integr Physiol, Osaka Univ, Osaka, Japan
- P2-136** **Short-term memory during navigational decision-making in flying *Drosophila***
 Hiroshi M. Shiozaki, Hokuto Kazama
 RIKEN BSI, Saitama, Japan
 Short Talk 4 ST-4-17
 9/12 10 : 00-11 : 00
- P2-137** **Neural mechanism of top-down influences on V1 responses in visual processing**
 Akikazu Kamiyama, Yoshiki Kashimori
 Dept Engineering Science, The University of Electro-Communications, Tokyo, Japan
 Short Talk 3 ST-3-15
 9/12 9 : 00-10 : 00
- P2-138** **Functional microarchitecture of visual selectivity in the cat area 17**
 Megumi Nishiyama¹, Teppei Matsui¹, Kenta M Hagihara¹, Tomonari Murakami¹, Kenichi Ohki^{1,2}
¹Dept Mol Physiol, Kyushu Univ, Fukuoka, Japan ²CREST, JST, Tokyo, Japan
- P2-139** **Integration of multiple spatial frequency channels in V1 disparity detectors**
 Mika Baba¹, Kota S Sasaki^{1,2}, Izumi Ohzawa^{1,2}
¹Grad Sch Frontier Biosciences, Osaka Univ, Osaka, Japan ²Center for Information and Neural Networks
- P2-140** **Flashing lights Enhance Visual Perception through Long Delayed Cortical Depolarization**
 Kenta Funayama¹, Genki Minamisawa¹, Nobuyoshi Matsumoto¹, Hiroshi Ban², Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Laboratory of Chemical Pharmacology, Graduate School of Pharmaceutical Sciences, The University of Tokyo
²Center for Information and Neural Networks, Suita City, Osaka, Japan
- P2-141** **Subspace mapping in Gabor wavelet domain for Macaque V2 and MT neurons**
 Hajime Hashimoto¹, Kota S Sasaki^{1,2}, Mikio Inagaki¹, Izumi Ohzawa^{1,2}
¹Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan
²Center for Information and Neural Networks (CiNet), Osaka, Japan
- P2-142** **Spatial attention modulates size and shape of receptive fields of neurons in monkey inferotemporal cortex differently in supra- and infra-granular layers**
 Keitaro Obara^{1,2}, Kazunori O'hashi¹, Manabu Tanifuji^{1,2,3}
¹Lab. for Integrative Neural Systems, RIKEN Brain Sci Inst, Saitama, Japan ²Dept. Life Sci Med Biosci, Waseda Univ, Tokyo, Japan
³Dept. Complexity Sci and Eng, Grad. School of Frontier Sciences, Univ of Tokyo, Chiba, Japan
 Short Talk 4 ST-4-18
 9/12 10 : 00-11 : 00
- P2-143** **Behavioral task demands modulate object tuning of neurons in the inferior temporal cortex**
 Kazunori Ohashi¹, Keitaro Obara^{1,2}, Manabu Tanifuji^{1,2}
¹BSI, Laboratory for Integrative Neural Systems, Japan ²Dept. Life Sci Med Biosci, Waseda Univ, Tokyo, Japan
- P2-144** **Anatomical connections of the gloss selective region in the inferior temporal cortex of the monkey**
 Akiko Nishio¹, Noritaka Ichinohe², Hidehiko Komatsu^{1,3}
¹National Institute for Physiological Sciences ²National Center of Neurology and Psychiatry, Tokyo, Japan
³SOKENDAI, Okazaki, Japan
- P2-145** **Comparison of color selectivity in DKL and CIE-xy spaces in macaque area V4**
 Tomoyuki Namima^{1,2}, Takahisa M Sanada^{1,2}, Hidehiko Komatsu^{1,2}
¹National Institute for Physiological Sciences ²SOKENDAI, Okazaki, Japan

- P2-146** Neural response characteristics that are invariant to face inversion in monkey area TE
Yasuko Sugase-Miyamoto¹, Narihisa Matsumoto¹, Kenji Kawano²
¹Human Tech Res Inst, AIST, Ibaraki, Japan ²Dept Integrative Brain Sci, Kyoto Univ, Kyoto, Japan
- P2-147** Inhibitory controls from the parietal association area to the primary visual cortex in mice
Ryuichi Hishida¹, Masao Horie², Hiroaki Tsukano¹, Manavu Tohmi¹, Katsuei Shibuki¹
¹Dept Neurophysiol, Brain Res Inst, Niigata Univ, Niigata, Japan
²Div Neurobiol and Anat, Grad Sch Med and Dent, Niigata Univ, Niigata, Japan
- P2-148** Dynamic Causal Modeling of emotional face perception
Katsuki Hasegawa¹, Aki Hattori¹, Nobuhiro Kaneko¹, Tomoko Ono¹, Keita Imai¹, Eiji Kirino², Shoji Tanaka¹
¹Sophia University ²Juntendo Univ, Shizuoka Hospital, Japan
- P2-149** Neural correlates of change blindness in human early visual cortex
Li-Feng Yeh¹, Justin L Gardner^{1,2}
¹RIKEN Brain Science Institute, Wako, Japan ²Dept Psych, Stanford Univ, Stanford, USA
- P2-150** Pattern randomness judgement activates the lateral occipital complex
Yuki Yamada¹, Hiroshi Kadota², Tomomi Dote³, Makoto Iwata², Takanori Kochiyama⁴, Makoto Miyazaki³
¹Kyushu Univ, Fukuoka, Japan ²Kochi Univ Tech, Kochi, Japan ³Yamaguchi Univ, Yamaguchi, Japan ⁴ATR, Kyoto, Japan

Short Talk 4
ST-4-19
9/12 10:00-11:00

Auditory and Vestibular Systems

- P2-151** A semi-*in-vivo* electrophysiological analysis of auditory nerve development in larval zebrafish
Maya Inoue^{1,2}, Masashi Tanimoto¹, Yoichi Oda¹
¹Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., Aichi, Japan ²JSPS Research Fellow DC, Tokyo, Japan
- P2-152** Auditory-evoked responses of large GABAergic neurons in the inferior colliculus
Tetsufumi Ito
Dept of Anat, Faculty of Med Sci, Univ of Fukui
- P2-153** Corticocollicular modulation inputs to the projection neurons in the Inferior Colliculus
Kousuke Taki, Fuduki Inoguchi, Yoshinari Aimi, Motoi Kudo
Dept. of Anat., Shiga Univ. of Med. Sci.
- P2-154** Electrophysiological auditory response and perineuronal net in Rodent
Hisataka Fujimoto, Tomohiro Ohgomi, Jun Yamada, Shozo Jinno
Department of Developmental Molecular Anatomy, Graduate School of Medical Sciences, Kyushu University
- P2-155** Electrophysiological detection of neural activities induced by song stimuli in auditory cortex of female Zebra finch (*Taeniopygia guttata*)
Satomi Moriyama¹, Toshinobu Shimoi², Kohji Hotta², Hiroaki Saito¹, Kotaro Oka²
¹Center for Computer Science, School of Science for Open and Environmental Systems, Keio University, Japan
²Center for Biosciences and Informatics, School of Fundamental Sciences and Technology, Keio University, Japan
- P2-156** Dorsal high frequency area of the primary auditory cortex responding to ultrasonic male songs in mice
Hiroaki Tsukano¹, Masao Horie², Ryuichi Hishida¹, Katsuei Shibuki¹
¹Dept Neurophysiol, Brain Res Inst, Niigata Univ, Niigata, Japan
²Div Neurobiol and Anat, Grad Sch of Med and Dent Sci, Niigata Univ, Niigata, Japan
- P2-157** Identification of a novel vibration and deflection center in the brain of the fruit fly
Daichi Yamada, Azusa Kamikouchi, Eriko Matsuo
Graduate school of science, Nagoya University, Aichi, Japan
- P2-158** Sound-induced Hyperpolarization and Theta Resonance in Hippocampal Neurons
Reimi Abe¹, Tetsuya Sakaguchi¹, Nobuyoshi Matsumoto¹, Daisuke Ishikawa¹, Keiichi Kitajo², Norio Matsuki¹, Yuji Ikegaya^{1,3}
¹Lab Chem Pharmacol, Grad Sch Pharmaceut Sci, Univ Tokyo, Tokyo, Japan
²Lab for Advanced Brain Signal Processing, RIKEN BSI, Saitama, Japan ³CiNet, Osaka, Japan
- P2-159** Effects of speakers' unconscious subtle movements on listener's autonomic nerve activity
Yuki Oishi¹, Maori Kobayashi^{2,3}, Norimichi Kitagawa¹, Kanako Ueno^{3,4}, Shiro Ise^{3,5}, Makio Kashino^{1,3}
¹NTT Communication Science Laboratories, Kanagawa, Japan ²Faculty of Engineering, Univ of Meiji, Kanagawa, Japan
³CREST JST, Japan ⁴Dept Sci. and Tech., Univ of Meiji, Kanagawa, Japan ⁵Sch. Info. and Env., Univ of Tokyo Denki, Chiba, Japan

Olfaction, Taste, Chemical Senses

- P2-160** 5T4 glycoprotein regulates the sensory experience-dependent dendritic development of olfactory bulb interneurons
Hiroo Takahashi¹, Sei-ichi Yoshihara¹, Yoichi Ogawa², Masahito Kinoshita¹, Nobushiro Nishimura¹, Akio Tsuboi¹
¹Lab for Mol Biol of Neural System, Nara Med Univ, Kashihara, Japan ²Dep. of Physiol. I, Nara Med Univ, Kashihara, Japan
- P2-161** Nasal airflow entrains glomerulus-specific theta oscillations for phase odor coding
Ryo Iwata¹, Takeshi Imai^{1,2}
¹RIKEN Center for Developmental Biology, Laboratory for Sensory Circuit Formation
²PRESTO, Japan Science and Technology Agency (JST)
- P2-162** Stereological estimation of olfactory receptor neurons in rodents
Kyutaro Kawagishi, Kumiko Yokouchi, Nanae Fukushima, Tetsuji Moriizumi
Dept. of Anatomy, Shinshu Univ.Sch.of Med.
- P2-163** Stereological analyses of regenerated bulbar projection neurons with functional correlation
Kumiko Yokouchi, Kyutaro Kawagishi, Nanae Fukushima, Tetsuji Moriizumi
Dept. of Anat. Shinshu Univ. Sch. of Med.
- P2-164** Applying 7 Tesla fMRI to an odor recognition study
Hideyuki Fukami¹, Sawa Horie^{1,2}, Satomi Higuchi³, Makoto Sasaki³, Yoshinori Sahara¹
¹Dept Physiol, Iwate Medical Univ, Iwate, Japan ²Dept Tumor Biol, Inst Biomed Sci, Iwate Medical Univ, Iwate, Japan
³Div Ultrahigh Field MRI, Inst Biomed Sci, Iwate Medical Univ, Iwate, Japan
- P2-165** Neural mechanism of modulation of taste perception elicited by smell
Takahiro Shimemura, Yosiki Kashimori
Dept of Engineering Science, The University of Electro-Communications, Tokyo, Japan
Short Talk 3
ST-3-17
9/12 9:00-10:00
- P2-166** Response profiles of bitter sensitive taste cells in mouse fungiform papillae
Ryusuke Yoshida¹, Misa Yasaka¹, Robert F Margolskee², Yuzo Ninomiya¹
¹Section of Oral Science, Faculty of Dentistry, Kyushu University ²Monell Chem. Senses Center, Philadelphia, USA
- P2-167** Ginger elevates the expression of substance P in the mouse tongue
Michiro Iizuka¹, Ayumu Hirata¹, Yusuke Yagi¹, Megumi Nakai¹, Hisashi Shiraishi¹, Kohei Jobu¹, Junko Yokota¹, Yoshiyasu Fukuyama², Mitsuhiro Miyamura¹
¹Dept Pharm, Kochi Med Sch Hosp, Kochi, Japan ²Fac Pharm Sci, Univ of Tokushima Bunri, Tokushima, Japan

Somatosensory System

- P2-168** Role of extrasynaptic GABA_A receptor on the remodeling of medial lemniscal fibers in the somatosensory thalamus by peripheral nerve injury
Yasuyuki Nagumo¹, Mariko Miyata^{1,2}
¹Dept Physiol, Tokyo Women's Medical University, Tokyo, Japan ²PRESTO, Japan Science and Technology Agency, Saitama, Japan
- P2-169** A Morphological Analysis of Neurons in Rat Spinal Trigeminal Subnucleus Caudalis with Viral Vectors
Sachi Ohno¹, Eriko Kuramoto², Takeshi Kaneko³, Takahiro Sonomura⁴, Haruki Iwai⁵, Atsushi Kohjitani¹, Kazuna Sugiyama¹
¹Dept Dental Anesthesiology, Grad Sch of Med and Dent, Kagoshima Univ, Kagoshima, Japan
²Dept Anatomy, Kawasaki Med Sch, Okayama, Japan ³Dept Morphological Brain Science, Grad Sch Med, Kyoto Univ, Kyoto, Japan
⁴Dept Anatomy, Kanazawa Med Sch, Ishikawa, Japan
⁵Dept Anatomy for Oral Sciences, Grad Sch of Med and Dent, Kagoshima Univ, Kagoshima, Japan
- P2-170** Physiological properties of motor thalamic nucleus during sensory stimulation in mice
Yusuke Atsumi^{1,2}, Maya Odagawa¹, Keisuke Ota^{1,3}, Masanori Murayama¹
¹Lab for Behav Neurophysiol, BSI, RIKEN, Saitama, Japan ²Department of Biological Information, Tokyo Institute of Technology
³JSPS Research Fellow
- P2-171** Topographic Projection Map of Adult Somatosensory Neurons in Drosophila
Asako Tsubouchi¹, Takeshi K Yokoyama¹, Tomoko Yano^{1,2}, Kei Ito^{1,2}
¹The University of Tokyo, Institute of Molecular and Cellular Biosciences ²The University of Tokyo, Graduate school of frontier sciences
- P2-172** Comprehensive Anatomical Analysis of Somatosensory Projections in the Fruit Fly Drosophila Central Brain
Takeshi K Yokoyama, Asako Tsubouchi, Kei Ito
Laboratory for Neural Circuits, Institute of Molecular and Cellular Biosciences, University of Tokyo
Short Talk 4
ST-4-20
9/12 10:00-11:00

- P2-173** A neural circuit mechanism of large-scale somatotopic reorganization in the thalamus after transection of the whisker sensory nerve of mice
Yuichi Takeuchi¹, Yoko Katayama¹, Mariko Miyata^{1,2}
¹Dept of Physiol, Tokyo Women's Med Univ, Tokyo, Japan ²PRESTO, Japan Science and Technology Agency, Saitama, Japan
- P2-174** Comparison of neural activities evoked by self-movement-induced and externally-induced sensory stimuli in mouse somatosensory cortex
Keisuke Ota^{1,2}, Kazuyuki Yamada¹, Atsushi Kamoshida^{1,3}, Masanori Murayama¹
¹Behavioral Neurophysiology, Brain Science Institute, RIKEN, Wako-shi, Saitama, Japan ²JSPS Research Fellow, Tokyo, Japan ³National Instruments Japan Corporation, Tokyo, Japan
- P2-175** Toward understanding neuronal representation of tactile perception in the mouse somatosensory cortex
Takayuki Suzuki¹, Chihiro Homma¹, Atsushi Kamoshida^{1,2}, Kazuyuki Yamada¹, Keisuke Ota^{1,3}, Shunjiro Moizumi⁴, Ayumu Inutsuka⁵, Akihiro Yamanaka⁵, Mitsuru Oda¹, Hiroshi Yamakawa¹, Masanori Murayama¹
¹Lab for Behavioral Neurophysiology, BSI, RIKEN, Saitama, Japan ²National Instruments Japan Corporation, Tokyo, Japan ³JSPS Research Fellow ⁴Solidray Corporation, Kanagawa, Japan ⁵Department of Neuroscience II, Research Institute of Environmental Medicine, Nagoya University, Nagoya, Japan
- P2-176** The top-down circuit for sensory perception in the cerebral cortex of the mouse
Satoshi Manita¹, Takayuki Suzuki¹, Chihiro Homma¹, Takashi Matsumoto¹, Maya Odagawa¹, Kazuyuki Yamada¹, Keisuke Ota^{1,7}, Chie Matsubara¹, Ayumu Inutsuka², Masaaki Sato^{1,3}, Masamichi Ohkura⁴, Akihiro Yamanaka², Yuchio Yanagawa⁵, Junichi Nakai^{1,4}, Yasunori Hayashi^{1,4}, Matthew E Larkum⁶, Masanori Murayama¹
¹RIKEN BSI ²Dept. of Neuroscience II, Research Institute of Environmental Medicine, Nagoya University, Aichi, Japan ³JST, PRESTO, Saitama, Japan ⁴Brain Science Institute, Saitama University, Saitama, Japan ⁵Dept. of Genetic and Behavioral Neuroscience, Gunma University Graduate School of Medicine, Gunma, Japan ⁶Neurocure Cluster of Excellence, Humboldt University, Berlin, Germany ⁷JSPS Research Fellow
- P2-177** Sevoflurane modulates the hemodynamic responses in rat primary somatosensory cortex
Tomokazu Tsurugizawa^{1,2,3}, Akihiko Kitamura^{2,3}, Yukari Takahashi³, Kei Shinohara³, Hisayuki Uneyama², Fusao Kato³
¹Neurospin/CEA, Gif sur Yvette, France ²Institute for Innovation, Ajinomoto Co., Inc, Kawasaki, Japan ³The Jikei University School of Medicine, Tokyo, Japan
- P2-178** Rhodopsin 5 and 6 dominantly regulate temperature preference in *Drosophila melanogaster*
Takaaki Sokabe, Hsiang-Chin Chen, Craig Montell
UC Santa Barbara, USA

Short Talk 4
ST-4-21
9/12 10:00-11:00

Pain, Itch and Their Disorders

- P2-179** Enhancement of TRPV1-mediated nociception by anoctamin 1 activation
Yasunori Takayama¹, Daisuke Uta^{2,3}, Hidemasa Furue^{2,4}, Makoto Tominaga^{1,4}
¹Div Cell Signaling, OIIB, Aichi, Japan ²Div Neural Signaling, NIPS, Aichi, Japan ³Dept Applied Pharmacol, Univ of Toyama, Toyama, Japan ⁴Dept Physiol, SOKENDAI, Kanagawa, Japan
- P2-180** Cell-specific Transcriptional Activation of Chemokine Associated with Histone Modifications in Spinal Cord Astrocytes Following Peripheral Nerve Injury
Daigo Ikegami^{1,2}, Kaori Ohi¹, Michiko Narita¹, Kanako Yaegashi¹, Maky Otsuka I.³, Naoko Kuzumaki^{1,4}, Hideyuki Okano^{3,4}, Toshikazu Ushijima^{2,3}, Katsuhide Igarashi³, Minoru Narita^{1,4}
¹Dept. Pharmacol., Hoshi Univ., Sch. of Pharmacy & Pharmceu. Sci., Tokyo, Japan ²Div. of Epigenomics, National Cancer Center Res. Institute., Tokyo, Japan ³Life Science Tokyo Advanced research center (L-StaR), Tokyo, Japan ⁴Dept. Physiol., Keio Univ. Sch. Med., Tokyo, Japan
- P2-181** Involvement of miR-17-92 cluster in neuropathic pain
Atsushi Sakai¹, Noriko Miyake², Koichi Miyake², Takashi Shimada², Hidenori Suzuki¹
¹Dept Pharmacol, Grad Sch Med, Nippon Med Sch, Tokyo, Japan ²Dept Biochem Mol Biol, Grad Sch Med, Nippon Med Sch, Tokyo, Japan
- P2-182** Mechanosensitive C-fiber afferents in rat skin was excited and sensitized to mechanical stimulation by monocyte chemoattractant protein-1 (MCP-1)
Asako Kubo¹, Toru Taguchi², Kazue Mizumura¹
¹Dept. Phys. Ther., Coll. Life Health Sci., Chubu Univ., Aichi, Japan ²Dept. Neurosci. II, Res. Inst. Environ. Med. Nagoya Univ., Aichi, Japan
- P2-183** Glial TNF alpha induces COX-2 expression and PGI2 synthesis in the spinal endothelial cell following peripheral nerve injury
Kimiko Kobayashi, Hirokato Kanda, Hiroki Yamanaka, Hideshi Yagi, Masamichi Okubo, Koichi Noguchi
Dept Anat and Neurosci, Hyogo Coll of Med, Hyogo, Japan

- P2-184** BDNF enhances the excitability of small-diameter trigeminal ganglion neurons projecting to the trigeminal nucleus interpolaris/caudalis transition zone following masseter muscle inflammation
Mamoru Takeda¹, Masayuki Takahashi², Junichi Kitagawa⁴, Masanori Nasu³, Takuya Kanazawa², Yoshihito Shimazu¹, Shigeji Matsumoto²
¹Lab Food Physiol Sci, Dep Food Env Sci, Sch Life Env, Azabu Univ. ²Dep Physiol, Sch Life Dent, Nippon Dent Univ, Tokyo, Jpn
³Res Cent Odont, Sch Life Dent, Nippon Dent Univ, Tokyo, Japan
⁴Div Oral Physiol, Dep Oral Biol Sci, Niigata Univ Grad Sch Med Dent Sci, Niigata, Japan
- P2-185** Subcellular localization of internalized μ opioid receptors in rats
Ryosuke Ishida¹, Toshiko Tsumori², Tetsuro Nikai¹, Yukiko Katsube¹, Mai Takahashi¹, Yoji Saito¹
¹Dept Anesthesiology, Shimane University Faculty of Medicine, Shimane, Japan
²Dept Nursing, Faculty of Health and Welfare, Prefectural Univ of Hiroshima, Hiroshima, Japan
- P2-186** Hemokinin-1 (1-5) elicits the inhibitory effect on pruritic processing in rats
Rumi Nakayama-Naono^{1,2}, Funahashi Hideki³, Takamiya Kogo¹, Nishimori Toshikazu³
¹Dept of Neurosci, Fac of Med, Univ of Miyazaki, Miyazaki, Japan ²JSPS Research Fellow, Tokyo, Japan
³Dept of Psychiatry, Fac of Med, Univ of Miyazaki, Miyazaki, Japan
- P2-187** Electrophysiological analysis of spinal dorsal horn neurons receiving pruriceptive afferents in the adult rat spinal cord
Daisuke Uta^{1,2}, Tsugunobu Ando¹, Yasushi Kuraishi¹, Keiji Imoto^{2,3}, Hidemasa Furue^{2,3}
¹University of Toyama ²Div. Neural Signaling, Dept. Info. physiol, Natl. Inst. Physiol. Sci., Okazaki, Japan
³Dept. Physiol. Sci., SOKENDAI, Okazaki, Japan
- P2-188** Appropriate starvation reduces noxious heat responses in *Drosophila* adults
Hirono Ohashi, Takaomi Sakai
Department of Biological Sciences, Tokyo Metropolitan Univ., Tokyo, Japan
- P2-189** Spinal integration of concurrent bilateral nociceptive inputs : an exception to the rule of reflex movements elicited from the limbs in man
Mathieu Piche^{1,2}, Jessica Tessier¹
¹Department of Chiropractic, Universite du Quebec a Trois-Rivieres, Canada ²Tokyo Metropolitan Institute of Gerontology

Others

- P2-190** Excitatory and inhibitory inputs to vasoactive intestinal polypeptide-expressing neurons in the mouse primary somatosensory cortex
Jaerin Sohn^{1,2}, Hiroyuki Hioki¹, Shinichiro Okamoto¹, Takeshi Kaneko¹
¹Dept Morphol Brain Sci, Grad Sch of Med, Kyoto Univ, Kyoto, Japan ²Research Fellow of Japan Society for Promotion of Science
- P2-191** Three-dimensional Analysis of the Cell Configuration in Neocortical Layer 5
Seiichiro Sakai, Hosoya Toshihiko
RIKEN BSI, Saitama, Japan
- P2-192** Neuronal basis of resting state functional connectivity investigated with simultaneous wide field imaging of intrinsic and calcium signal
Teppe Matsui, Tomonari Murakami, Kenichi Ohki
Dept. of Mol. Physiol., Faculty of Med. Kyushu Univ.
- P2-193** Effects of extracranial layer on functional connectivity estimated from NIRS measurement
Naoki Tanaka^{1,2,3}, Shoya Matsuki², Kyoko Yamazaki¹, Ai Hirasawa³, Shigehiko Ogoh^{1,2,3}, Tsukasa Funane⁴, Masashi Kiguchi⁴
¹Dept Biomed Eng, Toyo University, Saitama, Japan ²Dept Biomed Eng, Toyo University, Saitama, Japan
³Dept Mater Mechatron Syst, Toyo Univ, Saitama, Japan ⁴Central Res Lab, Hitachi, Ltd

Neuroendocrine System

- P2-194** Effect of aging on estrogen-dependent changes in estrogen receptor- β mRNA expression in female rat brain
Naoko Yamaguchi^{1,2}, Kazunari Yuri¹
¹Dept Neurobiol Anat, Kochi Medical School, Kochi Univ, Kochi, Japan ²Dept Pharmacol, Aichi Med Univ, Aichi, Japan
- P2-195** Role of gonadal steroids in SNAP-25 expression in neonatal mouse brain
Syoko Sagoshi¹, Paolo Manca^{1,2}, Sonoko Ogawa¹
¹Laboratory of Behavioral Neuroendocrinology, University of Tsukuba, Tsukuba, Japan ²JSPS

- P2-196** **Rapid modulation of synapses by locally synthesized sex-hormones in the hippocampus**
Miyuki Yoshiya, Rei Sato, Yasushi Hojo, Tetsuya Kimoto, Suguru Kawato
Grad Sch of Arts and Sci, Univ of Tokyo
- P2-197** **Acute Modulation of long-term potentiation of Pyramidal Neurons by Hippocampal-derived Estrogen**
Yoshitaka Hasegawa, Keisuke Hotta, Hiroki Kojima, Suguru Kawato
Department of Life Science, the University of Tokyo
- P2-198** **Cyclic fluctuation of synapses in female hippocampus: Sex difference in hippocampus-synthesized steroids and synapses**
Yasushi Hojo^{1,2}, Asami Kato¹, Bon-Chu Chung², Takeshi Yamazaki³, Tetsuya Kimoto^{1,2}, Suguru Kawato^{1,2}
¹Dept. of Biophys. & Life Scis., Grad. Sch. of Arts & Scis., Univ. of Tokyo ²JST, Japanese-Taiwanese Cooperative Programme
³Hiroshima Univ.
- P2-199** **Modulation of hippocampal LTP by neurosteroids, analyzed by using custom multi-electrode probes**
Suguru Kawato¹, Yoshitaka Hasegawa¹, Bon-Chu Chung², Hiroki Kojima¹
¹The Univ. of Tokyo ²Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan
- P2-200** **Correlation between circadian rhythm of corticosterone and synapse in the hippocampus**
Muneki Ikeda, Yoshimasa Komatsuzaki, Miyuki Yoshiya, Yasushi Hojo, Suguru Kawato
Department of Biophysics and Life Sciences, Graduate school of Arts and Sciences, The University of Tokyo
- P2-201** **The effect of glucocorticoid on Venus expression in the paraventricular nucleus of the CRF-Venus knockin mouse**
Short Talk 3
ST-3-19
9/12 9 : 00-10 : 00
Ashraf Talukder¹, Toshimitsu Fuse¹, Katsuya Uchida¹, Maya Yamazaki³, Manabu Abe³, Rie Natsume³, Kenji Sakimura³, Keiichi Itoi^{1,2}
¹Laboratory of Information Biology, GSIS, Tohoku University, Sendai, Japan
²Department of Neuroendocrinology, Graduate School of Medicine, Tohoku University, Sendai, Japan
³Department of Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan
- P2-202** **Effects of prostaglandin E2 on miniature EPSCs of gonadotropin-releasing hormone neurons**
Hitomi Fujioka, Toshiya Funabashi, Tatsuo Akema
Dept. of Physiol., St. Marianna Univ. Sch. of Med.
- P2-203** **Oxytocin neurones in the paraventricular nucleus receive synaptic inputs from the contralateral paraventricular and supraoptic nuclei in the lactating rat**
Kazumasa Honda, William Zhang, Keita Tomiyama
Fukui Prefectural Univ, Fukui, Japan
- P2-204** **PDGF-dependent regulation of pericyte and neurosecretion in adult mouse neurohypophysis**
Kazunori Nishikawa, Seiji Miyata
Dep. of Appl. Biol. Kyoto Inst of Tech, Kyoto, Japan
- P2-205** **Lysine and ornithine stimulate but arginine suppresses gastrointestinal motility**
Short Talk 3
ST-3-20
9/12 9 : 00-10 : 00
Junya Nakato¹, Yin Yee Ho¹, Kentaro Kaneko¹, Takafumi Mizushige^{1,2}, Ryuhei Kanamoto¹, Kousaku Ohinata¹
¹Division of Food Science and Biotechnology, Graduate School of Agriculture, Kyoto University
²Res. Unit for Physiol. Chem., C-PIER, Kyoto Univ.

Neuroimmunology

- P2-206** **Foxp3 regulates alternative activation of microglia through CD200/CD200R signaling following an excitotoxic lesion in the mouse hippocampus**
Short Talk 4
ST-4-24
9/12 10 : 00-11 : 00
Min-Hee Yi, Hyunjung Baek, Nara Shin, Dong Woon Kim
Department of Anatomy, Brain Research Institute, Chungnam National University School of Medicine, Daejeon, South Korea
- P2-207** **Mechanism of Fever following Intracranial Hemorrhage in Mice**
Yuki Hirai¹, Shingo Shiomi¹, Takumi Fukuda¹, Shiki Okamoto², Yasuhiko Minokoshi², Kiyoshi Matsumura¹
¹Osaka Institute of Technology, Osaka, Japan ²National Institute for Physiological Sciences, Aichi, Japan
- P2-208** **Regulation of microglial homeostasis through cell-cell interaction signal**
Miho Hashimoto¹, Yuriko Hayashi¹, Shinya Kusakari², Takenori Kotani³, Yoji Murata³, Takashi Matozaki³, Hiroshi Ohnishi¹
¹Dept Lab Sci, Gunma Univ Grad Sch Health Sci, Gunma, Japan ²Lab Biosig Sci, Inst Mol Cell Reg, Gunma Univ, Gunma, Japan
³Div Mol Cell Signal, Dept Biochem Mol Biol, Kobe Univ Grad Sch Med, Kobe, Japan

Sleep and Biological Rhythms

- P2-209** Expression of the *Drosophila* LIM-Homeobox gene, *apterous*, in PDF-producing neurons is required for *Drosophila* sleep
Naoto Shimada, Show Inami, Takaomi Sakai
Department of biological sciences, Tokyo Metropolitan Univ, Tokyo, Japan
- P2-210** Roles of PI3K in regulation of BMAL1/CLOCK-mediated circadian gene expression
Yoshikazu Morishita¹, Daiki Miura¹, Satoshi Kida^{1,2}
¹*Dept. of Bioscience, Tokyo Univ. of Agriculture* ²*CREST, JST*
- P2-211** Circadian rhythms of micturition in mice with dysregulated clocks
Miho Yasuda¹, Hiromitsu Negoro², Akihiro Kanematsu³, Takeshi Okinami², Osamu Ogawa², Yoshiaki Yamaguchi¹, Masao Doi¹, Hitoshi Okamura¹
¹*Dept. of Syst. Biol., Grad. Sch. Pharmaceut. Sci., Kyoto Univ., Kyoto, Japan* ²*Dept. Urol., Grad. Sch. Med., Kyoto Univ., Kyoto, Japan*
³*Dept. Urol., Hyogo Coll. Med., Hyogo, Japan*
- P2-212** Effects of 5-HT_{1A} receptor agonist on the narcoleptic like effects in orexin knockout mice
Naoki Uzawa, Tomohisa Mori, Yoshiyuki Iwase, Shigeto Hirayama, Daiki Masukawa, Mahardian Rahmadi, Mayuna Hokazono, Masahiro Shibasaki, Tsutomu Suzuki
Dept. of Toxicol, Hoshi Univ of Pharmacy and Pharmaceutical Sciences, Tokyo, Japan
- P2-213** Orexin neurons suppress narcolepsy via two distinct efferent pathways
Emi Hasegawa¹, Masashi Yanagisawa^{2,3}, Takeshi Sakurai¹, Michihiro Mieda¹
¹*Dept of Molecular Neuroscience and Integrative Physiology, Grad Sch of Medical Science, Kanazawa Univ.*
²*International Institute for Integrative Sleep Medicine, University of Tsukuba*
³*Center for Behavioral Molecular Genetics, University of Tsukuba*
- P2-214** Correlation between Neocortical Green-Autofluorescence and EEG Delta Activity of Urethane Anesthetized Mice
Daiki Nakagawa¹, Norihiro Katayama¹, Ayako Ueno^{1,2}, Akihiro Karashima¹, Mitsuyuki Nakao¹
¹*Graduate School of Information Sciences, Tohoku University, Miyagi, Japan* ²*Japan Society for the Promotion of Science, Tokyo, Japan*
- P2-215** Cortical calcium dynamics in naturally sleeping and waking mice
Takeshi Kanda¹, Natsuko Kanda¹, Ryo Ishii¹, Masashi Yanagisawa^{1,2}
¹*International Institute for Integrative Sleep Medicine, University of Tsukuba, Ibaraki, Japan*
²*University of Texas Southwestern Medical Center, TX, USA*
- P2-216** Sleep spindle and its cross-frequency coupling with slow waves in the primate brain
Saori Takeuchi^{1,5}, Rie Murai¹, Hideki Shimazu², Yoshikazu Isomura³, Tatsuya Mima⁴, Toru Tsujimoto^{1,5}
¹*NIPS, Okazaki, Japan* ²*MIT, Cambridge, MA, USA* ³*Tamagawa Univ, Tokyo, Japan*
⁴*Dept Brain Pathophysiol, HBRC, Kyoto Univ, Kyoto, Japan* ⁵*SOKENDAI, Kanagawa, Japan*
- P2-217** NMDA receptor regulates gamma oscillations in the primate neocortex and hippocampus
Rie Murai¹, Saori Takeuchi¹, Hideki Shimazu², Yoshikazu Isomura³, Tatsuya Mima⁴, Toru Tsujimoto¹
¹*National Institute for Physiological Sciences, Aichi, Japan* ²*MIT, Cambridge, USA* ³*Tamagawa University, Tokyo, Japan*
⁴*Kyoto University Graduate School of Medicine, Kyoto, Japan*

Motivation and Emotion

- P2-218** Effect of social buffering on fear extinction in male rats
Kaori Mikami, Yasushi Kiyokawa, Yukari Takeuchi, Yuji Mori
Lab of Vet Etholo, Univ of Tokyo, Tokyo, Japan
- P2-219** Relationship between elevated plus maze arm structure and anxiety-like behavior in rats: the presence or absence of open arm ledges vs opaqueness of closed arm structure walls
Yasuyuki Horii^{1,2}, Kosuke Takahashi¹, Yuji Sato¹, Shingo Nakajima¹, Kosuke Sato¹, Yuki Shiraishi¹, Maiko Kawaguchi¹
¹*Lab of Animal Environmental Science, Meiji Univ, Kanagawa, Japan*
²*Mouse Genomics Resource Laboratory, National Institute of Genetics, Japan*
- P2-220** Genetic diversity of sensitivity to anxiolytic drug diazepam in wild-derived heterogeneous stock mice
Yuji Imai¹, Yuki Matsumoto², Akira Taneve², Naoto Hanzawa¹, Tsuyoshi Koide²
¹*Graduate school of science and engineering, Yamagata University, Yamagata, Japan*
²*MGR, National Institute of Genetics, Mishima, Shizuoka, Japan*

- P2-221** Sex differences in an activation of extracellular signal-regulated kinase (ERK) following contextual fear extinction
Shingo Matsuda¹, Daisuke Matsuzawa^{2,3}, Daisuke Ishii², Haruna Tomizawa², Eiji Shimizu^{2,3}
¹Dept. Ultrastructural Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry
²Dept. Cognitive Behavioral physiology, Univ of Chiba, Chiba, Japan
³Dept. Research Center for Child Mental Development, Univ of Chiba, Chiba, Japan
- P2-222** The Roles of 5-HT2CR RNA-editing in Higher Brain Functions -Behavioral Analysis of 5-HT2CR RNA-editing Blocked mice (INI-mice)
Miku Aoki^{1,2}, Yoshihisa Watanabe¹, Kanji Yoshimoto³, Masaki Tanaka¹
¹Dept of Basic Geriatrics, Kyoto Pref Univ of Med, Kyoto, Japan ²Dept of Dental Med, Kyoto Pref Univ of Med, Kyoto, Japan
³Dept of Food Sci and Biotech, Hiroshima Inst of Technol, Hiroshima, Japan
- P2-223** The effects of maternal separation on the anxiety- and fear-related behavior in the mice
Natsu Koyama, Xiaojing Jia, Seiji Hitoshi
Department of Physiology, Shiga University of Medical Science
- P2-224** Modulatory mechanism of autonomic system that induced by acquired auditory experience in mice
Fumihiro Shutoh^{1,2}, Koji Sugimoto², Setsuji Hisano^{1,2}
¹Faculty of Medical Sciences, University of Tsukuba
²Kansei, Behavior and Brain Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba
- P2-225** The relationship between academic performance and academic-related boredom: the 5-HTTLPR gene polymorphism as a moderator
Yangyang Liu¹, Zuhong Lu²
¹Nanjing University, China ²Southeast University, China

Reward and Decision Making

- P2-226** Investigation of action-dependent state prediction in the mouse parietal cortex with two-photon microscopy
Akihiro Funamizu, Bernd Kuhn, Kenji Doya
Okinawa Inst Sci Tech, Okinawa, Japan
- P2-227** Effects of acute and subchronic stress on change in p-ERK, p-CREB and c-fos levels in rat hippocampus during morphine-induced conditioned place preference procedure
Short Talk 3
ST-3-22
9/12 9 : 00-10 : 00
Yasaman Razavi, Zahra Fatahi, Fariba Khodaghali, Abbas Haghparast
Neuroscience Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran
- P2-228** Systemic stimulation of $\alpha 2$ adrenergic receptors with clonidine affects oscillatory activity in the rat hippocampus during a spatial decision-making task
Seiichiro Amemiya, A. David Redish
Dept Neurosci, Univ of Minnesota, Minneapolis, USA
- P2-229** Dissociation of working memory-based and value-based strategies in a free-choice task
Short Talk 3
ST-3-23
9/12 9 : 00-10 : 00
Makoto Ito¹, Tomohiko Yoshizawa^{1,2}, Kenji Doya^{1,2}
¹Neural Computation Unit, OIST, Okinawa, Japan ²NAIST, Nara, Japan
- P2-230** Neuronal activity in macaque dorsal premotor cortex during switching between exploratory and exploitative choice behaviors
Satoshi Nishida¹, Atsushi Fujimoto², Tadashi Ogawa³
¹Kokoro Res Cent, Kyoto Univ, Kyoto, Japan ²Dept Psychiat, Grad Sch of Med, Kyoto Univ, Kyoto, Japan
³Dept Integrative Brain Sci, Grad Sch of Med, Kyoto Univ, Kyoto, Japan
- P2-231** Activity of midbrain dopamine neurons evoked by visual conditioned stimuli presented in the V1 lesion-affected visual field
Norihiro Takakuwa^{1,2}, Rikako Kato¹, Peter Redgrave³, Tadashi Isa^{1,2}
¹Department of Developmental Physiology, National Institute for Physiological Sciences, Okazaki, Japan
²The Graduate Univ for Advanced Studies, Hayama, Japan ³Dept Psychol, Univ of Sheffield, Sheffield, United Kingdom
- P2-232** Simultaneous real-time detection of reward-induced dopamine release in the monkey caudate and putamen
Kenji Yoshimi¹, Shiori Kumada², Takamasa Koyama², Masato Inoue¹
¹Dept. Neurophysiology, Juntendo Univ. Sch. of Med., Tokyo, Japan ²Dept. Psychology, Japan Women's Univ. Kawasaki, Japan
- P2-233** Neural response predicting visual stimuli in monkey striatum
Koji Kuraoka, Masahiko Inase
Dep. of Physiology, School of Medicine, Kinki Univ.

- P2-234** Exploring models of reinforcement learning to explain the ramping DA signal in the striatum
 Ayaka Kato¹, Kenji Morita²
 Short Talk 4
 ST-4-27
 9/12 10 : 00-11 : 00
¹Dept Biological Sciences, School of Science, Univ of Tokyo, Tokyo, Japan
²Physical & Health Educ, Grad Sch of Educ, Univ of Tokyo, Tokyo, Japan
- P2-235** Decision making under ambiguity and human brain structure
 Junya Fujino, Yusuke Tanaka, Kimito Hirose, Ryosaku Kawada, Toshiya Murai, Hidehiko Takahashi
 Kyoto University Graduate School of Medicine
- P2-236** Reward function was augmented in the nucleus accumbens by bupropion in healthy individuals
 Yumiko Ikeda¹, Takuya Funayama², Amane Tateno³, Hidehiko Takahashi⁴, Yoshiro Okubo³, Haruhisa Fukayama², Hidenori Suzuki¹
¹Dept Pharmacol, Grad Sch Med, Nippon Med Sch, Tokyo, Japan ²Dept Anesthesiol Clin Physiol, Grad Sch, TMDU, Tokyo, Japan
³Dept Neuropsychiat, Grad Sch Med, Nippon Med Sch, Tokyo, Japan ⁴Dept Psychiat, Grad Sch Med, Kyoto Univ, Kyoto, Japan
- P2-237** Judgment of the sender's attractiveness modifies the value of a present
 Jun Nakagawa^{1,2}, Muneyoshi Takahashi², Rieko Okada², Akane Sue², Misaki Watanabe², Eisuke Matsushima¹, Tetsuya Matsuda²
 Short Talk 3
 ST-3-24
 9/12 9 : 00-10 : 00
¹Sect of Liaison Psych and Palliative Med, Grad School of Tokyo Medical and Dental Univ, Tokyo, Japan
²Brain Science Inst, Tamagawa Univ, Tokyo, Japan
- P2-238** The neural substrates of making decisions to maintain task performance based on the level of fatigue: a magnetoencephalography study
 Akira Ishii¹, Masaaki Tanaka¹, Emi Yamano¹, Yasuyoshi Watanabe^{1,2}
¹Department of Physiology, Osaka City University Graduate School of Medicine, Osaka, Japan
²RIKEN Center for Life Science Technologies, Kobe, Japan

Learning and Long-term Memory

- P2-239** A mushroom-body-specific small GTPase Rgk1 regulates the anesthesia-resistant component of *Drosophila* olfactory memory
 Satoshi Murakami¹, Maki Minami¹, Ryuichiro Nakato², Katsuhiko Shirahige², Tetsuya Tabata¹
¹Lab of Neuroscience, IMCB, Univ. of Tokyo. ²Lab of Genome structure and function, IMCB, Univ. of Tokyo.
- P2-240** Taste avoidance conditioning with electrical shock as unconditional stimulus in *Lymnaea stagnalis*
 Satoshi Takigami, Manabu Sakakibara
 Graduate School of Bioscience, Tokai University, Shizuoka, Japan
- P2-241** Imaging of the neural circuit activities during retrieval of behavioral program for active avoidance in zebrafish
 Hisaya Kakinuma¹, Ryo Aoki¹, Tazu Aoki¹, Masako Yamazaki¹, Toshiyuki Shiraki¹, Mikako Takahoko¹, Kawori Eizumi¹, Tetsuya Koide², Yoshihiro Yoshihara², Junichi Nakai³, Koichi Kawakami⁴, Hitoshi Okamoto¹
¹Lab. for Developmental Gene Regulation, RIKEN, BSI, Japan ²Lab. for Neurobiology of Synapse, RIKEN, BSI, Japan
³Brain Science Institute, Saitama Univ., Japan ⁴Division of Molecular and Developmental Biology, NIG, Japan
- P2-242** Involvement of dopamine D2L receptor in cognitive learning
 Makiko Morita¹, Toshikuni Sasaoka², Wang Yanyan³, Akira Sawa⁴, Takatoshi Hikida¹
¹Med. Innovation Ctr, Kyoto Univ. Grad. Sch. of Med., Kyoto, Japan ²Brain Res. Institute, Niigata Univ., Niigata, Japan
³Dept. of Pharmacology, Univ. of Illinois, Urbana, IL, USA
⁴Dept. of Psychiatry, Johns Hopkins Univ. Sch. of Medicine, Baltimore, MD, USA
- P2-243** Memory allocation in the sensory cortex
 Yoshitake Sano¹, Justin L Shobe¹, Miou Zhou¹, Shan Huang¹, Tristan Shuman², Denise J Cai¹, Peyman Golshani², Masakazu Kamata³, Alcino J Silva¹
¹Departments of Neurobiology, Psychiatry & Biobehavioral Sciences, Psychology, Integrative Center for Learning and Memory and Brain Research Institute, University of California, Los Angeles, CA, USA.
²Department of Neurology at David Geffen School of Medicine, University of California, Los Angeles, CA, USA
³Department of Hematology and Oncology, University of California, Los Angeles, CA, USA
- P2-244** Involvement of mACh receptor on contextual eyeblink conditioning in mice
 Md.ashrafur Rahman¹, Kouji Usui^{1,2}, Shigenori Kawahara^{1,2}
¹Grad. Sch. Innovative Life Science, Univ. Toyama ²Dpt. Life Sciences and Bioengineering, Fac. Engineering, Univ. Toyama
- P2-245** Analysis of regulatory mechanisms of stability of remote contextual fear memory
 Hotaka Fukushima^{1,2}, Ryang Kim¹, Satoshi Kida^{1,2}
¹Dept. Biosci., Tokyo Univ. of Agric., Tokyo, Japan ²JST, CREST, Tokyo, Japan

- P2-246** **Organization of multisynaptic inputs to the dorsal and ventral dentate gyrus: Retrograde transsynaptic tracing with rabies virus vector in the rat**
Shinya Ohara¹, Sho Sato¹, Ken-ichiro Tsutsui¹, Menno P Witter², Toshio Iijima¹
¹*Div Sys Neurosci, Tohoku Univ Grad Sch of Life Sci, Sendai, Japan*
²*Kavli Inst for Sys Neurosci and Cen for Neural Comp, NTNU, Trondheim, Norway*
- P2-247** **Hippocampal subregion-specific increase in the overlapping in two cellular ensembles during behavioral tagging**
Masanori Nomoto¹, Jun Yokose^{1,2}, Kaori Ohsawa^{1,2}, Akinobu Suzuki^{1,2}, Kaori Inokuchi^{1,2}
¹*Department of Biochemistry, Faculty of Medicine, Graduate School of Medicine & Pharmaceutical Sciences, University of Toyama, Toyama*
²*CREST, JST*
- P2-248** **Differential involvement of kinase activity of Ca²⁺/calmodulin-dependent protein kinase II α in maze learning tasks**
Short Talk 4
ST-4-26
9/12 10 : 00-11 : 00
Yoko Yamagata^{1,2}, Yuchio Yanagawa³, Keiji Imoto^{1,2}
¹*Natl Inst Physiol Sci, Okazaki, Japan* ²*SOKENDAI, Okazaki, Japan* ³*Gunma Univ Grad Sch Med, Maebashi, Japan*
- P2-249** **Dynamics in ensemble activities associated with memory generalization**
Short Talk 3
ST-3-25
9/12 9 : 00-10 : 00
Marie Yokoyama¹, Naoki Matsuo^{1,2,3}
¹*Career-Path Promotion Unit for Young Life Scientists, Kyoto University, Kyoto, Japan*
²*The Hakubi Center, Kyoto University, Kyoto, Japan* ³*PRESTO, JST*
- P2-250** **Stress-induced memory deficit and enhanced memory retention after theanine intake: involvement of NMDA receptor-independent LTP**
Misa Osawa¹, Haruna Tamano¹, Miki Suzuki¹, Kotaro Fukura², Hidehiko Yokogoshi², Atsushi Takeda¹
¹*Dept Neurophysiology, University of Shizuoka, Shizuoka, Japan* ²*University of Shizuoka, Shizuoka, Japan*
- P2-251** **A study on the role of CB1 receptors in motor learning using the three-lever operant task**
Mitsugu Yoneda, Yuki Tabata, Ryo Takabayashi, Takako Ohno-Shosaku
Fac Health Sci, Kanazawa Univ, Kanazawa, Japan
- P2-252** **Striatal indirect pathway from the dorsomedial striatum regulates the performance of conditional discrimination through controlling perseverative response**
Kayo Nishizawa¹, Ryoji Fukabori¹, Kana Okada², Motokazu Uchigashima³, Masahiko Watanabe³, Akira Shiota⁴, Masatsugu Ueda⁴, Yuji Tsutsui⁵, Kazuto Kobayashi¹
¹*Dept Mol Genet, Fukushima Medical University School of Medicine* ²*Dept of Behavioral Science, Hiroshima University*
³*Dept of Anatomy and Embryology, Hokkaido University Graduate School of Medicine* ⁴*Institute of Immunology, Co., Ltd.*
⁵*Dept Human Support System, Fukushima University*
- P2-253** **Maternal experiences affect hippocampal neural plasticity**
Short Talk 3
ST-3-26
9/12 9 : 00-10 : 00
Miyako Furuta, Atsushi Fukushima, Toshiya Funabashi, Tatsuo Akema
Dept Physiol, St. Marianna University School of Medicine, Japan
- P2-254** **Coordinated activity of hippocampal-prefrontal network related to recall of learned sequences in rats**
Seiya Ishino¹, Susumu Takahashi², Yoshio Sakurai¹
¹*Dept Psychol, Kyoto Univ, Kyoto, Japan* ²*Neural Circuitry, Brain Science, Doshisha Univ, Japan*
- P2-255** **Up-regulation of CREB activity in forebrain enhances working-like memory and increases in spine density**
Tatsuro Serita¹, Hotaka Fukushima^{1,2}, Satoshi Kida^{1,2}
¹*Dept. of Bioscience, Tokyo Univ. of Agriculture* ²*JST, CREST*
- P2-256** **Relation between hippocampal sharp wave ripple events and prefrontal local field potential during delayed reinforcement task**
Sei-etsu Fujiwara, Yoshinori Izaki, Toshiya Funabashi, Tatsuo Akema
Department of Physiology, St. Marianna University, School of Medicine
- P2-257** **The synchronized high frequency oscillation between the hippocampus and the amygdala during rest time after aversive stimuli in rats**
Takafumi Kubota, Sei-etsu Fujiwara, Toshiya Funabashi, Tatsuo Akema
Department of Physiology, St. Marianna University School of Medicine
- P2-258** **Formation of a c-fos /CREB positive feedback loop during spaced training**
Tomoyuki Miyashita, Minoru Saitoe
Tokyo Metropolitan Institute of Medical Science

P2-259 Methyl donors deficient during developmental period affected memory and AMPA receptor gene expressionHaruna Tomizawa¹, Daisuke Matsuzawa^{1,2}, Daisuke Ishii¹, Shingo Matsuda³, Kotomi Kawai¹, Chihiro Sutoh¹, Eiji Shimizu^{1,2}¹Dept of Cognitive Behavioral Physiology, Graduate School of Medicine, Chiba University, Chiba, Japan²Research Center for Child Mental Development, Graduate School of Medicine, Chiba University, Chiba, Japan³Dept. Ultrastructural Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan**P2-260 Learning-induced and stathmin-dependent changes in microtubule stability are critical for memory and disrupted in aging**Shusaku Uchida¹, Yoshifumi Watanabe¹, Shumyatsky P Gleb²¹Div. of Neuropsychiatry, Dept. of Neuroscience, Yamaguchi University School of Med. ²Rutgers University, NJ, USA**Working Memory and Executive Function****P2-261 Impaired short-term memory of visual space/shape information in mice with reduced cluster number of protocadherin- α** Daiki Kamatani^{1,3}, Kenji Watanabe¹, Ryuichi Hishida¹, Takeshi Yagi^{2,3}, Katsuei Shibuki^{1,3}¹Dept of Neurophysiol, Brain Res Inst, Niigata Univ, Niigata, Japan²KOKORO-Biology Group, Grad Sch of Frontier Biosci, Osaka Univ, Osaka, Japan ³JST, CREST**P2-262 Functional neuronal organization in the hippocampus and neocortex in a non-spatial, working memory task**Short Talk 4
ST-4-29
9/12 10 : 00-11 : 00Jiyeon Cho¹, Sonoko Ogawa¹, Constantine Pavlides^{1,2}¹Faculty of Human Sciences, University of Tsukuba, Ibaraki, Japan. ²The Rockefeller University, New York, NY, USA**P2-263 Behavioral flexibility is inhibited by cholinergic interneurons in the dorsomedial striatum, via muscarinic M₄ receptors**Kana Okada¹, Kayo Nishizawa², Ryoji Fukabori², Nobuyuki Kai², Akira Shiota³, Masatsugu Ueda³, Yuji Tsutsui⁴, Shogo Sakata¹, Natsuki Matsushita⁵, Kazuto Kobayashi^{2,6}¹Dept Behav Sci, Grad Sch Integr Arts & Sci, Hiroshima Univ, Hiroshima, Japan²Dept Mol Genet, Fukushima Med Univ, Fukushima, Japan ³Inst Immunol, Co, Ltd, Tokyo, Japan⁴Dept Hum Support Syst, Fukushima Univ, Fukushima, Japan ⁵Transl Res Ctr, Ehime Univ Hosp, Ehime, Japan⁶JST, CREST, Tokyo, Japan**P2-264 Various responses of neurons in the ventro-medial prefrontal cortex of rats during performing an attentional set-shifting task**

Eiichi Jodo, Tadahiro Katayama, Masahiro Okamoto, Satoshi Eifuku

Fukushima Med.Univ.

P2-265 Neuronal coding of category information in monkey prefrontal cortex in group reversal task

Takayuki Hosokawa, Shinya Nakamura, Munekazu Yamada, Toshio Iijima, Ken-ichiro Tsutsui

Tohoku University

P2-266 Neural activity of monkey prefrontal cortex during foraging for multiple targetsShort Talk 4
ST-4-30
9/12 10 : 00-11 : 00Makoto Kusunoki^{1,2}, Kei Watanabe^{1,3}, Mikiko Kadohisa^{1,2}, John Duncan^{1,2}¹Dept Exp Psychol, Univ of Oxford, Oxford, UK ²MRC Cognition and Brain Sciences Unit, Cambridge, UK³Japan Society for the Promotion of Sci. Tokyo, Japan**P2-267 Comparing prefrontal and medial temporal lobe single-unit activity in macaque monkeys during a temporal-order-memory task**Short Talk 3
ST-3-27
9/12 9 : 00-10 : 00Yuji Naya^{1,2,3,4}, He Chen³, Cen Yang³, Wendy A Suzuki¹¹Center for Neural Science, New York University ²Department of Psychology, Peking University³Peking-Tsinghua Center for Life Sciences, Peking University ⁴IDG/McGovern Institute for Brain Research at Peking University**P2-268 Responses of monkey prefrontal neurons during a transverse patterning task**Masafumi Nejime¹, Masato Inoue¹, Masanori Saruwatari¹, Akichika Mikami^{1,2}, Katsuki Nakamura¹, Shigehiro Miyachi¹¹Primate Research Institute, Kyoto University ²Chubu Gakuin University**P2-269 Flexibility and capacity constraint in prefrontal information processing during acquisition and retention of multiple target memory**Short Talk 3
ST-3-28
9/12 9 : 00-10 : 00Kei Watanabe^{1,3}, Mikiko Kadohisa^{1,2}, Makoto Kusunoki^{1,2}, John Duncan^{1,2}¹Exp. Psy., Univ. of Oxford, United Kingdom ²Cognition and Brain Sci. Unit, MRC, Cambridge, United Kingdom³Japan Society for the Promotion of Sci. Tokyo, Japan**P2-270 Neuronal activity in the posterior medial prefrontal cortex during the search of response tactics**Yoshiya Matsuzaka¹, Youhei Komakine², Hajime Mushiake¹¹Dept Physiol, Grad Sch of Med, Tohoku Univ, Sendai, Japan ²Sch Med, Tohoku Univ, Sendai, Japan

P2-271 Neural correlates of thinking in a behavioral shift

Kei Omata¹, Shigeru Ito², Yasuomi Ouchi¹

¹Dept Biofunctional Imaging, MPRC, Hamamatsu University school of Medicine

²Hamamatsu PET Imaging Center, Hamamatsu Medical Photonics Foundation, Hamamatsu, Japan.

Social Behavior

P2-272 A Neural Mechanism Underlying Mating Preferences for Familiar Individuals in Medaka Fish

Teruhiro Okuyama^{1,2,3}, Saori Yokoi², Mai Ohka², Hideki Abe⁶, Yasuko Isoe², Yuji Suehiro², Haruka Imada², Minoru Tanaka³, Takashi Kawasaki⁴, Shunsuke Yuba⁴, Yoshihito Taniguchi⁵, Yasuhiro Kamei³, Kataaki Okubo⁷, Atsuko Shimada², Kiyoshi Naruse³, Hiroyuki Takeda², Yoshitaka Oka², Takeo Kubo², Hideaki Takeuchi²

¹Massachusetts Institute of Technology ²Dept. of Biol. Scis., Grad. Sch. of Sci., The Univ. of Tokyo ³Natl. Inst. Basic Biol. ⁴AIST

⁵School of Med., Kyorin Univ. ⁶Grad. Sch. of Bioagri. Sci., Nagoya Univ. ⁷Grad. Sch. of Agric. and Life Sci., The Univ. of Tokyo

P2-273 Analysis of neural/molecular mechanisms of mate-guarding behavior in small fish, medaka

Saori Yokoi¹, Teruhiro Okuyama¹, Yasuhiro Kamei², Yoshihito Taniguchi³, Satoshi Ansai⁴, Masato Kinoshita⁴, Takeo Kubo¹, Hideaki Takeuchi¹

¹Div. of Biol. Science, Grad. Sch. of Science, Univ. of Tokyo ²National Institute for Basic Biology, Aichi, Japan

³Department of Preventive Medicine and Public Health, School of Medicine, Keio University, Tokyo, Japan

⁴Division of Applied Biosciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan

Short Talk 3
ST-3-29
9/12 9 : 00-10 : 00

P2-274 Cross-modal individual recognition in medaka fish

Mu-Yun Wang, Hideaki Takeuchi, Takeo Kubo

Dept Sci, Univ of Tokyo, Tokyo, Japan

Short Talk 4
ST-4-31
9/12 10 : 00-11 : 00

P2-275 Molecular genetic analysis of aggressive behavior using medaka fish

Mayuko Suzuki¹, Saori Yokoi¹, Satoshi Ansai², Masato Kinoshita², Takeo Kubo¹, Hideaki Takeuchi¹

¹Dept Biol, Univ of Tokyo, Tokyo, Japan ²Dept Agri, Kyoto Univ, Kyoto, Japan

P2-276 Glutamatergic input in the dorsal raphe nucleus as the determinant of the level of aggression in male mice

Aki Takahashi, Tsuyoshi Koide

Mouse Genomics Resource Lab, National Institute of Genetics, Mishima, Japan

Short Talk 4
ST-4-32
9/12 10 : 00-11 : 00

P2-277 Neuropeptide Y signaling in the dorsal raphe nucleus inhibits the expression of maternal behavior in mice

Yoshikage Muroi, Toshiaki Ishii

Dept Basic Vet Med, Obihiro Univ of Agri and Vet Med, Hokkaido, Japan

Short Talk 3
ST-3-30
9/12 9 : 00-10 : 00

P2-278 Characterization of behaviors under group-housed conditions by a novel analysis system in mice grown in various environments

Nozomi Endo¹, Waka Ujita¹, Chiharu Tohyama¹, Masaki Kakeyama^{1,2}

¹Lab. Environ. Health Sci., Grad. Sch. of Med., The Univ. of Tokyo

²Dept. Neurobiol. and Behav., Grad. Sch. of Biomed. Sci., Nagasaki Univ., Japan

P2-279 The impact of social hierarchy on DNA methylation in medial prefrontal cortex of laboratory mice

Takahiro Murakami¹, Chisato Hirai², Chikako Tsuchida², Miki Watanabe², Hisaya Iwata¹, Yutaka Yamamuro^{1,2}

¹Grad Sch of Bioresource Sci, Nihon Univ, Kanagawa, Japan ²Dept Anim Sci, Coll Bioresource Sci, Nihon Univ, Kanagawa, Japan

P2-280 Mother-infant interaction interferes with the development of amygdalar dopaminergic control

Masatoshi Takita^{1,2}, Takefumi Kikusui³

¹National Institute of Advanced Industrial Science and Technology ²The University of Electro-Communications ³Azabu University

P2-281 Neuronal activities in the common marmoset performing Go-Nogo task using voice stimuli

Kazuo Hikosaka¹, Hisashi Tayama¹, Sachiko Hikosaka¹, Chihiro Yokoyama², Hiroataka Onoe²

¹Dept. of Sensory Science, Kawasaki University of Science Welfare, Okayama, Japan

²Bio-function Imaging Team, RIKEN Center for Life Science Technology (CLST), Hyogo, Japan

P2-282 Effects of repetitive motor imitation and observation onto preference for visual motor stimuli

Yousuke Ogata, Takashi Hanakawa

Integrative Brain Imaging Center, National Center of Neurology and Psychiatry

- P2-283** Does being observed modulate self-conscious emotion in individuals with autism spectrum disorders?
Tomoyo Morita^{1,2}, Hirotaka Kosaka^{3,4,5}, Daisuke N Saito^{3,5}, Takeshi Fujii^{3,5,6}, Makoto Ishitobi^{4,7}, Toshio Munesue⁸, Keisuke Inohara⁴, Hidehiko Okazawa^{3,5}, Ryusuke Kakigi², Norihiro Sadato^{5,9,10}
¹Grad Sch of Eng, Osaka Univ, Osaka, Japan ²Dept of Integrative Physiol, NIPS, Aichi, Japan
³Res Center for Child Mental Dev, Univ of Fukui, Fukui, Japan ⁴Dept of Neuropsychiatry, Univ of Fukui, Fukui, Japan
⁵Biomed Imag Res Center, Univ of Fukui, Fukui, Japan ⁶Dept of Psychiatry, NCNP, Tokyo, Japan
⁷National Institute of Mental Health, NCNP, Tokyo, Japan ⁸Res Center for Child Mental Dev, Kanazawa Univ, Kanazawa, Japan
⁹Dept of Cereb Res, NIPS, Aichi, Japan ¹⁰The Grad Univ for Advanced Studies
- P2-284** The electroencephalogram in music preference
Kiyohisa Natsume, Noboru Kojima
Grad Sch of Life Sci and Sys Eng, Kyushu Inst of Technol

Alzheimer's Disease, Other Dementia, Aging

- P2-285** Different effects of brain atlases for feature extraction on MCI prediction
Kenichi Ota¹, Naoya Oishi¹, Kengo Ito², Hidenao Fukuyama¹
¹Hum Brain Res Ctr, Kyoto Univ Grad School of Med, Kyoto, Japan ²Natl Ctr Geriatr Gerontol, Aichi, Japan
- P2-286** Age related alteration in the human brain tissue detected by T1-weighted/T2-weighted MR ratio image
Takuya Ishida¹, Jun Iwatani², Kazuhiro Shinosaki², Tomohiro Donishi¹, Masaki Terada³, Yoshiki Kaneoke¹
¹Dept system neurophysiol, Wakayama Medical University ²Dept psychiatry, Wakayama Medical University
³Wakayama-Minami Radiology Clinic
- P2-287** The influence of ApoE4 on hippocampal volume in healthy children and adolescents
Keiko Kunitoki¹, Teruo Hashimoto², Susumu Yokota², Hiroshi Hashizume², Kentaro Inoue³, Hikaru Takeuchi^{2,4}, Atsushi Sekiguchi^{4,5}, Hiroyuki Arai⁶, Hiroaki Tomita⁷, Ryuta Kawashima^{2,4,8}, Yasuyuki Taki^{2,3,5}
¹Tohoku University School of Medicine
²Division of Developmental Cognitive Neuroscience, Institute of Development, Aging and Cancer, Tohoku University, Sendai
³Department of Nuclear Medicine and Radiology, Institute of Development, Aging and Cancer, Tohoku University, Sendai
⁴Department of Functional Brain Imaging, Institute of Development, Aging and Cancer, Tohoku University, Sendai
⁵Division of Medical Neuroimage Analysis, Department of Community Medical Supports, Tohoku Medical Megabank Organization, Tohoku University, Sendai
⁶Department of geriatrics, Institute of Development, Aging and Cancer, Tohoku University, Sendai
⁷International Research Institute of Disaster Science, Tohoku University, Sendai
⁸Smart Ageing International Research Center, Institute of Development, Aging and Cancer, Tohoku University, Sendai
- P2-288** Distribution of endogenous and exogenous tau in the mouse brain
Atsuko Kubo¹, Hiroaki Misono², Makoto Matsuyama⁴, Akihiko Takashima⁵, Yasuo Ihara^{1,3}, Tomohiro Miyasaka¹
¹Dept of Neuropathology, Faculty of Life and Medical Sciences, Doshisha Univ
²Lab for Ion Channel Pathophysiology, Graduate School of Brain Science, Doshisha Univ
³Lab for Cognition, Memory and Aging, Graduate School of Brain Science, Doshisha Univ
⁴Division of Molecular Genetics, Shigei Medical Research Institute
⁵Dept of Aging Neurobiology, Center for Development of Advanced Medicine for Dementia, National Center for Geriatrics and Gerontology
- P2-289** Traumatic brain injury (TBI) accelerates amyloid- β depositions and spatial memory impairment in a triple-transgenic mouse model of Alzheimer's disease
Yasushi Kishimoto¹, Hajime Shishido², Nobuyuki Kawai², Masaki Ueno³, Takashi Kubota¹, Takashi Tamiya², Yutaka Kirino¹
¹Department of Physical Chemistry, School of Pharmaceutical Sciences at Kagawa, Tokushima Bunri University
²Department of Neurological Surgery, Faculty of Medicine, Kagawa University
³Departments of Pathology and Host Defense, Faculty of Medicine, Kagawa University
- P2-290** BMP-4 expression by immature pericytes correlates with white matter damage
Maiko Uemura¹, Masafumi Ihara³, Takayuki Nakagomi⁴, Tomohiro Matsuyama⁴, Ayae Kinoshita², Ryosuke Takahashi¹
¹Department of Neurology, Kyoto University Graduate School of Medicine ²School of Human Health Sci, Univ of Kyoto, Kyoto, Japan
³Dept of Stroke and Cerebrovas Dis, National Cerebral and Cardiovascular Center Hospital, Osaka, Japan
⁴Ins for Adv Med Sci, Hyogo College of Med, Hyogo, Japan
- P2-291** Raft derived vesicles are another component of neurofibrillary tangle
Masahiro Nakamori^{1,2}, Tetsuya Takahashi¹, Tomokazu Nishikawa¹, Tomoyasu Matsubara¹, Chengyu Li¹, Yukari Shinozaki¹, Yoshito Nagano¹, Hirofumi Maruyama¹, Masayasu Matsumoto¹
¹Dept Neurol, Univ of Hiroshima, Hiroshima, Japan ²Dept Neurol, Suisaikai Kajikawa Hospital, Hiroshima, Japan

Short Talk 3
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- P2-292** **Correlation of A β oligomer levels in matched cerebrospinal fluid and serum samples**
Takashi Kasai^{1,2}, Takahiko Tokuda^{1,3}, Mark Taylor², David Allsop², Masanori Nakagawa^{1,4}, Toshiki Mizuno¹
¹Kyoto Prefectural University of Medicine ²Dept Biomedical and Life Science, Lancaster Univ, UK
³Dept Molecular Pathobiology of Brain diseases, Kyoto Prefectural Univ of Medicine, Japan
⁴North Medical Center, Kyoto Prefectural Univ of Medicine
- P2-293** **An endogenous peptide to recover amyloid β oligomer-induced cognitive dysfunction**
Takashi Miyano¹, Shota Sato¹, Yuko Manabe¹, Nagisa Yoshida¹, Ayano Kimura², Saori Hata², Toshiharu Suzuki², Tsuyoshi Inoue¹
¹Dept of Biophys Chem, Grad Sch of Med Dent and Pharm Sci, Okayama Univ ²Dept of Neurosci, Grad Sch of Pharm Sci, Hokkaido Univ
- P2-294** **Nobiletin, a citrus flavonoid, improves cognitive impairment in triple transgenic Alzheimer disease mouse model**
Yuki Aoyama¹, Akira Nakajima¹, Eun-Joo Shin², Hyoung-Chun Kim², Taku Nagai¹, Akihito Yokosuka³, Yoshihiro Mimaki³, Yasushi Ohizumi^{4,5}, Kiyofumi Yamada¹
¹Dept Neuropsychopharmacol Hosp Pharm, Grad Sch Med, Nagoya Univ, Nagoya, Japan
²Neuropsychopharmacol Toxicol Pro, Col Pharm, Kangwon Natl Univ, Chunchon, South Korea
³Lab Med Plant Sci, Sch Pharm, Tokyo Univ of Pharm Life Sci, Tokyo, Japan
⁴Dept Mol Toxicol, Grad Sch Pharm Sci, Univ of Shizuoka, Shizuoka, Japan
⁵Kansei Fukushi Res Inst, Tohoku Fukushi Univ, Miyagi, Japan

Parkinson's Disease and Related Disorders

- P2-295** **Cytotoxicity associated with mitochondrial stressor-induced TRPC1 inhibition in PC12 cells overexpressing human alpha-synuclein**
Satoru Ito¹, Kazuhiro Nakaso², Kenji Nakashima¹
¹Dept Brain and Neurosci., Univ of Tottori University, Tottori, Japan
²Dept Pathophysiol. and Therapeutic Sci., Univ of Tottori University, Tottori, Japan
- P2-296** **α -synuclein oligomers suppress spike frequency by enhancing afterhyperpolarization in neocortical pyramidal neurons**
Kenji Yamamoto, Hideyuki Sawada
Clinical Research Center & Dept of Neurology, Utano National hospital
- P2-297** **Screening of small molecules that down-regulate α -synuclein transcription for drugs to treat Parkinson's disease**
Takeshi Asano, Hodaka Yamakado, Ryosuke Takahashi
Dept Neurology, Grad Sch of Med, Kyoto Univ, Kyoto, Japan
- P2-298** **Protection of differentiated SH-SY5Y cells from MPP⁺-mediated toxicity by histone deacetylase inhibition**
Chi-Jing Choong¹, Toru Yasuda¹, Kousuke Baba¹, Tsutomu Sasaki¹, Shinichi Uesato², Hideki Mochizuki¹
¹Department of Neurology, Osaka University Graduate School of Medicine, Osaka, Japan
²Department of Life Science and Biotechnology, Faculty of Chemistry, Materials and Bioengineering, Kansai University, Osaka, Japan
- P2-299** **Functional ESCRT machinery is required for the clearance of aggregate-prone proteins associated with neurodegenerative diseases**
Ryuji Oshima^{1,2}, Takafumi Hasegawa¹, Keiichi Tamai², Naoto Sugeno¹, Emiko Miura¹, Masatoshi Konno¹, Akio Kikuchi¹, Atsushi Takeda³, Nobuyuki Tanaka², Masashi Aoki¹
¹Dept of Neurol, Tohoku Univ Grad Sch of Med, Miyagi, Japan ²Miyagi Cancer Ctr Res Inst, Miyagi, Japan
³Natl Hosp Org Sendai-Nishitaga Hosp, Miyagi, Japan
- P2-300** **iPS Cell Modeling of Genetic Parkinson's Disease**
Yasushi Koshiba^{1,2}, Asuka Morizane², Hodaka Yamakado¹, Tetsuhiro Kikuchi², Naoto Jingami¹, Daisuke Doi², Haruhisa Inoue², Jun Takahashi², Ryosuke Takahashi¹
¹Dept Neurol, Kyoto Univ, Kyoto, Japan ²Center for iPS Cell Research and Application, Kyoto Univ, Kyoto, Japan
- P2-301** **Changes in dopamine receptor expression in iPSC-derived neurons of patients with familial Parkinson's disease**
Naoko Kuzumaki^{1,2}, Yukari Suda¹, Michiko Narita¹, Chizuru Iwasawa¹, Miri Matsuo¹, Wado Akamatsu^{2,3}, Nobutaka Hattori⁴, Hideyuki Okano², Minoru Narita^{1,5}
¹Hoshi Univ. Sch. Pharm. Pharmaceut. Sci., Tokyo, Japan ²Dept. Physiol., Keio Univ. Sch. Med. Tokyo, Japan
³Juntendo Univ. Grad. Sch. Med., Tokyo, Japan ⁴Dept. Neurol., Juntendo Univ. Grad. Sch. Med., Tokyo, Japan
⁵Life Science Tokyo advanced Reserch Center (L-STAR), Tokyo, Japan

Short Talk 4
ST-4-33
9/12 10 : 00-11 : 00

- P2-302** Analysis of PKC γ substrates in nigrostriatal system: The role of β PIX phosphorylation for dopamine release
Toshihiko Shirafuji^{1,2}, Takehiko Ueyama¹, Ken-ichi Yoshino¹, Naoko Adachi¹, Hideyuki Takahashi¹, Naoki Hiramatsu³, Yukio Ago³, Toshio Matsuda³, Tatsushi Toda⁴, Norio Sakai², Naoaki Saito¹
¹Lab. Mol. Pharmacol. Biosig. Res. Ctr., Kobe Univ, Kobe, Japan
²Dept. Mol. Pharmacol. Neurosci., Inst. Biomed. Health Sci., Hiroshima Univ
³Lab. Medicinal Pharmacol., Grad. Sch. of Pharmaceut. Sci., Osaka Univ ⁴Dept. Neurol/ Mol Brain Sci., Grad. Sch. Med., Kobe Univ
- P2-303** Brain neural networks related to Parkinson's disease: A resting state functional MRI study
Jinsoo Koh¹, Yoshiki Kaneoke², Tomohiro Donishi², Megumi Mori¹, Yoshiaki Nakayama¹, Mayumi Sakata¹, Ken-ya Murata¹, Masaki Terada³, Hidefumi Ito¹
¹Dept Neurol, Wakayama Medical University, Wakayama, Japan
²Dept System Neurophysiology, Wakayama Medical University, Wakayama, Japan ³Wakayama-minami radiology clinic
- P2-304** Evaluation of motor symptoms of patients with Parkinson's disease in terms of three components of tracking movement of the wrist
Jongho Lee¹, Shinji Kakei¹, Satoshi Orimo²
¹Motor disorders project, Tokyo Metropolitan Inst. of Medical Science, Tokyo, Japan
²Department of Neurology, Kanto Central Hospital, Tokyo, Japan
- P2-305** Severity of freezing gait in Parkinson's disease patients correlates with the white matter abnormality in dorsal tegmental area
Masahito Mihara¹, Hiroaki Fujimoto², Masaru Yokoe¹, Kuni Konaka¹, Yoshiyuki Watanabe³, Hideki Mochizuki¹
¹Dept Neurol, Osaka University Graduate School of Medicine, Osaka, Japan ²Neurorehab Res Inst, Morinomiya Hosp, Osaka, Japan
³Dept Radiol, Osaka University Graduate School of Medicine, Osaka, Japan
- P2-306** Toward a novel closed-loop deep brain stimulation for ameliorating the Parkinson's disease
Susumu Takahashi¹, Tomo Unzai¹, Kenta Kobayashi³, Fuyuki Karube¹, Fumino Fujiyama^{1,2}
¹Laboratory of Neural Circuitry, Grad Sch Brain Science, Doshisha University ²CREST, JST
³Sec Viral Vector Development, NIPS, Okazaki, Japan
- P2-307** Spontaneously Emerging Parkinsonism-Cerebellar Syndrome in a Subspecies of Japanese Macaque (*Macaca fuscata yakui*): A Potential Analogue of Multiple System Atrophy
Kevin William McCairn¹, Yuji Nagai², Katsuo Kimura¹, Yasuhiro Go³, Ken-ichi Inoue¹, Masaki Isoda⁴, Takafumi Minamimoto², Masayuki Matsumoto⁵, Masahiko Takada¹
¹Primate Research Institute, Kyoto University ²National Institutes of Radiological Science ³National Institutes of Natural Science
⁴Kansai Medical University ⁵Tsukuba University
- P2-308** *Atp1a3*-deficient heterozygous mice under the stress showed shorter stride length relevant to symptoms of Rapid-onset dystonia parkinsonism
Hiroki Sugimoto, Kiyoshi Kawakami
Div Biol, Cent Mol Med, Jichi Med Univ, Tochigi, Japan

Polyglutamine Diseases, ALS, SCD, Other Neurodegenerative Disorder

- P2-309** Optineurin suppression causes neuronal cell death via NF- κ B pathway
Mayumi Akizuki¹, Hirofumi Yamashita¹, Kengo Uemura¹, Hirofumi Maruyama², Hideshi Kawakami², Hidefumi Ito¹, Ryosuke Takahashi¹
¹Department of Neurology, Kyoto University Graduate School of Medicine, Kyoto, Japan
²Department of Epidemiology, Research Institute for Radiation Biology and Medicine, Hiroshima University, Hiroshima, Japan
- P2-310** Multimodal and exclusive pathology between ALS and FTLN caused by TDP-43 mutations
Chikako Hara^{1,2}, Yuguaku Daté³, Minami Hasegawa¹, Reona Kobayashi², Junko Takahashi-Fujigasaki⁴, Naomi Kogo⁵, Chie Sano⁵, Yuki Kobayashi⁵, Norihiro Suzuki³, Shigeyoshi Itohara⁵, Hideyuki Okano², Hiroataka J Okano¹
¹Department of Regenerative Medicine Jikei University School of Medicine
²Department of Physiology, Keio University School of Medicine ³Department of Neurology, Keio University School of Medicine
⁴Division of Neuropathology, Jikei University School of Medicine ⁵Laboratory for Behavioral Genetics, RIKEN BSI
- P2-311** Selective uptake of C-terminal fragments of TDP-43 into exosome
Keisuke Abe, Taku Namatame, Mio Tajiri, Daishi Yui, Takuya Ohkubo, Takanori Yokota
Tokyo Medical and Dental University
- P2-312** The involvement of glial cells in FUS-related ALS/FTLD pathophysiology
Yusuke Fujioka¹, Shinsuke Ishigaki¹, Takashi Shiromizu², Tsuyoshi Udagawa¹, Satoshi Yokoi¹, Daiyu Honda¹, Kensuke Ikenaka¹, Masahisa Katsuno¹, Takeshi Tomonaga², Gen Sobue¹
¹Dept Neurol, Univ of Nagoya, Nagoya, Japan ²National Institute of Biomedical Innovation, Osaka, Japan

- P2-313** **Involvement of axonal transport impairment in ALS**
Tomohiro Ohgomori¹, Jun Yamada¹, Kenji Kadamatsu², Shozo Jinno¹
¹Kyushu University, Fukuoka, Japan ²Nagoya University Graduate School of Medicine, Nagoya, Japan
- P2-314** **Gene Expression Profiling in Motor Neuron-Specific 26S Proteasome Conditional Knockout Mice**
Tomonori Hoshino, Hirofumi Yamashita, Ryosuke Takahashi
Dept. Neurol, Grad. Sch. Med., Kyoto Univ.
- P2-315** **Impaired response of hypoxic sensor protein HIF-1 α and its downstream proteins in the spinal motor neurons of ALS model mice**
Kota Sato, Toru Yamashita, Nozomi Hishikawa, Kentaro Deguchi, Koji Abe
Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences
- P2-316** **Conditional deletion of glial glutamate transporters in spinal cord induces ALS-like phenotypes in mice**
Kaori Sugiyama¹, Tomomi Aida¹, Masatoshi Nomura², Ryoichi Takayanagi², Kohichi Tanaka^{1,3,4}
¹Mol Neurosci, Med Res Inst, Tokyo Med Dent Univ, Tokyo ²Dept Med and Bioreg Sci, Grad Sch of Med Sci, Kyushu Univ, Kyushu
³Cent Brain Integ Res, Tokyo Med Dent Univ, Tokyo ⁴JST, CREST, Saitama, Japan.
- P2-317** **Influence of heterozygous Hsf-1 depletion on the skeletal muscle pathology of spinal and bulbar muscular atrophy (SBMA)**
Naohide Kondo¹, Masahisa Katsuno¹, Hiroaki Adachi², Kentaro Sahashi¹, Yu Miyazaki¹, Madoka Iida¹, Genki Tohnai¹, Shinsuke Ishigaki¹, Yusuke Fujioka¹, Fumiaki Tanaka³, Gen Sobue¹
¹Dept Neurol, Univ of Nagoya, Nagoya, Japan
²Dept Neurol, Univ of Occupational and Environmental Health, School of Medicine, Kokura, Japan
³Dept Neurol and Stroke, Univ of Yokohama City, Yokohama, Japan
- P2-318** **A functional deficiency of TERA/VCP/p97 contributes to impaired DNA repair in multiple polyglutamine diseases**
Kyota Fujita¹, Yoko Nakamura¹, Tsutomu Oka¹, Hikaru Ito¹, Takuya Tamura¹, Kazuhiko Tagawa¹, Toshikazu Sasabe¹, Asuka Katsuta², Kazumi Motoki¹, Hiroki Shiwaku¹, Masaki Sone², Chisato Yoshida¹, Hitoshi Okazawa¹
¹Tokyo Medical and Dental University ²Dept Biomol Sci, faculty of Sci, Toho Univ, Japan
- P2-319** **A study on the distribution of type III sodium-dependent phosphate transporter associated with Fahr's disease**
Masatoshi Inden¹, Masaki Iriyama¹, Miho Zennami¹, Masayuki Kaneko¹, Akira Hara², Mitsunori Yamada³, Isao Hozumi¹
¹Lab Med Therap Mol Therap, Gifu Pharm Univ, Gifu, Japan ²Dept Tumor Pathol, Gifu Univ Grad Sch of Med, Gifu, Japan
³Dept Clin Res, National Hospital Organization, Saigata National Hospital, Niigata, Japan
- P2-320** **Visualization of the axonal transport dysfunction in HuC KO mouse**
Yuki Ogawa¹, Minami Hasegawa¹, Kyoko Kakumoto², Tetsu Yoshida², Robert Darnell³, Hideyuki Okano², Hiroataka James Okano¹
¹Div Regen Med, Jikei Univ Sch of Med, Tokyo ²Dept Physiol, Keio Univ Sch of Med, Tokyo ³The Rockefeller Univ, NY, USA

Schizophrenia

- P2-321** **The role of Akt1, a schizophrenia susceptibility gene, in the regulation of motivational salience and reward-based choices in mice**
Short Talk 3
ST-3-32
9/12 9 : 00-10 : 00
Ching Chen¹, Ya-Wen Liu¹, Wen-Sung Lai^{1,2,3}
¹Dept Psy, NTU, Taiwan ²Graduate Institute of Brain and Mind Sciences, NTU, Taiwan
³Neurobiology and Cognitive Science Center, NTU, Taiwan
- P2-322** **DISC1 regulates differentiation of oligodendrocytes**
Akira Ito¹, Tsuyoshi Hattori², Shoko Shimizu³, Yoshihisa Koyama⁴, Hisayo Emoto⁵, Yuji Matsumoto⁵, Natsuko Kumamoto⁶, Kohei Yamada⁷, Hironori Takamura⁸, Shinsuke Matsuzaki^{8,9}, Taiichi Katayama⁸, Masaya Tohyama^{3,8,9}
¹Dept Mol Neuropsychiatry, Osaka Univ, Osaka, Japan ²Dept of Neuroanat, Kanazawa Univ, Ishikawa, Japan
³Div Mol Brain Sci, Kinki Univ, Osaka, Japan ⁴Dept Neuroscience and Cell Biology, Osaka Univ, Osaka, Japan
⁵Drug Res Div, Dainippon Sumitomo Pharma Co, Ltd, Osaka, Japan ⁶Dept Neurobiol and Anat, Nagoya City Univ, Aichi, Japan
⁷Res Ctr for Child Mental Develop, Hamamatsu Univ School Med, Shizuoka, Japan
⁸Dept Child Develop & Mol Brain Sci, United Grad School of Child Develop, Osaka Univ, Kanazawa Univ, Hamamatsu Univ School Med, Chiba Univ and Univ Fukui, Osaka, Japan ⁹Dept Anat and Neurosci, Osaka Univ, Osaka, Japan

- P2-323** **Analysis of Disc1 using mice carrying a deletion in exon 6 of the Disc1 gene**
Ko Miyoshi^{1,2}, Kyosuke Kasahara³, Ikuko Miyazaki³, Shinsuke Matsuzaki^{1,2,4}, Keisuke Kuroda⁵, Kozo Kaibuchi⁵, Masato Asanuma³, Taiichi Katayama¹
¹Dept of Child Develop and Molecular Bra Sci, United Grad Sch of Child Develop, Osaka Univ, Osaka, Japan
²Molecular Res Center for Child Mental Develop, United Grad Sch of Child Develop, Osaka Univ, Osaka, Japan
³Dept of Bra Sci, Grad Sch of Med Dent Pharm Sci, Okayama Univ, Okayama, Japan
⁴Dept of Anat and Neurosci, Grad Sch of Med, Osaka Univ, Osaka, Japan
⁵Dept of Cell Pharm, Grad Sch of Med, Nagoya Univ, Aichi, Japan
- P2-324** **Comprehensive behavioral analysis of forebrain- and dentate gyrus-specific Schnurri-2 knockout mice**
Satoko Hattori^{1,2}, Keizo Takao^{2,3}, Maya Yamazaki⁴, Keiko Toyama^{1,2}, Juzoh Umemori^{1,2}, Kenji Sakimura⁴, Tsuyoshi Miyakawa^{1,2,3}
¹Division of Systems Medical Science, Institute for Comprehensive Medical Science, Fujita Health University, Aichi, Japan
²JST, CREST, Japan ³Center for Genetic Analysis of Behavior, National Institute for Physiological Sciences, Aichi, Japan
⁴Department of Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan
- P2-325** **Transcriptomic evidence for immaturity of the prefrontal cortex in patients with schizophrenia**
Hideo Hagihara^{1,2}, Koji Ohira^{1,2}, Keizo Takao^{2,3}, Tsuyoshi Miyakawa^{1,2,3}
¹Div Sys Med Sci, ICMS, Fujita Hlth Univ, Toyoake, Japan ²CREST JST, Kawaguchi, Japan ³Ctr for Genet Anal, NIPS, Okazaki, Japan
- P2-326** **Aberrant mechanism of biological motion recognition in schizophrenia**
Yukiko Matsumoto¹, Hideyuki Takahashi², Toshiya Murai¹, Hidehiko Takahashi¹
¹Dept Psychiatry, Kyoto University, Kyoto, Japan ²Dept Engineering, Osaka University, Osaka, Japan
- P2-327** **Parahippocampal dysconnectivity in the At Risk Mental State**
Jun Miyata^{1,2}, Toby Winton-Brown², Nicolas Karmelic Crossley², Shitij Kapur², Philip McGuire²
¹Department of Neuropsychiatry, Kyoto University Hospital ²Institute of Psychiatry, King's College London, London, UK
- P2-328** **Double-event-related changes in Oxy-Hb during verbal discrimination tasks in schizophrenic patients**
Youhei Ishii¹, Kiichiro Morita^{1,2}, Ryo Fujiki^{1,2}, Keiichiro Mori^{1,2}, Naohisa Uchimura^{1,2}
¹Cognitive and Molecular Research Institute of Brain diseases, Kurume University
²Department of Neuropsychiatry, Kurume University School of Medicine, Fukuoka, Japan

Mood Disorders

- P2-329** **Association between the GRM7 polymorphism and Beck youth inventories scores in a Chinese cohort**
Ting Kuang Yeh¹, Ying-Chun Cho¹, Pei-Jung Lin², Chun-Yen Chang¹
¹National Taiwan Normal University, Taiwan ²National Taiwan University, Taiwan
- P2-330** **Quantitative evaluation of cerebrovascular unit degeneration in rat prefrontal cortex slice culture: Relation with bipolar disorder**
Yuki Kurauchi¹, Akinori Hisatsune^{1,2}, Takahiro Seki³, Hiroshi Katsuki³
¹Priority Organization for Innovation and Excellence, Kumamoto University, Kumamoto, Japan ²Program for Leading Graduate Schools
³Department of Chemo-Pharmacological Sciences, Graduate School of Pharmaceutical Sciences, Kumamoto University, Kumamoto, Japan
- P2-331** **Transcriptomic evidence for the immaturity in the frontal cortex of mice treated with antidepressants**
Koji Ohira¹, Hideo Hagihara^{1,2}, Rika Takeuchi^{1,2}, Tsuyoshi Miyakawa^{1,2,3}
¹Div. Systems Med Sci, ICMS, Fujita Health Univ, Aichi, Japan ²CREST, JST, Saitama, Japan ³Sect Behav Patterns, NIPS, Aichi, Japan
- P2-332** **Contrasting expression pattern for immaturity and maturity marker genes in the dentate gyrus between mouse lines with "immature dentate gyrus" and mice overexpressing glucocorticoid receptor**
Hisatsugu Koshimizu^{1,2}, Hideo Hagihara^{1,2}, Keizo Takao^{2,3}, Tsuyoshi Miyakawa^{1,2,3}
¹Div. of Sys. Med. Sci., ICMS, Fujita Hlth. Univ., Aichi, Japan ²CREST, JST, Saitama, Japan
³Ctr. for Gene. Anal. of Behav., NIPS, Aichi, Japan
- P2-333** **Correlations between peripheral and central 5-hydroxytryptamin level/5-hydroxytryptamin receptors expression in chronic unpredictable mild stress rats**
Sufang Peng, Shifu Xiao, Shengyu Zhang, Shunying Yu, Zeping Xiao, Huafang Li, Xia Li
Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China
- P2-334** **Effects of acute sleep deprivation on neuronal properties and slow network oscillation in the rat basolateral amygdala**
Miki Hashizume¹, Rina Shinozaki¹, Hideo Mukai², Takayuki Murakoshi¹
¹Dept of Biochem, Saitama Med Univ, Saitama, Japan ²Dept Comp Sci, Meiji Univ, Kanagawa, Japan

- P2-335** **Innate immune molecules mediate behavioral, neuronal and microglial changes induced by repeated social defeat stress in mice**
Shiho Kitaoka¹, Xiang Nie¹, Kohei Tanaka¹, Atsubumi Ogawa¹, Yuki Imoto², Eri Segi-Nishida³, Shuh Narumiya¹, Tomoyuki Furuyashiki⁴
¹Medical Innovation Center, Kyoto University Graduate School of Medicine, Kyoto, Japan
²Department of Physiological Chemistry, Kyoto University Graduate School of Pharmaceutical Sciences
³Department of Systems Bioscience for Drug Discovery, Kyoto University Graduate School of Pharmaceutical Sciences
⁴Division of Pharmacology, Kobe University Graduate School of Medicine, Kobe, Japan
- P2-336** **Examination of the change of IDO expression in the mouse brain under inflammatory condition**
Yusuke Ishida, Yukiko Nakamura, Makoto Kondo, Shoichi Shimada
Dept Anatomy I, Univ of Osaka, Osaka, Japan
- P2-337** **Analysis of *Fosb*^{F/F} mice expressing only FOSB and vFOSB but not Δ FOSB and $\Delta 2 \Delta$ FOSB**
Atsuhisa Katogi¹, Hiroko Nomaru¹, Yoshinori N. Ohnishi¹, Kunihiro Sakumi^{1,2}, Yusaku Nakabeppu^{1,2}
¹Div. Neurofunc. Genomics, MIB., Kyushu Univ., Fukuoka, Japan ²Res. Ctr. Nucleotide pool, Kyushu Univ., Fukuoka, Japan

Anxiety Disorders

- P2-338** **Voxel-based morphometric analysis of gray matter volume alterations upon rat PTSD-model stress**
Takanobu Yoshii¹, Naoya Oishi², Kazuya Ikoma³, Masamitsu Kido³, Isao Nishimura¹, Yuki Sakai¹, Kenichi Matsuda⁴, Mitsuhiro Kawata⁴, Kenji Fukui¹
¹Dept. of Psychiatry, Kyoto Prefect. Univ. of Med., Kyoto, Japan
²Human Brain Research Center, Kyoto Univ. Graduate School of Med., Kyoto, Japan
³Dept. of Orthopaedics, Kyoto Prefect. Univ. of Med., Kyoto, Japan
⁴Dept. of Anatomy and Neurobiology, Kyoto Prefect. Univ. of Med., Kyoto, Japan
- P2-339** **Fear reinstatement is associated with presynaptic depression in the infralimbic cortex**
Yuki Miura¹, Hiroshi Nomura¹, Natsuko Imamura¹, Chie Teshirogi¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
Short Talk 3 ST-3-36 9/12 9 : 00-10 : 00
¹Lab. Chem Pharmacol, Grad Sch. Pharm Sci, Univ. Tokyo ²Center for Information and Neural Networks
- P2-340** **Energy dysfunctions in serotonergic neurons in HDAC6 knockout mouse**
Yoshiharu Kawaguchi, Masahide Fukada, Kyoko Takeshima, Atsuo Nakayama
Inst. for Dev. Res., Aichi Human Service Ctr.
- P2-341** **Brain expression pattern of *Srrm4*, the gene mutated in *bronx waltzer* mice, and its effect on GABAergic interneuron**
Yuka Shirakawa¹, Hitomi Izumi¹, Shoko Nakamura², Ken Inoue², Yu-ichi Goto², Masumi Inagaki¹
¹National Institute of Mental Health, NCNP, Tokyo, Japan ²National Institute of Neuroscience, NCNP, Tokyo, Japan

Drug Addiction and Abuse

- P2-342** **Intrinsic membrane plasticity induced after chronic cocaine administration in the laterodorsal tegmental nucleus cholinergic neurons**
Katsuyuki Kaneda, Ryo Kurosawa, Naofumi Taoka, Masabumi Minami
Dept Pharmacol, Grad Sch Pharm Sci, Hokkaido Univ, Sapporo, Japan
- P2-343** **Cholinergic transmission to and dopaminergic transmission from the ventral tegmental area contribute to the expression of cocaine-conditioned place preference**
Fumiya Shinohara, Masabumi Minami, Katsuyuki Kaneda
Dept Pharmacol, Grad Sch Pharm Sci, Hokkaido Univ, Sapporo, Japan
- P2-344** **Chronic cocaine exposure changes inhibitory synaptic transmission in cholinergic neurons of laterodorsal tegmental nucleus**
Naofumi Taoka, Ryo Kurosawa, Masabumi Minami, Katsuyuki Kaneda
Dept Pharmacol, Grad Sch Pharm Sci, Hokkaido Univ, Sapporo, Japan
- P2-345** **Involvement of Immune Protein MHC class I in The Development of Cocaine Self-Administration**
Gen Murakami¹, Hongrui Meng², Mitsuhiro Edamura², Tomonori Furukawa³, Atsuo Fukuda³, Toshihide Iwashita¹, Daiichiro Nakahara⁴
Short Talk 3 ST-3-37 9/12 9 : 00-10 : 00
¹Dept. Regenerative and Infectious Pathology, Hamamatsu University School of Medicine
²Dept. Psychology, Hamamatsu University School of Medicine ³Dept. Neurophysiology, Hamamatsu University School of Medicine
⁴Dept. Biofunctional Imaging Medical Photonics Research Center, Hamamatsu University School of Medicine
- P2-346** **Biphasic mechanisms of amphetamine action at the dopamine terminal**
Cody Siciliano, Erin Calipari, Mark J Ferris, Sara R Jones
Wake Forest School of Medicine, USA

P2-347

Short Talk 3
ST-3-36
9/12 9:00-10:00**Low blood concentration of alcohol enhances stop failure response in the inferior frontal cortex in healthy social drinkers**Jun Shinozaki¹, Hidekazu Saito¹, Takashi Murahara^{1,2}, Hiroshi Nagahama³, Yuuki Sakurai³, Takashi Nagamine¹, Hiroshi Matsumoto⁴¹Dept Systems Neosci, Sapporo Med Univ, Hokkaido, Japan ²Dept Neurol, Sapporo Med Univ Hospital, Hokkaido, Japan³Divi Radiol, Sapporo Med Univ Hospital, Hokkaido, Japan ⁴Dept Legal Med, Osaka Univ Grad Sch of Med, Osaka, Japan

P2-348

The involvement of chronic social deprivation on alcohol consumption in μ -opioid receptor knockout miceYuki Moriya^{1,2}, Yoshiyuki Kasahara^{1,2}, F. Scott Hall³, George R. Uhl³, Hiroaki Tomita^{1,2}, Ichiro Sora^{1,4}¹Dept. of Biological Psychiatry, Tohoku Univ. Graduate School of Medicine²Dept. of Disaster Psychiatry, Tohoku Univ. Graduate School of Medicine³Molecular Neurobiology Branch, Intramural Research Program, National Institute on Drug Abuse, MD, USA⁴Dept. of Psychiatry, Kobe Univ. Graduate School of Medicine, Japan

P2-349

Role of brain cell components in ethanol-induced signal transcription in the brainKana Sugimoto¹, Ryuichi Katada¹, Hidekazu Tanaka², Motonori Yoshida¹, Kazuo Igarashi¹, Hiroshi Matsumoto¹¹Department of Legal Medicine, Osaka University Faculty of Medicine²Department of Biomedical Sciences, College of Life Sciences, Ritsumeikan University, Shiga 525-8577, Japan

P2-350

The relationship between ghrelin and serotonin releases in the lateral hypothalamus of the habitual alcohol drinking modelsKanji Yoshimoto^{1,3}, Yoshihisa Watanabe², Masaki Tanaka², Masataka Nagao³, Shuichi Ueda⁴¹Dept Food Sci Biotech, Hiroshima Inst Tech, Hiroshima, Japan ²Dept Basic Geriatrics, Kyoto Pref Univ Med, Kyoto, Japan³Dept Forensic Med, Hiroshima Univ, Hiroshima, Japan ⁴Dept Histol Neurobiol, Dokkyo Univ Sch Med, Tochigi, Japan

P2-351

Aripiprazole inhibits methamphetamine-induced stereotypy in miceNobue Kitanaka¹, Junichi Kitanaka¹, Masaru Kayama¹, Hironobu Sugimori¹, Kaname Watabe², Hitoshi Kubo², Hitoshi Takahashi², Koh-ichi Tanaka³, Nobuyoshi Nishiyama³, Motohiko Takemura¹¹Dept Pharmacol, Hyogo Col Med, Hyogo, Japan ²Muromachi Kikai Co Ltd, Tokyo, Japan³Div Pharmacol, Dept Pharm, Sch Pharm, Hyogo Univ Hlth Sci, Hyogo, Japan

P2-352

Exogenous agmatine inhibits methamphetamine-induced stereotypy and hyperlocomotion in miceJunichi Kitanaka¹, Nobue Kitanaka¹, F. Scott Hall², George R. Uhl², Koh-ichi Tanaka³, Nobuyoshi Nishiyama³, Motohiko Takemura¹¹Hyogo Col. Med. ²Mol. Neurobiol., NIDA-IRP, Baltimore, MD, USA³Div Pharmacol, Dept Pharm, Sch Pharm, Hyogo Univ Hlth Sci, Hyogo, Japan

P2-353

Insular activation during reward anticipation reflects duration of illness in abstinent pathological gamblers

Kosuke Tsurumi, Ryosaku Kawada, Naoto Yokoyama, Toshiya Murai, Hidehiko Takahashi

Kyoto University Department of Psychiatry, Graduate School of Medicine

Neurodevelopmental Disorders

P2-354

Short Talk 4
ST-4-36
9/12 10:00-11:00**Autism risk gene, A2BP1 plays an essential role in cortical development**

Nanako Hamada, Hidenori Tabata, Hidenori Ito, Koh-ichi Nagata

Institute for developmental research, Aichi human service center, Aichi, Japan

P2-355

Paternal Pax6 mutation accelerates vocal communication deficit in mouse offspring caused by paternal aging

Ryuichi Kimura, Kaichi Yoshizaki, Kohei Koike, Hitoshi Inada, Noriko Osumi

Division of Developmental Neuroscience, Center for Translational and Advanced Animal Research, Tohoku University Graduate School of Medicine

P2-356

Advanced paternal age affect maternal separation-induced ultrasonic vocalization in the offspring

Kaichi Yoshizaki, Ryuichi Kimura, Kohei Koike, Hitoshi Inada, Noriko Osumi

Dept Dev Neurosci, Grad Sch of Med, Tohoku Univ, Sendai, Japan

P2-357

A machine-learning-based investigation on the neural substrates of autism spectrum disorder using resting-state fMRINoriaki Yahata¹, Jun Morimoto², Ryuichiro Hashimoto³, Kazuhisa Shibata^{2,4}, Hiroshi Imamizu², Megumi Fukuda², Yuki Kawakubo⁵, Hitoshi Kuwabara⁵, Miho Kuroda⁵, Takashi Yamada³, Nobumasa Kato³, Yuka Sasaki^{2,4}, Takeo Watanabe^{2,4}, Kiyoto Kasai⁶, Mitsuo Kawato²¹Dept Youth Mental Health, Univ of Tokyo, Tokyo, Japan ²ATR Brain Info Comm Res Lab Group, Kyoto, Japan³Medical Institute of Developmental Disorder, Showa University, Tokyo, Japan ⁴Dept Cogn Ling & Psychol Sci, Brown Univ, RI, USA⁵Dept Child Neuropsych, Univ of Tokyo, Tokyo, Japan ⁶Dept Neuropsych, Univ of Tokyo, Tokyo, Japan

- P2-358** **The neural response in the object-selective visual regions for children and adults with ASD**
Yuko Okamoto¹, Ryo Kitada^{2,3}, Ayumi Seki⁴, Hiroki C Tanabe⁵, Masamichi J Hayashi⁶, Takanori Kochiyama⁷, Toshio Munesue⁸, Makoto Ishitobi⁹, Daisuke N Saito¹, Hisakazu T Yanaka⁴, Masao Omori¹⁰, Yuji Wada¹, Hidehiko Okazawa¹, Hirotaka Kosaka¹, Tatsuya Koeda⁴, Norihiro Sadato^{2,3}
¹University of Fukui ²NIPS ³SOKEKENDAI ⁴Tottori University ⁵Nagoya University ⁶University of Sussex ⁷ATR ⁸Kanazawa University ⁹National Center of Neurology and Psychiatry ¹⁰Fukui Prefectural University
- P2-359** **Co-occurrence of disrupted local connectivity and reduced brain activity in adults with autism spectrum disorder: a resting-state fMRI study**
Takashi Itahashi¹, Takashi Yamada¹, Hiromi Watanabe¹, Motoaki Nakamura^{1,4}, Chieko Kanai^{1,3}, Nobumasa Kato¹, Ryuichiro Hashimoto^{1,2}
¹Institute of Neurodevelopmental Disorders, Showa University, Tokyo, Japan. ²Graduate School of Humanities, Tokyo Metropolitan University, Tokyo, Japan. ³Department of Education and Child Studies, Faculty of Arts & Sciences, Sagami Women's University, Kanagawa, Japan ⁴Kinko Hospital, Kanagawa Psychiatric Center, Kanagawa, Japan
- P2-360** **Chronic neonatal NMDA receptor blockade impairs methamphetamine-induced conditioned place preference in rats**
Hiroki Furuie, Kazuo Yamada, Yukio Ichitani
Dept of Behav Neurosci, Univ of Tsukuba, Ibaraki, Japan
- P2-361** **Prenatal exposure to valproic acid decreases methamphetamine sensitivity in mice**
Yuta Hara¹, Erika Takano¹, Kesuke Katashiba¹, Atsuki Taruta¹, Kosuke Higashino¹, Yuko Maeda¹, Yukio Ago¹, Kazuhiro Takuma¹, Toshio Matsuda^{1,2}
¹Lab. of Medicinal Pharmacol., Grad. Sch. of Pharmaceut. Sci., Osaka Univ., Osaka, Japan ²Unit-Grad. Sch. of Child Dev., Osaka Univ., Kanazawa Univ., Hamamatsu Univ. Sch. of Med., Chiba Univ., Fukui Univ., Osaka, Japan
- P2-362** **Effects of D-cycloserine on the behavioral impairment in mice induced by prenatal nicotine exposure**
Nami Sakakibara¹, Yuki Aoyama^{1,2}, Yuka Soh¹, Aya Yoshida¹, Takayoshi Mamiya^{1,4}, Toshitaka Nabeshima^{3,4}, Masayuki Hiramatsu^{1,4}
¹Department of Chemical Pharmacology, Faculty of Pharmacy, Meijo University, Nagoya, Japan ²Department of Neuropsychopharmacology, Nagoya University Graduate School of Medicine, Nagoya, Japan ³Department of Regional Pharmaceutical Care and Sciences, Faculty of Pharmacy, Meijo University, Nagoya, Japan ⁴Japanese Drug Organization of Appropriate Use and Research, Nagoya, Japan
- P2-363** **Prenatal nicotine exposure impaired the proliferation of the neuronal progenitors**
Yuka Soh¹, Yuki Aoyama^{1,2}, Nami Sakakibara¹, Aya Yoshida¹, Kazuya Toriumi¹, Takayoshi Mamiya^{1,4}, Toshitaka Nabeshima^{3,4}, Masayuki Hiramatsu^{1,4}
¹Department of Chemical Pharmacology, Faculty of Pharmacy, Meijo University, Nagoya, Japan ²Department of Neuropsychopharmacology, Nagoya University Graduate School of Medicine, Nagoya, Japan ³Department of Regional Pharmaceutical Care and Sciences, Faculty of Pharmacy, Meijo University, Nagoya, Japan ⁴Japanese Drug Organization of Appropriate Use and Research, Nagoya, Japan
- P2-364** **Matrix metalloproteinase-3 and neurodevelopmental impairment due to polyI:C-induced innate immune activation**
Taku Nagai, Shinnosuke Yamada, Kiyofumi Yamada
Department of Neuropsychopharmacology and Hospital Pharmacy, Nagoya University Graduate School of Medicine
- P2-365** **Cerebral developmental trace in a rat model of cryptogenic infantile spasms**
Megumi Tsuji, Yukari Takahashi, Ayako M Watabe, Fusao Kato
Department of Neuroscience, Jikei University School of Medicine

Hardware Implementation

- P2-366** **Live mouse functional MRI using normal bore 600 MHz NMR magnet**
Yoshifumi Abe, Tatsuhiro Hisatsune
Dept. of Integrated Bioscis., Grad. Sch. of Frontier Sciences, The Univ. of Tokyo

BMI/BCI

- P2-367** **Estimating attentional state of multiple moving targets by steady state visual evoked potential**
Takahiro Shinkai¹, Tetsuto Minami², Shigeki Nakauchi¹
¹Dept of Info & CS, Toyohashi University of Technology, Aichi, Japan ²Electronics-Inspired Interdisciplinary Research Institute, Toyohashi University of Technology, Aichi, Japan

- P2-368** **Transfer of operantly conditioned firings between neuron groups in rat cortex**
Kichan Song¹, Susumu Takahashi², Yoshio Sakurai¹
¹Dept Psychol, Kyoto Univ., Kyoto, Japan ²Graduate School of Brain Science, Doshisha Univ., Kyoto, Japan
- P2-369** **A development of an environmental control system based on wideband SSVEP-BMI**
Tomoaki Komatsu¹, Kouji Takano¹, Kenji Kansaku^{1,2}
¹Sys Neurosci Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan
²Univ of Electro-Communications, Chofu, Japan
- P2-370** **Neurocommunicator 3.0 as a practical BMI system with the shielded headgear**
Yoshiko Nakamura¹, Yuki Nakayama², Chiharu Matsuda², Ryohei P. Hasegawa¹
¹National Institute of Advanced Industrial Science and Technology (AIST) ²Tokyo Metropolitan Institute of Medical Science
- P2-371** **The effect of Transcranial Direct Current Stimulation in a repetition motor learning task**
Takaaki Igarashi, Sotaro Shimada
Dept Electronics and Bioinformatics, Meiji Univ., Kanagawa, Japan
- P2-372** **Toward brain-machine interface using neural activity in the visual cortex for dexterous control of a prosthetic hand**
Ryusuke Hayashi¹, Satoshi Saga²
¹System Neuroscience Group, AIST, Tsukuba, Japan ²Div of Info Eng, Univ of Tsukuba, Tsukuba, Japan
- P2-373** **The influence of light and sound on prefrontal cortex : an fNIRS study with media-art**
Shota Hori^{1,2}, Koichi Mori³, Takehisa Mashimo⁴, Akitoshi Seiyama¹
¹the Graduate School of Medicine, Kyoto University, Kyoto, Japan ²Japan Society for the Promotion of Science
³Doshisha Women's College of Liberal Arts ⁴Seian University of Art and Design

Image/Sound Processing

- P2-374** **An Advanced Real-Time Binocular Eye Tracking System Using a High Frame-Rate Digital Camera**
Keiji Matsuda¹, Kenji Kawano²
¹Neurosci. Res. Inst., AIST ²Dept. Integ Brain Sci. Grad.Sch. Med. Kyoto Univ, Kyoto, Japan
- P2-375** **Effects of Non-local Means Denoising Filter on Voxel-based Morphometry in Rat Brain**
Naoya Oishi¹, Takanobu Yoshii², Hidenao Fukuyama¹
¹Human Brain Research Center, Kyoto University Graduate School of Medicine
²Department of Psychiatry, Graduate School of Medical Science, Kyoto Prefectural University of Medicine

Robotics

- P2-376** **Personal Robot-Assisted Activity for Children with Autism Spectrum Disorders : A Comparative Study with Animal-Assisted Activity**
Short Talk 4
ST-4-37
9/12 10 : 00-11 : 00
Masakazu Hirokawa¹, Atsushi Funahashi², Yasushi Itoh², Kenji Suzuki¹
¹Univ of Tsukuba, Ibaraki, Japan ²Aichi Human Service Center, Aichi, Japan

Molecular, Biochemical, and Genetic Techniques

- P2-377** **A singing strain in mutants from mutator mouse breeding**
Short Talk 3
ST-3-39
9/12 9 : 00-10 : 00
Takeshi Yagi¹, Mayumi Higuchi¹, Yohei Minakuchi², Atsushi Toyoda², Asao Fujiyama², Ikuo Miura³, Shigeharu Wakana³, Arikuni Uchimura¹
¹Grad. Sch. of Frontier Biosci., Osaka Univ. ²Comparative Genomics Laboratory, National Institute of Genetics
³Technology and Development Team for Mouse Phenotype Analysis, Japan Mouse Clinic, RIKEN BioResource Center
- P2-378** **Singing mice (*sng* mutant) exhibited a novel human-audible vocalization behavior**
Rie Ariga
Osaka University
- P2-379** **Newly optical imaging systems of change in oxygen metabolism and hemodynamic using awake mice brain**
Hiroyuki Takuwa¹, Asuka Nishino^{1,2}, Tetsuya Matsuura^{1,2}, Kazumi Sakata², Yosuke Tajima¹, Hiroshi Ito¹
¹Molecular Imaging Center, National Inst of Radiological Sciences
²Department of Chemistry and Bioengineering, Faculty of Engineering, Iwate University, Japan

P2-380

Short Talk 4

ST-4-38

9/12 10 : 00-11 : 00

Improved bioluminescent reporters based on newly cloned firefly luciferases

Takashi Sugiyama

Olympus Corporation, Tokyo, Japan

P2-381

Rapid and highly efficient in vivo genome editing for knockin mouse: from human rare variants to gene cassettes

Risa Imahashi¹, Tomomi Aida¹, Keiho Chiyo¹, Tetsushi Sakuma⁵, Takako Usami², Harumi Ishikubo¹, Obrocki Pawel¹, Takashi Yamamoto⁵, Kohichi Tanaka^{1,3,4}

¹*Mol Neurosci, Med Res Inst, Tokyo Med Dent Univ, Tokyo* ²*Lab of Reco Ani, Med Res Inst*

³*Cent Brain Integ Res, Tokyo Med Dent Univ, Tokyo* ⁴*JST, CREST, Saitama, Japan*

⁵*Dept of Math and Life Sci, Grad Sch of Sci, Hiroshima Univ, Hiroshima*

P2-382

Short Talk 4

ST-4-39

9/12 10 : 00-11 : 00

Cerebellar transduction profiles after ssAAV9 injection via cortical, intrathecal or intravenous routes

Fathul Huda^{1,2}, Ayumu Konno¹, Yasunori Matsuzaki¹, Hanna Goenawan^{1,2}, Koichi Miyake³,

Takashi Shimada³, Hirokazu Hirai¹

¹*Department of Neurophysiology, Gunma University Graduate School of Medicine*

²*Department of Physiology, Faculty of Medicine Universitas Padjadjaran*

³*Department of Biochemistry and Molecular Biology, Nippon Medical School*

P2-383

Systemic delivery of an AAV vector in neonatal macaques facilitates widespread gene transduction into neurons throughout the brain

Kenichi Inoue¹, Katsuo Kimura^{1,2}, Ryuji Yasukochi¹, Naoya Sugawara¹, Takaya Ogasawara¹,

Yasuhiro Okuda¹, Maki Fujiwara¹, Masahiko Takada¹

¹*Sys Neurosci Sec, Primate Res Inst, Kyoto Univ, Inuyama, Japan* ²*Dept Neurol and Stroke Med, Yokohama City Univ, Yokohama, Japan*

P2-384

Short Talk 4

ST-4-40

9/12 10 : 00-11 : 00

Projection pathway specific gene expression using trans-synaptically and retrogradely transported Cre recombinase

Keita Shimizu¹, Ayumu Inutsuka², Azusa Inui², Saori Ohnishi¹, Akihiro Yamanaka²

¹*Dept Med, Nagoya Univ, Nagoya, Japan* ²*Res Inst of Envrn Med, Nagoya Univ, Nagoya, Japan*

Staining, Tracing, and Imaging Techniques

P2-385

Short Talk 3

ST-3-40

9/12 9 : 00-10 : 00

Gene delivery to motor neurons in rats using adeno-associated viral vectors

Tatsuya Umeda^{1,2}, Kenta Kobayashi³, Miki Kobayashi¹, Yoshiki Takahashi¹, Kengo Funakoshi¹

¹*Dept Neuroanatomy, Yokohama City Univ, Yokohama, Japan* ²*Dept Neurophysiol, NIN, NCNP, Kodaira, Japan*

³*Sec Viral Vector Develop, NIPS, Okazaki, Japan*

P2-386

Short Talk 4

ST-4-41

9/12 10 : 00-11 : 00

Characteristics of striatal neurons innervated from midbrain dopaminergic neurons by trans-synaptic tracing study

Kaneyasu Nishimura, Takahashi Jun

Dept. of Clin. Appl. Kyoto Univ.

P2-387

Three-dimensional reconstruction of ultrathin-sectioned brain by light microscopy

Hirohide Iwasaki, Shigeo Okabe

Dept Cellular Neurobiol., Graduate School of Medicine, Univ of Tokyo, Tokyo, Japan

P2-388

Novel method for development of the new PET probes detecting AMPA receptors

Asami Serizawa¹, Yuusuke Shibata¹, Youko Kuroki^{1,2}, Tomoyuki Miyazaki^{1,2}, Takuya Takahashi¹

¹*Department of Physiology, Yokohama City University School of Medicine*

²*Department of Anesthesiology, Yokohama City University Graduate School of Medicine*

P2-389

Short Talk 3

ST-3-41

9/12 9 : 00-10 : 00

Non-invasive MRI Monitoring of Immune Cell Recruitment and Migration in Mouse Brain

Yuki Mori^{1,2}, Ting Chen¹, Tetsuya Fujisawa³, Syoji Kobashi³, Yutaka Hata³, Yoshichika Yoshioka^{1,2}

¹*Immunology Frontier Research Center, Osaka Univ* ²*Center for Information and Neural Networks, NICT and Osaka Univ*

³*Graduate School of Engineering, Univ of Hyogo*

P2-390

A new sequence method of manganese enhanced MRI in vivo

Misato Yoshikawa, Akihiko Takashima

Dept Aging Neurobiol, National Center for Geriatrics and Gerontology, Aichi, Japan

P2-391

Computational analysis of the effects of anti-neoplastic agents on intraneuronal transport of human iPSC derived neurons

Haruko Nakamura^{1,4}, Naoya Yamashita¹, Yuri Kanamaru², Yuko Sekino³, Toshiyuki Gotoh²,

Fumiaki Tanaka⁴, Yoshio Goshima¹

¹*Department of Molecular Pharmacology and Neurobiology, Yokohama City University Graduate School of Medicine, Yokohama, Japan*

²*Graduate School of Environment and Information Sciences, Yokohama National University, Yokohama, Japan*

³*Division of Pharmacology, National Institute of Health Sciences, Tokyo, Japan*

⁴*Department of Neurology and Stroke Medicine, Yokohama City University Graduate School of Medicine, Yokohama, Japan*

Optical Methods

- P2-392** **Functional Near-infrared Cortical Imaging (fNCI) of the miniature pig brain : The comparison of hemoglobin species**
Minako Uga^{1,4}, Toshiyuki Saito^{1,2}, Daisuke Tsuzuki⁴, Hidenori Yokota³, Keiji Oguro³, Edison Edmi Rizki³, Tsutomu Mizutani³, Ippeita Dan^{1,4}, Eiju Watanabe^{1,3}
¹Center for Development of Advanced Medical Technology, Jichi Medical University, Tochigi, Japan
²Department of Animal Medical Sciences, Faculty of Life Sciences, Kyoto Sangyo University, Kyoto, Japan
³Department of Neurosurgery, Jichi Medical University, Tochigi, Japan
⁴Research and Development Initiatives/ Faculty of Science and Engineering, Chuo University, Tokyo, Japan
- P2-393** **Analysis of interrelationships among slow changes in cerebral and other physiological signals by using directed coherence function**
Kyoko Yamazaki¹, Tsukasa Funane², Masashi Kiguchi², Ai Hirasawa³, Shigehiko Ogoh¹, Naoki Tanaka¹
¹Department of Biomedical Engineering, Faculty of Science and Engineering, Toyo University ²Central Research Laboratory, Hitachi, Ltd
³Graduate School of Science and Engineering, Toyo University
- P2-394** **Near-infrared spectroscopy (NIRS) in non-human primates: Toward search of biological markers for neurodevelopmental and psychiatric disorders**
Short Talk 4
ST-4-42
9/12 10 : 00-11 : 00
Lee Young-A¹, Yukiori Goto²
¹Catholic University of Daegu ²Primate Research Institute, Kyoto University
- P2-395** **Visualization of cerebral cortical calcium dynamics by a transgenic mouse that express G-CaMP7 in neurons and glia**
Short Talk 3
ST-3-42
9/12 9 : 00-10 : 00
Hiromu Monai¹, Masamichi Ohkura², Mika Tanaka¹, Shigeyoshi Itohara¹, Junichi Nakai², Youichi Iwai¹, Hajime Hirase^{1,2}
¹RIKEN BSI, Wako, Saitama, Japan ²Saitama University Brain Science Institute, Saitama, Saitama, Japan
- P2-396** **Comparing electrical neural activities and calcium responses recorded by micro-endoscope in deep brain area of mouse**
Short Talk 4
ST-4-43
9/12 10 : 00-11 : 00
Hidetaka Yashiro¹, Ichiro Nakahara^{4,5}, Kohta I Kobayasi^{2,3}, Kazuo Funabiki^{1,4,5}, Hiroshi Riquimaroux^{1,2,3}
¹Graduate School of Life and Medical Sciences, Doshisha University
²Department of Biomedical Information, Faculty of Life and Medical Sciences, Doshisha University, Kyoto, Japan
³Neurosensing and Bionavigation Research Center, Doshisha University, Kyoto, Japan
⁴Graduate school of Biostudies, Kyoto University, Kyoto, Japan
⁵Department of Systems Biology, Osaka Bioscience Institute, Osaka, Japan
- P2-397** **Brain functional imaging with an implantable CMOS imaging device for using in a behavior experiment**
Makito Haruta, Yoshinori Sunaga, Takahiro Yamaguchi, Hironari Takehara, Toshihiko Noda, Kiyotaka Sasagawa, Takashi Tokuda, Jun Ohta
Nara Institute of Science and Technology
- P2-398** **Femtosecond laser-induced stimulation of a single neuron and its application to functional analysis of living neuronal networks**
Short Talk 4
ST-4-44
9/12 10 : 00-11 : 00
Yuta Nakagwa^{1,2}, Suguru N Kudoh^{1,2}, Takahisa Taguchi³, Chie Hosokawa^{1,2}
¹Health Res Inst, AIST, Osaka, Japan ²School of Sci and Tech, Kwansai Gakuin Univ, Hyogo, Japan ³CiNet, NICT, Osaka, Japan

Synaptic Plasticity

- P2-399** **Oxytocin mediates early experience-dependent crossmodal plasticity in the sensory cortices**
Jingjing Zheng, Shujing Li, Xiaodi Zhang, Wanying Miao, Dinghong Zhang, Haishan Yao, Xiang Yu
Institute of Neuroscience, Chinese Academy of Sciences, China

Signal Transduction and Modulation

- P3-001** **MAM-2201, a Newly Emerged Abused Drug, Potently Suppresses Synaptic Transmission via CB1R, and Reduces Synaptically-Evoked Dendritic Ca²⁺ Transient in Cerebellar Neurons of Mice**
Tomohiko Irie¹, Ruri Kikura-Hanajiri², Makoto Usami¹, Nahoko Uchiyama², Yukihiro Goda³, Yuko Sekino¹
¹Div Pharmacology, National Institute of Health Sciences
²Div Pharmacognosy, Phytochemistry, Narcotics, National Institute of Health Sciences
³Div Drugs, Narcotics, National Institute of Health Sciences
- P3-002** **Frequency dependent specialization of dendritic processing in auditory coincidence detector neurons of birds**
Rei Yamada¹, Hiroshi Kuba^{1,2}
¹Dept Cell Physiol, Nagoya Univ Grad Sch Med, Aichi, Japan ²JST PRESTO, Saitama, Japan
- P3-003** **Nitric oxide-mediated central olfactory responses in a land mollusk**
Short Talk 5
ST-5-1
9/13 9:00-10:00
Kouhei Ishida¹, Yuuta Hamasaki¹, Tomoya Shimokawa¹, Minoru Saito¹, Fumihito Takanashi², Yoshiichiro Kitamura³, Satoshi Watanabe⁴
¹ Graduate School of Integrated Basic Sciences, Nihon University, Tokyo, Japan
²Graduate School of Pharmaceutical Sciences, University of Tokyo, Tokyo, Japan
³College of Science and Engineering, Kanto Gakuin University, Yokohama, Japan
⁴Department of Bioengineering and Robotics, Graduate School of Engineering, Tohoku University, Sendai, Japan
- P3-004** **Two Distinct Types of Adrenoceptors Modulate Network Activity in The Central Nucleus of Amygdala**
Sumii Yamamoto¹, Yukari Takahashi², Ayako Watabe², Fusao Kato²
¹University of Tsukuba ²Dept Neurosci, Jikei Univ Sch Med, Tokyo, Japan
- P3-005** **Frequency of Spontaneous Electrical activity is modulated by Extracellular Glucose Concentration in a Rat Hippocampal Neuronal Network**
Short Talk 5
ST-5-2
9/13 9:00-10:00
Wataru Minoshima, Hidekatsu Ito, Suguru N. Kudoh
Dept. of Sci. and Tech. Human System Interaction Kwansai Gakuin University, Japan
- P3-006** **Calcineurin Activity Regulation by NAP-22 and Lipid Localized at Lipid Raft**
Yuumi Kobayashi, Fumio Hayashi, Shohei Maekawa
Dept Biology, Kobe Univ, Hyogo, Japan
- P3-007** **Spontaneous neuronal activity levels are similar between organotypically cultured networks and *in vivo* networks**
Kazuki Okamoto¹, Tomoe Ishikawa¹, Reimi Abe¹, Daisuke Ishikawa¹, Chiaki Kobayashi¹, Mika Mizunuma¹, Hiroaki Norimoto¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Lab Chem Pharmacol, Grad Sch Pharmaceut Sci, Univ Tokyo, Tokyo, Japan
²Center for Information and Neural Networks, Osaka, Japan
- P3-008** **[6]-Gingerol induces autophagy by inhibiting the Akt/mTOR/p70S6K pathway in NG108-15 cells**
Sayaka Fujimoto, Hiroko Inoue
Waseda university
- P3-009** **Control mechanism of cell migration induced by adducin**
Mitsushi J Ikemoto^{1,2}
¹Biomedical Research Institute, AIST, Ibaraki, Japan ²Grad. Sch. of Sci. Toho Univ, Chiba, Japan
- P3-010** **Expression of neurotrophin receptors in rat superior cervical ganglia**
Pablo Valle Leija, Rommel Arias, Angeles Cancino, Freddy Cifuentes, Miguel Morales
National Autonomous University of Mexico, Mexico
- P3-011** **Intervals of bursting electrical activity were memorized by electrical stimulus in a cultured neuronal network**
Hidekatsu Ito
School of Sci.and Tech.,Kwansai Gakuin Univ.

Axonal Transport and Cytoskeleton

- P3-012** Alcadein drives kinesin-1 and undergoes constitutive limited proteolysis to maintain proper distribution of kinesin-1
Tohru Yamamoto¹, Tetsuhiko Toyoshima¹, Chiaki Maruta², Masahiko Araseki², Toshiharu Suzuki²
¹Dept Mol. Neurobiol., Fac Med., Kagawa Univ, Kagawa, Japan ²Lab Neurosci., Fac Pharm. Sci., Hokkaido Univ, Hokkaido, Japan
- P3-013** Filamin A-interacting protein is involved in the morphology of neuronal spines with one of chaperone proteins
Hideshi Yagi¹, Makoto Sato^{2,3,4}, Koichi Naguchi¹
¹Dept Anat & Neurosci, Hyogo Col of Med, Hyogo, Japan
²United Grad Sch of Child Development, Osaka Univ, Kanazawa Univ, Hamamatsu Univ Sch of Med, Chiba Univ and Univ of Fukui, Osaka, Japan ³Res Edu Program Life Sci, Univ of Fukui, Fukui, Japan
⁴Dept Anatomy and Neuroscience, Grad Sch Med, Osaka Univ, Osaka, Japan
- P3-014** Spikar function and its stabilization in dendritic spines are dependent on drebrin
Hiroyuki Yamazaki, Tomoaki Shirao
Dept. of Neurobiol. & Behavior, Gunma Univ. Sch. of Med.
- P3-015** Primary cultured hippocampal neurons prepared from drebrin knockout mice show the decrease of MAP2 positive dendrites at late developmental stage
Noriko Koganezawa¹, Yuki Kajita¹, Nobuhiko Kojima^{1,2}, Kenji Sakimura³, Tomoaki Shirao¹
¹Department of Neurobiology and Behavior, Gunma University Graduate School of Medicine
²Department of Life Sciences, Toyo University, Itakura, Japan
³Department of Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan
- P3-016** Endogenous sialidase affect neurite outgrowth and brain function
Shuhei Takahashi¹, Akinori Hisatsune², Yuki Kurauchi², Takahiro Seki¹, Hiroshi Katsuki¹
¹Dept. Chemico-Pharmacol. Sci., Grad. Sch. Pharm. Sci. Kumamoto Univ.
²Program for Leading Graduate Schools HIGO Program, Kumamoto Univ.
- P3-017** SEM observation of neurons on various substrates and nano-structures
Nahoko Kasai, Touichiro Goto, Rick Lu, Yoshiaki Kashimura, Aya Tanaka, Shingo Tsukada, Koji Sumitomo
NTT Basic Res.Labs.
- P3-018** JSAP1 and JLP regulate kinesin-1-dependent axonal transport to prevent neuronal degeneration
Tokiharu Sato¹, Masamichi Ohkura², Junichi Nakai², Nobuhiko Takamatsu³, Katsuji Yoshioka¹
¹Cancer Research Institute, Kanazawa University, Japan ²Brain Science Institute, Saitama University, Japan
³School of Science, Kitasato University, Japan

Glia and Glia-Neuron Interaction

- P3-019** Involvement of microglia in synaptic maturation in the developing common marmoset brains
Tomomi Sanagi¹, Tetsuya Sasaki¹, Kazuhisa Sakai¹, Shigeo Uchino^{2,3}, Shinichi Kohsaka³, Noritaka Ichinohe¹
¹Department of Ultrastructural Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan
²Department of Biosciences, School of Science and Engineering, Teikyo University, Tochigi, Japan
³National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan
- P3-020** STAT3 pathway in microglia is involved in cognitive function
Jeong-Kyu Han¹, Sun-Ho Kwon²
¹Department of Brain & Cognitive Sciences, Seoul National University, Seoul, Korea
²Department of Pharmacology, College of Medicine, Seoul National University
- P3-021** RhoGDI2 controls for migration of astrocytes following an excitotoxic lesion in the mouse hippocampus
Hyunjung Baek, Min-Hee Yi, Nara Shin, Dong Woon Kim
Department of Anatomy, Brain Research Institute, Chungnam National University School of Medicine, Daejeon, South Korea
- P3-022** Ultrastructural investigation of lateralized experience-dependent synaptic plasticity in rat hippocampal CA1 stratum radiatum
Yoshiaki Shinohara, Aki Hosoya, Hajime Hirase
RIKEN BSI
Short Talk 6
ST-6-1
9/13 10 : 00-11 : 00
- P3-023** Involvement of nitric oxide in the induction of interleukin 1 β in microglia in vitro
Kazuyuki Nakajima¹, Mitsuko Takizawa¹, Hiroshi Kobayashi¹, Shinichi Kohsaka²
¹Dept. of Bioinformatics, Faculty of Engineering, Soka Univ. ²National Institute of Neuroscience, Tokyo, Japan

P3-024

Sustained downregulation of β -dystroglycan in astrocytic endfeet in epileptic cerebral cortex

Short Talk 6
ST-6-2

9/13 10 : 00-11 : 00

Asako Gondo, Takanori Shinotsuka, Ayaka Morita, Masato Yasui, Mutsuo Nuriya
Keio University School of Medicine

P3-025

Structural abnormalities of the nodes of Ranvier by exposed repeated stressful events is associated with the onset of major depressive disorder

Shingo Miyata¹, Yoshihisa Koyama², Manabu Taniguchi², Shoko Shimizu¹, Takashi Tanaka¹, Matsumura Akiyo¹, Masaya Tohyama¹

¹*Div Mol Brain Sci, Res Ins Tra Asian Med, Kinki Univ, Osaka, Japan* ²*Dept Anat Neurosci, Med, Osaka Univ, Osaka*

P3-026

Transformation of resident microglia into phagocytic cells in transected and cycloheximide-administered rat facial nucleus

Daiki Shimakawa¹, Yasuko Nagamine¹, Maasa Koshimoto¹, Michiko Nakagawa¹, Shinichi Kohsaka², Kazuyuki Nakajima¹

¹*Department of Bioinformatics, Faculty of Engineering, Soka University* ²*National Institute of Neuroscience*

P3-027

Myelin homeostasis dysfunction induces motor learning impairments

Daisuke Kato¹, Hiroaki Wake¹, Ryohei Akiyoshi¹, Yasuyo H Tanaka², Yasuhiro R Tanaka², Yoshito Masamizu², Riichiro Hira², Fuki Ohkubo², Philip R Lee³, Douglas R Fields³, Junichi Nabekura¹, Masanori Matsuzaki²

¹*Division of Homeostatic Development, NIPS, Okazaki, Japan* ²*Division of Brain Circuits, NIBB, Okazaki, Japan*

³*Section of Nervous System Development and Plasticity NICHD, NIH*

P3-028

Effect of pressure and temperature on the viability and function of rat primary astrocytes

Keiji Nei¹, Kazuyuki Nakajima², Shinichi Yamamoto², Akio Shimizu¹

¹*Dept Environmental Engineering for Symbiosis, Soka University, Tokyo, Japan* ²*Dept Bioinformatics, Soka University, Tokyo, Japan*

Myelination and Myelin-Axon Interaction

P3-029

The role of damage associated molecular patterns (DAMPs) in myelin restitution

Ayako Tsukihashi, Rieko Muramatsu, Toshihide Yamashita
Dept Med, Univ of Osaka, Osaka, Japan

Blood-Brain Barrier

P3-030

Effect of Transcranial Direct Current Stimulation on the Permeability of the Rat Blood-Brain Barrier

Short Talk 6
ST-6-3

9/13 10 : 00-11 : 00

Nik Mohd Afizan Nik Abd. Rahman^{1,2}, Kazuaki Nagasaka^{2,3}, Nobuo Kunori^{2,3}, Yumiko Watanabe², Noriyuki Higo², Ichiro Takashima²

¹*Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, Serdang, Malaysia*

²*Human Tech. Res. Inst., AIST, Tsukuba, Japan* ³*Grad. Sch. of Comp. Human Sci., University of Tsukuba, Tsukuba, Japan*

P3-031

Development of in vitro blood-brain barrier model including microglia

Short Talk 5
ST-5-3

9/13 9 : 00-10 : 00

Yukari Mogami, Kazue Hoshikawa, Yuko Sekino, Kaoru Sato

Divi. Pharmacol., National Institute of Health Sciences, Tokyo, Japan

P3-032

Difference between the blood-brain barrier and blood-nerve barrier: Analyses using new human in vitro blood-brain and blood-nerve barrier models

Masaaki Abe, Yasuteru Sano, Hideaki Nishihara, Mariko Oishi, Hironori Sano, Fumitaka Shimizu, Toshihiko Maeda, Takashi Kanda

Yamaguchi University School of Medicine Department of Clinical Neuroscience and Neurology

Gene Regulation and Epigenetics

P3-033

Mechanisms of transcription-dependent gene clustering in differentiating embryonic neural stem cells

Kenji Ito¹, Sanosaka Tsukasa², Igarashi Katsuhide³, Otsuka I Maky³, Uosaki Yuichi¹, Noguchi Azumi¹, Arakawa Hirokazu¹, Nakashima Kinichi², Takizawa Takumi¹

¹*Dept Pediatrics, Univ of Gunma, Gunma, Japan* ²*Dept Stemcellbiol, Univ of Kyusyu, Fukuoka, Japan*

³*L-StaR, Hoshi University School of Pharmacy and Pharmaceutical Science, Tokyo, Japan*

- P3-034** **CTCF is an important factor for normal neuronal distribution, generation and development in inhibitory neurons**
 Hiromi Tanigaki¹, Takeshi Yagi^{1,4}, Takeshi Kitsukawa^{1,4}, Teruyoshi Hirayama^{1,4}, Katsuei Shibuki^{2,4}, Kouhei Yoshitake^{2,4}, Galjart Niels³
¹Grad. Sch. of Front. Biosci., Osaka Univ., Osaka, Japan ²Dept. of Neurophysiol., Brain Res. Inst., Niigata Univ., Niigata, Japan
³Dept. of Cell Biol. and Gen., Erasmus MC., Rotterdam, The Netherlands ⁴JST-CREST, Suita, Japan
- P3-035** **Differential expression and dendritic function of SRF coactivator MKL2 isoforms in cortical neurons**
 Akiko Tabuchi¹, Yuta Ishibashi¹, Shizuku Shoji¹, Yukimi Kubo¹, Tomoyuki Hakamata¹, Tomoaki Miyata¹, Natsumi Satoh¹, Hiroyuki Sakagami², Mamoru Fukuchi¹, Masaaki Tsuda¹
¹Laboratory of Molecular Neurobiology, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Toyama, Japan
²Department of Anatomy, Kitasato University, School of Medicine, Kanagawa, Japan
- P3-036** **Identification of plastic genes by transcriptome and ChIP-seq of Otx2 homeoprotein**
 Akiko Sakai¹, Ryuichiro Nakato², Norikazu Hara³, Yuchio Yanagawa⁴, Ryoza Kuwano³, Katsuhiko Shirahige², Sayaka Sugiyama¹
¹Grad Sch Med Dent Sci, Niigata Univ, Niigata, Japan ²Inst Mol Cell Biosci, Univ of Tokyo, Tokyo, Japan
³Brain Res Inst, Niigata Univ, Niigata, Japan ⁴Grad Sch Med, Gunma Univ, Gunma, Japan
- P3-037** **Light stimuli alter the activity status of CREB and CRT1 in the primary visual cortex of adult marmosets**
 Yuki Nakagami¹, Akiya Watakabe¹, Hiroshi Takemori², Tetsuo Yamamori¹
¹Div Brain Biol, Nat Inst Basic Biol, Aichi, Japan ²Lab Cell Sig & Metab, Nat Inst Biomed Innov, Osaka, Japan
- P3-038** **Zebrafish nr0b1 can repress the expression of pdyn gene in ventral hypothalamus**
 Sijie Chen, Peng Gang
 Institutes of Brain Science, Fudan University, Shanghai, China
- P3-039** **Artificial evolution and screening for new genes involved in temperature habituation of *C. elegans***
 Yukari Kinoshita, Akane Ohta, Satoru Sonoda, Atsushi Kuhara
 Univ of Konan, Kobe, Hyogo, Japan

Regulation and Function of RNA, Translational Regulation

- P3-040** **HIMAJA : a new motif search engine for control factor of neuronal function**
 Mana Igarashi^{1,2}, Hisashi Aoi³, Hirotsuka J Okano⁴, Hideyuki Okano¹
¹Dept. of Physiol., Keio Univ. Sch. Med., Tokyo, Japan ²Faculty of Science and Technology, Sophia Univ., Tokyo, Japan
³Dept Math, Ritsumeikan Univ, Shiga, Japan ⁴Div Reg Med, Jikei Univ Sch Med, Tokyo, Japan
- P3-041** **Axonal RNAs in the optic tectum of chick embryos**
 Isato Araki^{1,2}, Nozomi Onodera^{1,2}, Keiko Okudaira¹, Shiho Nozaki¹, Ryuji Nanayama¹, Miwa Watanabe¹
¹Dept Bioeng, Fac Eng, Iwate Univ, Morioka, Japan ²UGAS, Iwate Univ, Morioka, Japan
- P3-042** **Novel alternative 5'UTRs of general transcription factor II-I (Gtf2i) mRNAs: their differential expression in rat brain and localization to neuronal dendrites**
 Yoshinori Shirai, Suzuki Tatsuo
 Dept Neuroplasticity, Shinshu Univ, Grad Sch Med, Matsumoto, Japan
- P3-043** **Glial miR expression following basic fibroblast growth factor application in astrocytes**
 Noriko Yamamoto¹, Tadahi Numakawa¹, Shingo Nakajima¹, Yoshiko Ooshima¹, Haruki Odaka¹, Kazuo Hashido², Naoki Adachi¹, Hiroshi Kunugi¹
¹Dept. of Mental Disorder Research, Nat'l Inst. of Neurosci., NCNP, Tokyo, Japan
²Administrative Section of Radiation Protection, NCNP, Tokyo, Japan

Posttranslational Modulation and Proteolysis

- P3-044** **Specific proteolytic cleavage of Reelin regulates duration and range of its signaling**
 Kyoko Okumura, Mari Koie, Arisa Hisanaga, Takao Kohno, Mitsuharu Hattori
 Dept. Biomed. Sci., Grad. Sch. Pharmaceuti. Sci., Nagoya City Univ.
- P3-045** **Selective autophagy of lysosomes with ceroid-lipofuscin in neurons deficient in cathepsinD**
 Tomohisa Nanao¹, Koike Masato², Yamaguchi Junji¹, Shibata Masahiro³, Uchiyama Yasuo¹
¹Dept. Cell & Mol. Neuropathol., Juntendo Univ. Sch. Med., Tokyo, Japan
²Dept. Cell Biol & Neurosci., Juntendo Univ. Sch. Med., Tokyo, Japan
³Division of Gross Anatomy and Morphogenesis, Niigata Univ. Sch. Med & Dent Sci., Niigata, Japan

- P3-046 Hippocampal pyramidal neurons lacking LC3A and LC3B are resistant to hypoxic-ischemic brain injury in neonatal mice**
Junji Yamaguchi¹, Sunabori Takehiko², Koike Masato², Nanao Tomohisa¹, Shibata Masahiro³, Uchiyama Yasuo¹
¹*Dept. Cell & Mol. Neuropathol., Juntendo Univ. Sch. Med., Tokyo, Japan*
²*Dept. Cell Biol & Neurosci., Juntendo Univ. Sch. Med., Tokyo, Japan*
³*Dept. Gross Anat & Morphogene, Niigata Univ. Sch. Med & Dent Sci., Niigata, Japan*

Drug Development

- P3-047 In vivo assessment of axonal ion channel functions by inhibition of slow K channels**
Hiroyuki Nodera, Banzrai Chimeglkham, Yusuke Osaki, Ryuji Kaji
Tokushima University
- P3-048 The Effects of Mitsuba Extract on RAW264.7 Macrophage-like Cells**
Takahiro Yamamoto, Hiroko Inoue
Dept. Electrical engineering and Bioscience, Waseda university, Tokyo, Japan
- P3-049 Effects of Dihydrohonokiol-B on amyloid β_{1-42} -induced neuronal cell death in rat cultured hippocampal cells**
Yasuhisa Nakayama, Tomoyuki Nakamura
Dept. Pharm, Kansai Med Univ, Osaka, Japan
- P3-050 Application of human induced pluripotent stem cell-derived neurons to the neurotoxicity evaluation system**
Short Talk 6
ST-6-5
9/13 10:00-11:00
Kanako Takahashi¹, Yukari Mogami¹, Kanae Ohtsu¹, Yohei Okada², Hideyuki Okano², Yuko Sekino¹, Kaoru Sato¹
¹*Division of Pharmacology, National Institute of Health Sciences* ²*Dept. of Physiology, Sch. of Medicine, Keio Univ., Tokyo, Japan*
- P3-051 Effect of medial habenular activity on nicotine aversion in repeated nicotine-exposed rats**
Short Talk 5
ST-5-4
9/13 9:00-10:00
Hyunchan Lee, Jihyun Noh
Department of Science Education, Dankook University, Yongin-si, Gyeonggi-do, Korea

Others

- P3-052 Compound action potential inhibition produced by various traditional Japanese medicines in the frog sciatic nerve - interaction between crude medicines**
Tsugumi Fujita, Akitomo Matsushita, Sena Ohtsubo, Chang-Yu Jiang, Eiichi Kumamoto
Department of Physiology, Saga Medical School
- P3-053 Compound action potential inhibition by aroma-oil compounds in frog sciatic nerve and their chemical structures**
Sena Ohtsubo, Tsugumi Fujita, Akitomo Matsushita, Chang-Yu Jiang, Eiichi Kumamoto
Department of Physiology, Saga Medical School
- P3-054 Transient down-regulation and restoration of levels of glycogen synthase in transected rat facial motoneurons**
Yosuke Takezawa¹, Shinichi Kohsaka², Kazuyuki Nakajima^{1,2}
¹*Dept. of Bioinformatics, Faculty of Engineering, Soka Univ.*
²*Department of Neurochemistry, National Institute of Neuroscience, Tokyo, Japan*
- P3-055 Lysine 63-linked polyubiquitination is dispensable for Parkin-mediated mitophagy**
Kahori Fukushima¹, Tsuyoshi Inoshita², Nobutaka Hattori¹, Yuzuru Imai²
¹*Juntendo Univ.* ²*Department of Neurology and Research for Parkinson's Disease*
- P3-056 Structural basis for the trans- and cis-interactions of the voltage-gated sodium channel β subunits**
Hideaki Shimizu^{1,2}, Mikako Shirouzu^{1,2}, Nobuyuki Nukina⁴, Shun-ichi Sekine^{1,2}, Shigeyuki Yokoyama^{1,3}
¹*RIKEN Center for Life Science Technologies* ²*RIKEN Systems and Structural Biology Center* ³*RIKEN Structural Biology Laboratory*
⁴*Juntendo University School of Medicine*

Axonal/Dendritic Growth and Circuit Formation

P3-057 Withdrawn

Short Talk 5
ST-5-5
9/13 9:00-10:00

P3-058 Manipulating critical period by controlling synaptic GluN2B: live imaging of corticospinal axons

Noriko Isoo¹, Takae Ohno¹, Mutsumi Isowaki¹, Naoyuki Murabe¹, Masayoshi Mishina², Masaki Sakurai¹¹Dept. of Physiol., Teikyo Univ. Sch. of Med. ²Dept of Mol Neurobiol & Pharmacol, Grad Sch Med, Univ of Tokyo

P3-059 Coactosin, an actin-remodeling protein, activates critical period plasticity

Xubin Hou¹, Kenji Sakimura², Sayaka Sugiyama¹¹Lab. of Neuronal Development, Dept Med, Niigata Univ. Niigata, Japan²Dept Cellular Neurobiology, Brain Research Inst, Niigata Univ. Niigata, Japan

P3-060 Developmental change in GluN2B and critical period for corticospinal synapse

Mutsumi Isowaki¹, Takae Ohno¹, Noriko Isoo¹, Satoshi Fukuda¹, Masayoshi Mishina², Masaki Sakurai¹¹Dept Physiol, Teikyo Univ Sch Med ²Dept Mol Neurobiol & Pharmacol, Grad Sch Med, Univ Tokyo

P3-061 Localized imbalance between exocytosis and endocytosis steers neuronal growth cones

Rurika Itofusa¹, Takuro Tojima^{1,2}, Hiroyuki Kamiguchi¹¹Lab. for Neuronal Growth Mechanisms, RIKEN BSI, Saitama, Japan ²PRESTO, Japan Science and Technology Agency, Saitama, Japan

P3-062 Dock6 regulates switching from axon extension to branching

Yuki Miyamoto¹, Tomohiro Torii¹, Akito Tanoue¹, Junji Yamauchi^{1,2}¹Mol. Pharm. Group, Dept. of Pharmacology, Natl. Res. Inst. Child Health Dev.²Grad. School of Medical and Dental Sci., Tokyo Medical and Dental Univ.Short Talk 6
ST-6-6
9/13 10:00-11:00P3-063 Integrin $\alpha 5$ expressed in mesencephalic cells is involved in dopaminergic innervation of striatal neuronsChisato Kanbara¹, Yasuhiko Izumi¹, Seiko Wakita¹, Kanami Adachi¹, Toshie Nakai¹, Akinori Akaike^{1,2}, Toshiaki Kume¹¹Dept Pharmacol, Grad Sch Pharm Sci, Kyoto Univ, Kyoto, Japan²Dept Cell Pharmacol, Grad. Sch. Pharm. Sci., Nagoya Univ. Nagoya, Japan

P3-064 ERK2-Mediated Phosphorylation of Par3 Regulates Neuronal Polarization

Yasuhiro Funahashi, Takashi Namba, Shin Fujisue, Norimichi Ito, Shinichi Nakamuta, Katsuhiko Kato, Akiko Shimada, Chundi Xu, Wei Shan, Tomoki Nishioka, Kozo Kaibuchi

Dept. of Cell Pharmacology, Grad. Sch. of Med., Nagoya Univ.

P3-065 Role of ezrin in neuritogenesis in cultured cortical neurons

Yosuke Matsumoto¹, Masatoshi Inden², Atsushi Tamura³, Ryo Hatano¹, Sachiko Tsukita³, Shinji Asano¹¹Dept Mol Physiol, Ritsumeikan Univ ²Lab Med Therap Mol Therap, Gifu Pharm Univ ³Lab Biol Sci, Grad Sch Front Biosci, Osaka Univ

P3-066 Analysis of spatial change and temporal distribution of Rab35 activity during neurite outgrowth

Hiroyuki Nagai¹, Nanako Ishido¹, Sayaka Yasuda¹, Hotaka Kobayashi², Mitsunori Fukuda², Takeshi Nakamura¹¹RIBS, Tokyo Univ of Sci, Chiba, Japan ²Grad Sch of Life Sci, Tohoku Univ, Miyagi, Japan

P3-067 Opposite regulation by two afadin isoforms, l-afadin and s-afadin, of R-Ras-mediated axon branching in cultured cortical neurons

Kentarō Umeda, Izumi Oinuma, Manabu Negishi

Lab Mol Neurosci, Grad Sch Biost, Kyoto University, Kyoto, Japan

Short Talk 5
ST-5-6
9/13 9:00-10:00

P3-068 Analyses of neuronal and epithelial cell polarity of mice lacking genes involved in polarized transport

Akihiro Harada

Dept Cell Biology, Osaka Univ Grad Sch Med

P3-069 Cyclic nucleotides mediate axon guidance by regulating microtubule-dependent vesicle transport in the growth cones

Hiroki Akiyama¹, Tetsuko Fukuda¹, Takuro Tojima^{1,2}, Hiroyuki Kamiguchi¹¹RIKEN Brain Science Institute ²PRESTO, JST, Saitama, Japan

P3-070 Visualization and kinematic analysis of the three-dimensional growth cone motility using Riesz transform-assisted differential interference contrast imaging

Atsushi Tamada^{1,2,3}, Michihiro Igarashi^{1,2}¹Ctr for Transdisciplinary Research, Niigata Univ, Niigata, Japan²Dept Neurochem and Mol Cell Biol, Grad Sch Med and Dent Sci, Niigata Univ, Niigata, Japan ³PREST, JST, Saitama, Japan

P3-071

Short Talk 5
ST-5-7
9/13 9:00-10:00

Developmental connectomics of axonal reorganization in chick ciliary ganglion

Ryo Egawa^{1,2}, Shoko Hososhima^{1,2}, Toru Ishizuka^{1,2}, Hiromu Yawo^{1,2,3}

¹Grad Sch Life Sci, Tohoku Univ, Sendai, Japan ²CREST, JST, Tokyo, Japan

³Center for Neurosci, Grad Sch Med, Tohoku Univ, Sendai, Japan

P3-072

N-cadherin-mediated Radial glial cell-cortical neuron interaction directs axon formation from the opposite side of contacting neurite

Chundi Xu, Yasuhiro Funahashi, Takashi Watanabe, Tetsuya Takano, Takashi Namba, Kozo Kaibuchi
Dept of Cell Pharmacology, Nagoya University, Nagoya, Japan

P3-073

Importance of the inositol 1,4,5-trisphosphate receptor type 3 (IP₃R3) in growth cone navigation

Carmen Chan¹, Hiroki Akiyama¹, Toru Matsu-ura², Katsuhiko Mikoshiba², Hiroyuki Kamiguchi¹

¹RIKEN Brain Science Institute, Lab. for Neuronal Growth Mechanisms ²RIKEN Brain Science Institute, Developmental Neurobiology

Trophic Factors and Cytokines

P3-074

A Search for Nerve Regeneration Factors from Choroid Plexus Epithelial Cells

Kenji Kanekiyo¹, Norihiko Nakano¹, Tamami Homma¹, Naoya Matsumoto², Chizuka Ide¹

¹Inst of Regeneration and Rehabilitation, Aino Univ, Osaka, Japan

²Dept of Trauma and Acute Critical Care Ctr, Osaka Univ, Hosp, Osaka, Japan

P3-075

Short Talk 5
ST-5-8
9/13 9:00-10:00

Expression and localization of metallothionein in the brain of zebrafish

Seong Lin Teoh, Satoshi Ogawa, Ishwar Parhar

Brain Research Institute, Jeffrey Cheah School of Medicine, Monash University Malaysia, Sunway, Malaysia

Axonal Regeneration and Tissue Repair

P3-076

Characterization of canine dental pulp cells for neuroregenerative therapy

Eiji Naito¹, Daichi Kudo², Shinichiro Sekine², Kazuhiro Watanabe¹, Naritaka Tamaoki³, Masatoshi Inden², Kazuki Iida³, Isao Hozumi², Toshiyuki Shibata³, Yusuke Ito¹, Sadatoshi Maeda¹, Hiroaki Kamishina¹

¹Dept. Veterinary Medicine, Faculty Applied Biological Sciences, Gifu Univ., Gifu, Japan

²Lab. Medical Therapeutics and Molecular Therapeutics, Gifu Pharmaceutical Univ., Gifu, Japan

³Dept. Oral and Maxillofacial Sciences, Gifu Univ. School of Medicine, Gifu, Japan

P3-077

Autophagy is associated with the dystrophic endball formation induced by a proteoglycan gradient

Tomoya Ozaki, Kazuma Sakamoto, Yuanhao Gong, Kenji Uchimura, Kenji Kadomatsu

Dept Biochem, Nagoya Univ Grad Sch of Med, Aichi, Japan

P3-078

Roles of LOTUS, an endogenous Nogo receptor antagonist, in nerve regeneration after spinal cord injury

Tomoko Hirokawa¹, Yusuke Sakakibara², Yuji Kurihara¹, Masumi Iketani¹, Yoshio Goshima², Kohtaro Takei¹

¹Mol. Med. Biosci. Lab., Grad. Sch. of Med. Life Sci., Yokohama City Univ., Yokohama, Japan

²Dept Mol. Pharmacol. & Neurobiol., Grad. Sch. of Med., Yokohama City Univ., Yokohama, Japan

P3-079

LOTUS suppresses chondroitin sulfate proteoglycans-induced axonal growth inhibition

Yuji Kurihara, Yu Saito, Kohtaro Takei

Mol. Med. Biosci. Lab., Grad. Sch. of Med. Life Sci., Yokohama City Univ., Yokohama, Japan

P3-080

L-carnitine enhances axonal plasticity and improves white matter lesions after chronic hypoperfusion in rat brain

Yuji Ueno¹, Masato Koike³, Yoshiaki Shimada¹, Hideki Shimura², Yasuo Uchiyama³, Nobutaka Hattori¹, Takao Urabe²

¹Department of Neurology, Juntendo University School of Medicine, Tokyo, Japan

²Department of Neurology, Juntendo University Urayasu Hospital, Chiba, Japan

³Department of Cell Biology and Neuroscience, Juntendo University School of Medicine, Tokyo, Japan

P3-081

CSPG inhibits neurite outgrowth through interaction of RPTP-sigma with NME2

Hajime Hamasaki, Masashi Fujitani, Toshhide Yamashita

Department of Molecular Neuroscience, Graduate School of Medicine, Osaka University

Neuronal Death and Apoptosis

P3-082

Analysis of cell death in dentate gyrus of rat model of hyponatremia accompanied by adrenal insufficiencyShort Talk 6
ST-6-7
9/13 10:00-11:00Hisakazu Izumida¹, Yoshihisa Sugimura¹, Hiroshi Takagi¹, Haruki Fujisawa¹, Kohtarō Nakashima¹, Seiji Takeuchi¹, Hiroshi Ochiai¹, Takashi Namba², Shintaro Iwama¹, Yutaka Oiso¹¹Dept of Endocrinology and Diabetes, Univ of Nagoya, Grad Sch of Med, Nagoya, Japan²Dept of Cell Pharmacology, Univ of Nagoya, Grad Sch of Med, Nagoya, Japan

P3-083

DAP12-mediated inflammatory response in microglia exacerbates neuronal survival after motor nerve injuryMasaaki Kobayashi¹, Hiroyuki Konishi¹, Toshiyuki Takai², Hiroshi Kiyama¹¹Department of Functional Anatomy and Neuroscience, Nagoya University Graduate School of Medicine, Aichi, Japan²Department of Experimental Immunology, Institute of Development, Aging and Cancer, Tohoku University, Miyagi, Japan

P3-084

Protective effects of silymarin on ischemia-induced delayed neuronal cell death in rat hippocampusKoki Hirayama¹, Hideki Oshima¹, Akiko Yamashita³, Takashi Ikejima⁴, Kaoru Sakatani², Yoichi Katayama¹¹Dept Neurosurg, Nihon Univ Sch of Med, Tokyo, Japan ²Dept Electrical Engineering, Univ of Nihon, Tokyo, Japan³Div of Biology, Nihon Univ Sch of Med, Tokyo, Japan⁴China-Japan Res Instit Med and Pharmaceut Sci, Shenyang Pharmaceut Univ, Shenyang, China

P3-085

LPS-induced nitric oxide production is mediated by down-regulation of PIs synthesis in microglial cell lineShort Talk 5
ST-5-9
9/13 9:00-10:00Mohammed Youssef Saleh Ahmed¹, Shamim M Hossain¹, Kiyotaka Miake², Ahmed Ibrahim³, Toshihiko Katafuchi¹¹Dept Integr Physiol Kyushu Univ Grad Sch Med Sci ²Center Research Institute, Marudai Food, Co.³Dept Animal Physiol, Fac Vet Med, South Valley Univ, Qena, Egypt Dept Poultry Diseases, Fac Vet Med, South Valley Univ, Qena, Egypt

Adult Neurogenesis

P3-086

Regulation of the process of adult neurogenesis in the adult hippocampal dentate gyrus by Parvalbumin-positive neuronsHideki Miwa^{1,2}, Nobuaki Tamamaki³, Yuchio Yanagawa^{1,2}¹Dept of Genetic & Behavioral Neurosci, Gunma Univ Grad Sch Med, Maebashi, Japan ²Japan Science and Technology Agency, CREST³Dept Morphological Neural Science, Kumamoto Univ, Kumamoto, Japan

P3-087

Pia-progenitor that produce new neurons for adult mouse neocortexShogo Ninomiya^{1,2}, Chen Jing^{1,3}, Shigeyuki Esumi¹, Makoto Nasu¹, Ryohei Tomioka¹, Nobuaki Tamamaki¹¹Dept of Morphological Neural Science, Graduate School of Medical Sciences, Kumamoto Univ, Kumamoto, Japan²Dept of Rehabilitation, Faculty of Nursing and Welfare, Kyushu Univ of Nursing and social Wel, Kumamoto, Japan³Dept. of Anatomy, The forth Medical Univ. China

P3-088

Chk2 deficiency accelerates neural stem cell aging in the adult mouse hippocampusKyoko Ibaraki¹, Masato Sawada², Kazunobu Sawamoto², Makoto Minamiyama¹, Wakako Maruyama¹, Noboru Motoyama¹¹Department of Cognitive Brain Science, National Center for Geriatrics and Gerontology, Aichi, Japan²Department of Developmental and Regenerative Biology, Nagoya City University Graduate School of Medical Sciences, Aichi, Japan

P3-089

Selective vulnerability and dispersion of dentate granule cells and their progenitors in pilocarpine-induced status epilepticus rat model

Takeshi Uemori, Keiko Toda, Tatsunori Seki

Department of Histology and Neuroanatomy, Tokyo Medical University

P3-090

Adult neurogenesis reduces dimensionality to enhance pattern separation

Anthony Decostanzo, Tomoki Fukai

RIKEN

P3-091

The role of CAPS2 in adult neurogenesisShort Talk 5
ST-5-10
9/13 9:00-10:00Kaori Yagishita¹, Yo Shinoda¹, Teiichi Furuichi^{1,2}¹Department of Applied Biological Science Faculty of Science and Technology Tokyo University of Science ²RIKEN BSI, Saitama, Japan

- P3-092** **Drebrin knockout mice show the olfaction impairment caused by delayed neural exchange in olfactory bulb**
Yuki Kajita¹, Nobuhiko Kojima^{1,2}, Kenji Sakimura³, Tomoaki Shirao¹
¹Department of Neurobiology & Behavior, Gunma University Graduate School of Medicine
²Department of Life Sciences, Toyo University ³Department of Cellular Neurobiology, Brain Research Institute, Niigata University
- P3-093** **The impact of transgenic blockade of neurotransmitter release in newborn neurons on hippocampal dependent memory**
Hirotaka Asai¹, Thomas J. McHugh², Tatsuhiro Hisatsune¹
¹Dept. of Integrated Biosci., Grad. Sch. of Frontier Sciences, The Univ. of Tokyo
²Laboratory for Circuit and Behavioral Physiology, Riken BSI, Saitama, Japan
- P3-094** **Analysis of mechanism underlying brain growth accompanied by neurogenesis using medaka fish (Oryzias latipes)**
Yasuko Isoe¹, Teruhiro Okuyama¹, Masato Hoki¹, Yuji Suehiro¹, Genki Yamagishi¹, Kiyoshi Naruse², Masato Kinoshita³, Yasuhiro Kamei⁴, Atsushi Shimizu⁵, Takeo Kubo¹, Hideaki Takeuchi¹
¹Div. of Biol. Science, Grad. Sch. of Science, Univ. of Tokyo ²Dep. of Evo. Biol. and Biodiversity, NIBB, Okazaki Japan
³Dept Agriculture, Univ of Kyoto, Kyoto, Japan ⁴Spectrography & Bioimaging Fac., NIBB, Japan
⁵Public Health, Dept of Med., Keio Univ., Tokyo, Japan
- P3-095** **The effect of augmentation therapy consisting of a combination of antidepressants with 5-HT1A receptor agonist on rat hippocampal neurogenesis**
Masayoshi Mori¹, Yusuke Murata¹, Kazunori Mine², Munechika Enjoji¹
¹Dept Pharmacother, Fac Pharmaceuti Sci, Fukuoka Univ, Fukuoka, Japan ²Faculty of Neurology and Psychiatry, Mito Hospital
- P3-096** **The effect of chronic quetiapine treatment on the psychosocial stress-induced reduction of hippocampal neurogenesis in rat**
Hiroko Matsuda¹, Yusuke Murata¹, Masayoshi Mori¹, Shiori Hirose¹, Kazunori Mine², Munechika Enjoji¹
¹Dept Pharmacother, Fac Pharmaceuti Sci, Fukuoka Univ, Fukuoka, Japan ²Faculty of Neurology and Psychiatry, Mito Hospital
- P3-097** **Sleep deprivation decreases adult neurogenesis, dominantly in ventral hippocampus**
Ayana Oka¹, Yusuke Murata¹, Ayaka Iseki¹, Masayoshi Mori¹, Kazunori Mine², Munechika Enjoji¹
¹Dept Pharmacother, Fac Pharmaceuti Sci, Fukuoka Univ, Fukuoka, Japan ²Faculty of Neurology and Psychiatry, Mito Hospital
- P3-098** **The effects of weight-control intervention on hippocampal neurogenesis in high-fat diet induced obese mice**
Yoko Otsuka¹, Yusuke Murata¹, Masayoshi Mori¹, Naomi Kokushi¹, Yoshiko Nakashima¹, Kazunori Mine², Munechika Enjoji¹
¹Dept Pharmacother, Fac Pharmaceuti Sci, Fukuoka Univ, Fukuoka, Japan ²Faculty of Neurology and Psychiatry, Mito Hospital

Evolution

- P3-099** **Identification and Characterization of a Neuron-specific RNA-binding Protein Nova1 in Neocortical Development**
Tien-Cheng Wang, Ken-ichi Toma, Carina Hanashima
RIKEN, Center for Developmental Biology
- P3-100** **MRI volumetric analysis of sexual dimorphism and laterality of cerebellar morphology in ferrets**
Kazuhiko Sawada¹, Miwa Horiuchi-Hirose¹, Shigeyoshi Saito², Ichio Aoki³
¹Dept Nutr, Fac Health Sci, Tsukuba International Univ, Japan
²Dept Med Engineer, Div Health Sci, Osaka University Grad Sch Med, Japan ³Mol Imaging Cent, Nal Inst Radiol Sci, Japan
- P3-101** **Brain regeneration: Lessons from regenerative animals**
Takeshi Inoue¹, Tomomi Takano², Yoshihiko Umesonono¹, Kiyokazu Agata¹
¹Dept. of Biophysics, Kyoto Univ. ²Center for Developmental Biology, RIKEN

Tissue Engineering and Transplantation

- P3-102** **Transplantation of human iPS cell-derived neurons into the brain of adult rat**
Yoshihiko Irooi¹, Takenori Ogura^{1,2,3}, Noritaka Sano^{1,2,3}, Makoto Motono^{1,2}, Jun Takahashi^{1,2,3}
¹Institute for Frontier Medical Sciences, Univ of Kyoto, Kyoto, Japan ²CiRA, Univ of Kyoto, Kyoto, Japan
³Dept Neurosurgery, Univ of Kyoto, Kyoto, Japan

Sensorimotor Learning/Plasticity

- P3-103** Learning-stage-dependency of glutamatergic plasticity at layers II/III synapses in the rat primary motor cortex
Short Talk 5
ST-5-11
9/13 9 : 00-10 : 00
Hiroyuki Kida¹, Yasumasa Tusda¹, Yui Yamamoto², Yuji Owada², Dai Mitsushima¹
¹Dept of Neurosci., Yamaguchi Univ.Sch.of Med. ²Dept of Organ anatomy., Yamaguchi Univ.Sch.of Med.
- P3-104** Pregabalin decreased D-serine content and inhibited NMDA receptor-mediated synaptic transmission in the mouse spinal cord
Tetsuya Asakawa, Rie Matsuzawa, Toshifumi Takasusuki, Masao Maekawa, Shigaki Yamaguchi, Yuuichi Hori
Dept. Physiol. & Biol. Inf., Dokkyo Med. Univ., Tochigi, Japan
- P3-105** Analysis of Skilled Forelimb Movement in Rats with Hemiplegia with Motor Cortex Lesion
Yuuki Manaka, Kazuyuki Imamura
Dept. Systems Life Engineering, Graduate School of Engineering, Maebashi Institute of Technology, Gunma, Japan
- P3-106** Correlation between brain activity and performance of listening test: recognition process of the noise-vocoded speech sounds
Short Talk 6
ST-6-9
9/13 10 : 00-11 : 00
Shota Murai¹, Kohta I Kobayasi^{2,3}, Hiroshi Rikimaroux^{1,2,3}
¹Grad Sch of Life and Med Sci, Doshisha Univ, Japan ²Dept of Biomed Information, Fac of Life and Med Sci, Doshisha Univ, Japan
³Neurosensing and Bionavigation Res. Ctr, Doshisha Univ, Japan
- P3-107** Emergence of neural selectivity for learned songs in the songbird auditory cortex
Shin Yanagihara, Yoko Yazaki-Sugiyama
Okinawa Institute of Science and Technology Graduate University
- P3-108** Pre and postnatal effects of extremely low frequency electric fields on mismatch negativity component of the auditory event related potentials
Piraye Yargicoglu Akkiraz¹, Deniz Akpınar², Deniz Kantar Gok², Mutay Aslan³, Sukru Ozen⁴, Aysel Agar⁵
¹Akdeniz University, Faculty of Medicine ²Akdeniz University, Faculty of Medicine, Department of Biophysics
³Akdeniz University, Faculty of Medicine, Department of Biochemistry
⁴Akdeniz University, Engineering Faculty, Department of Electrical and Electronics Engineering
⁵Akdeniz University, Faculty of Medicine, Department of Physiology
- P3-109** Visual Cortical Prosthesis with a Geomagnetic Compass Restores Spatial Navigation in Blind Rats
Hiroaki Norimoto¹, Yuji Ikegaya^{1,2}
¹Lab.of Chem. Pharmacol., Grad.Sch.of Pharm.Sci., The Univ.of Tokyo ²Centre for Information and Neural Networks
- P3-110** The role of somatosensory input in paired associative stimulation
Nagako Murase¹, Bülent Cengiz², John C Rothwell²
¹National Hospital Organization Kyoto Medical Center
²Sobell Department of Motor Neuroscience and movement disorders, Institute of Neurology, University College London, London, UK
- P3-111** Long-term potentiation of indirect cortico-motoneuronal excitations in relaxed hand muscles in humans
Tsuyoshi Nakajima¹, Shinya Suzuki^{1,2}, Hiroyuki Ohtsuka², Takashi Endoh³, Yohei Masugi⁴, Shun Irie¹, Tomoyoshi Komiyama², Yukari Ohki¹
¹Dept Physiol, Kyorin Univ Sch of Med, Tokyo Japan ²Chiba Univ, Chiba, Japan ³Uekusa Gakuen Univ, Chiba Japan
⁴Univ of Tokyo, Tokyo Japan
- P3-112** Internal model of the human hand affects cognitive judgment for size of graspable tools: a relationship between handedness and tools
Masazumi Katayama, Yuta Kimura
Dept Human and Artificial Intelligent Systems, Graduate School of Engineering, Univ of Fukui, Japan

Visual System

- P3-113** Electrophysiological and behavioral approaches to understanding the neural basis of color vision in *Drosophila melanogaster*
Short Talk 5
ST-5-12
9/13 9 : 00-10 : 00
Yoichi Seki¹, Nanami Nakamura¹, Taro Yonekura¹, Ryohei Yamada², Haruka Nitta¹, Hiroyoshi Miyakawa¹, Takako Morimoto¹
¹Laboratory of Cellular Neurobiology, School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan
²Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Kanagawa, Japan

- P3-114** **A preliminary study on the morphological and motion cues involved in the induction of shoaling behavior by using 3DCG animation of medaka**
Tomohiro Nakayasu, Eiji Watanabe
National Institute for Basic Biology
- P3-115** **Histamine Affects the Voltage-Gated Currents in the Mouse Amacrine Cell**
Kayo Horio, Mahito Ohkuma, Ei-ichi Miyachi
Dept of Physiol, Sch of Med, Fujita Health Univ, Aichi, Japan
- P3-116** **Roles of the extrageniculate pathway in properties of higher visual cortices of mice**
Manavu Tohmi¹, Reiko Meguro², Hiroaki Tsukano¹, Ryuichi Hishida¹, Masao Norita², Katsuei Shibuki¹
¹Brain Res.Inst., Niigata Univ. ²Dept Neurobiol Anat, Sch Med, Niigata Univ, Niigata, Japan
- P3-117** **The intraretinal part of the rat optic nerve: A new sub-division scheme based on chemoarchitecture of GFAP and glutamine synthetase**
June Kawano
Lab for Neuroanat, Kagoshima Univ, Kagoshima, Japan
- Short Talk 5
ST-5-13
9/13 9 : 00-10 : 00
- P3-118** **Chronic two-photon calcium imaging of layer5 neurons in the mouse primary visual cortex**
Taisuke Yoneda, Hisato Maruoka, Seiichiro Sakai, Nao Nakagawa, Toshihiko Hosoya
Lab. for Local Neuronal Circuits, RIKEN BSI, Wako, Japan
- P3-119** **Three Types of Thalamocortical Projections from the Rat Lateral Posterior Thalamic Nucleus: A Single Neuron-Tracing Study Using Viral Vectors**
Hisashi Nakamura, Hiroyuki Hioki, Takahiro Furuta, Takeshi Kaneko
Dept Morphol Brain Sci, Kyoto Univ, Kyoto, Japan
- Short Talk 5
ST-5-14
9/13 9 : 00-10 : 00
- P3-120** **Reconstruction of stimulus images from the population activity in mouse primary visual cortex**
Takashi Yoshida^{1,2}, Kenichi Ohki^{1,2}
¹Dept Molecular Physiology, Grad. Sch. Medical Science, Kyushu Univ, Fukuoka, Japan ²CREST, JST
- P3-121** **Measurement of contrast response functions at multiple spatiotemporal frequencies within single neurons in primary visual cortex**
Kota S. Sasaki^{1,2}, Izumi Ohzawa^{1,2}
¹Graduate School of Frontier Biosciences, Osaka University ²Center for Information and Neural Networks, NICT, Osaka, Japan
- P3-122** **Shitsukan coding in marmoset visual neural network including posterior superior temporal area**
Naohisa Miyakawa, Taku Banno, Hiroshi Abe, Wataru Suzuki, Noritaka Ichinohe
National Center of Neurology and Psychiatry
- P3-123** **Functional organization of facial views within the face selective region in anterior inferotemporal cortex in macaque**
Chia-Pei Lin^{1,2}, Masashi Matsuda^{2,4}, Takayuki Sato², Go Uchida², Chou Po Hung³, Manabu Tanifuji^{2,4}
¹Institute of Neuroscience, National Yang-ming University, Taipei, Taiwan ²Brain Science Institute, Riken, Japan ³Dep of Neuroscience, Georgetown Uni, USA ⁴Dep of Complexity Science and Engineering, The Univ. of Tokyo, Japan
- P3-124** **Decoding of material categories from ECoG signals in the macaque inferior temporal cortex**
Takashi Teramoto¹, Keisuke Kawasaki¹, Takayuki Okatani², Hirohito Sawahata³, Takafumi Suzuki⁴, Isao Hasegawa¹
¹Dept Physiol, Niigata Univ Med Sch, Niigata, Japan ²Tohoku Univ Grad Sch of Info Sci, Miyagi, Japan ³Dept of Electrical and Electronic Inf Eng Toyohashi Univ of Tech, Aichi, Japan ⁴NICT Cinet, Osaka, Japan
- P3-125** **Hierarchical propagation of visual response through the inferior temporal cortex**
Keisuke Kawasaki¹, Taichi Haruna², Yuya Fujiki², Hirohito Sawahata³, Hisashi Tanigawa¹, Atsuhiko Iijima¹, Takafumi Suzuki⁴, Isao Hasegawa¹
¹Dept Physiol, Niigata Univ, Niigata, Japan ²Dept Earth and Planet Sci, Kobe Univ, Kobe, Japan ³Dept Electrical and Electronic Inf Eng, Toyohashi Univ of Tech, Aichi, Japan ⁴NICT Cinet, Osaka, Japan
- P3-126** **Population activity patterns of monkey pulvinar neurons categorize facial orientation, gender, and identities of human models**
Nguyen Minh Nui, Jumpei Matsumoto, Etsuro Hori, Anh H Tran, Taketoshi Ono, Hisao Nishijo
System emotional Science, Graduate School of Medicine & Pharmaceutical Sciences, University of Toyama
- P3-127** **Effects of fixation eye movements on retinal responses to band limited random dot patterns**
Makoto Nishino¹, Takeshi Kohama²
¹Graduate School of Biology-Oriented Science and Technology, Kinki University ²Faculty of Biology-Oriented Science and Technology, Kinki University

- P3-128** A neuron network model of top-down and bottom-up information integration in higher order visual processing
Yuta Maeda¹, Takeshi Kohama²
¹Graduate School of Biology-Oriented Science and Technology, Kinki University, Wakayama, Japan
²Faculty of Biology-Oriented Science and Technology, Kinki University, Wakayama, Japan
- P3-129** Performance evaluation indexes of characteristics of gaze shifts on natural visual scenery
Hiroyuki Yoshino¹, Takeshi Kohama²
¹Graduate School of Biology-Oriented Science and Technology, Kinki University, Wakayama, Japan
²Faculty of Biology-Oriented Science and Technology, Kinki University, Wakayama, Japan
- P3-130** What determines the presence or absence of an orientation map in the mammalian primary visual cortex?
Shigeru Tanaka¹, Masanobu Miyashita²
¹Univ of Electro-Commun, Tokyo, Japan ²Numazu Nat College of Tech, Shizuoka, Japan

Auditory and Vestibular Systems

- P3-131** A glycine mediated microcircuit in the lower auditory brainstem of gerbil
Anna Dondzillo, Achim Klug
University of Colorado Denver, School of Medicine, USA
- P3-132** The role of vocal-tract characteristics for discriminating individuals by coo calls of Japanese macaques
Takafumi Furuyama^{1,2}, Kohta I Kobayashi³, Hiroshi Riquimaroux^{1,3}
¹Graduate School of Life and Medical Sciences, Doshisha University, Kyoto, Japan
²Research fellow of Japan society for the promotion of Science (DC1)
³Neurosensing and Bionavigation Research Center, Doshisha University, Kyoto, Japan
- P3-133** Representation of fricative consonants in the auditory cortex of rats
Yoko Nishida^{1,2}, Go Ogawa², Masaharu Kudoh²
¹Department of Nursing, Faculty of Nursing, Tokyo Kasei University
²Department of Physiology, Teikyo University School of Medicine, Tokyo, Japan
- P3-134** Tonotopical map in the auditory cortex of marmoset monkeys revealed by optical intrinsic signal imaging
Wataru Suzuki, Naohisa Miyakawa, Taku Banno, Hiroshi Abe, Noritaka Ichinohe
National Center of Neurology and Psychiatry, National Institute of Neuroscience
- P3-135** A spectrum compensation mechanism observed in the guinea pig primary auditory cortex
Masataka Nishimura, Yuta Shiromi, Wen-Jie Song
Dept Sens Physiol, Kumamoto Univ, Kumamoto, Japan
- P3-136** Contrast between Activations Evoked by Forward and Backward Reproduction of a Natural Sound in the Auditory Cortex Increases after Classical Conditioning
Hisayuki Ojima^{1,2}, Tomohiro Ishida³, Masato Taira^{1,2}, Junsei Horikawa³
¹Grad Sch, Tokyo Med and Dent Univ, Tokyo, Japan ²CBIR, Tokyo Med and Dent Univ, Tokyo, Japan
³Comp Sci and Engi, Grad Sch Engi, Toyohashi Univ Tech, Toyohashi, Japan
- P3-137** A neural model for phase-locking of IC neurons to sinusoidally amplitude-modulated signals
Yoshiki Kashimori
Dept. of Engineering Science., Univ. of Electro-Communications
- P3-138** Acoustic-trauma-induced changes in phase synchrony of neuron population in rat auditory cortex
Naoki Wake^{1,2}, Tomoyo Shiramatsu-Isoguchi², Ryohei Kanzaki², Hirokazu Takahashi^{2,3}
¹Grad school of Info Sci and Tech, Univ of Tokyo, Tokyo, Japan ²Res Cent for Adv Sci and Tech, Univ of Tokyo, Tokyo, Japan
³PRESTO, JST, Saitama, Japan
- P3-139** Withdrawn

Olfaction, Taste, Chemical Senses

- P3-140** Mice selectively bred for high and low glutamate consumption differ in vagus-mediated postingestive effects of glutamate
Akihiko Kitamura^{1,2}, Masashi Inoue^{2,3}, Theodore M Nelson², Maria L Theodorides², Alexander A Bachmanov²
¹*Inst for Innovation, Ajinomoto Co., Inc., Kanagawa, Japan* ²*Monell Chemical Senses Center, Philadelphia, USA*
³*Lab of cellular Neurobiol, Sch of Life Sci, Tokyo Univ of Pharm and Life Sci, Tokyo, Japan*
- P3-141** Relationship between amygdala and somatosensory cortex for limbs (S1FL/HL) in regulation of sucrose preference by body weight
Yoko Asahina¹, Hiroko Eda-Fujiwara², Ryohei Satoh³, Yasunobu Yasoshima⁴, Takenori Miyamoto¹
¹*Lab Behav Neurosci, Div Biol Sci, Grad Sch Sci, Japan Women's Univ, Tokyo, Japan*
²*Dept of Human Arts Sciences, Univ of Human Arts and Sciences, Saitama, Tokyo*
³*Dept Physiol, Sch Med, Kitasato Univ, Kanagawa, Japan*
⁴*Div Behav Physiol, Dept of Behav Sci, Grad Sch of Human Sci, Osaka Univ, Osaka, Japan*
- P3-142** Minimal Cortical Size Essential for Olfactory Discrimination
Nanae Fukushima, Kumiko Yokouchi, Kyutaro Kawagishi, Tetsuji Moriizumi
Dept Anat, Shinshu Univ Sch Med, Nagano, Japan
- P3-143** Transformation of taste responses from the rostral nucleus of the solitary tract to the parabrachial nucleus in rats
Tatsuko Yokota, Katsunari Hiraba
Aichi-Gakuin Univ.
- P3-144** Effects of microinjections of GABA_A receptors antagonist into the bed nucleus of the stria terminalis on the intake of conditioned aversive stimulus
Tadashi Inui, Tsuyoshi Shimura
Division of Behavioral Physiology, Department of Behavioral Sciences, Graduate School of Human Sciences, Osaka University
- P3-145** Function of Pou2f3/Skn-1a in the generation of solitary chemosensory cells in mice
Junpei Yamashita¹, Tatsuya Yamaguchi¹, Makoto Ohmoto², Ichiro Matsumoto², Junji Hirota^{1,3}
¹*Dept. of Bioeng., Grad. Sch. of Biosci. and Biotech., Tokyo Inst. of Tech., Yokohama, Japan*
²*Monell Chemical Senses Center, Philadelphia, U. S. A.*
³*Center for Biological Resources and Informatics, Tokyo Institute of Technology, Yokohama, Japan*
- P3-146** The neural representation of salt taste in the rat chorda tympani nerve studied by using stereotrode method
Natsuki Sugano¹, Hiroyuki Minezumi¹, Tetsuhiro Kobayashi¹, Hiroyoshi Miyakawa¹, Masashi Inoue^{1,2}
¹*Laboratory of Cellular Neurobiology, Tokyo University of Pharmacy and Life Science*
²*Monell Chemical Senses Center, Philadelphia PA, USA*
- P3-147** Forward genetics revealed the existence of T1R3-independent sweet receptor mechanism using selective breeding of mouse lines with high and low glycine preference
Shiomi Katsumori¹, Masashi Inoue^{1,2}, Akihiko Kitamura^{2,3}, Kimiko Kitamura², Maria L Theodorides², Natalia P. Bosak², Glen J. Golden², Makoto Ohmoto², Ichiro Matsumoto², Alexander A. Bachmanov²
¹*Laboratory of Cellular Neurobiology, Tokyo Univ. of Pharmacy and Life Sciences, Tokyo, Japan*
²*Monell Chemical Senses Center, Philadelphia, USA* ³*Institute for Innovation, Ajinomoto Co., Inc., Kanagawa, Japan*
- P3-148** Diffuse projection patterns of bulbar mitral cells to olfactory cortical areas
Tetsuji Moriizumi, Kumiko Yokouchi, Nanae Fukushima, Kyutaro Kawagishi
Dept.of Anat., Sch.of Med., Shinshu Univ.
- P3-149** Analysis of neural network in *Aplysia* central nervous system concerning taste recognition by voltage sensitive dye imaging
Yuki Miyake¹, Yasuo Yoshimi¹, Tatsumi Nagahama²
¹*Dept. Applied Chemistry, Shibaura Institute of Technology, Tokyo, Japan*
²*Dept. Biophysics, Fac. Phar. Sci., Toho University, Funabashi, Japan*

Somatosensory System

- P3-150** Functional analysis of the somatosensory center of the *Drosophila melanogaster* brain
Tomoko Yano, Takeshi Yokoyama, Asako Tsubouchi, Kei Ito
IMCB, University of Tokyo

- P3-151** **Visual deprivation enhances lateral inhibition in the rat barrel cortex**
Waki Nakajima, Susumu Jitsuki, Takuya Takahashi
Yokohama City University, Graduate School of Medicine, Department of Physiology
- P3-152** **Direct and indirect somatosensory cortical responses after crossing nerve transfer in mice**
Keiichi Maniwa^{1,2}, Haruyoshi Yamashita^{1,2}, Hiroaki Tsukano¹, Ryuichi Hishida¹, Minoru Shibata³, Naoto Endo², Katsuei Shibuki¹
¹Department of Neurophysiology, Brain Research Institute, Niigata Univ, Niigata, Japan
²Division of Orthopedic Surgery, Niigata Univ, Niigata, Japan
³Division of Plastic and Reconstructive Surgery, Niigata Univ, Niigata, Japan
- P3-153** **Spatiotemporal dynamics of sensory processing in the rat vibrissa/barrel system**
Daichi Hirai, Ken-ichi Shibata, Takeshi Kaneko, Takahiro Furuta
Dept Morphol Brain Sci, Grad Sch of Med, Kyoto Univ, Kyoto
- P3-154** **Preferential inputs of cholecystokinin-positive neurons to the somatic compartment of parvalbumin-expressing neurons in the mouse primary somatosensory cortex**
Hiroyuki Hioki¹, Jaerin Sohn^{1,2}, Shinichiro Okamoto¹, Hiroshi Kameda³, Takeshi Kaneko¹
¹Dept Morphol Brain Sci, Grad Sch of Med, Kyoto Univ, Kyoto, Japan ²DC2 Research Fellow of Japan Society for Promotion of Science
³Dept Physio, Teikyo Univ Sch of Med, Tokyo, Japan
- P3-155** **Mechanisms of tactile encoding in the periphery of the rat whisker system: a key for decipherment of the secret code in the CNS**
Takahiro Furuta¹, Satomi Ebara², Daichi Kuroda², Daichi Hirai¹, Ken-ichi Shibata¹, Naoyuki Miyazaki³, Kazuyoshi Murata³, Takeshi Kaneko¹, Mitra Hartmann⁴
¹Dept. Morph. Brain Sci., Grad. Sch. Med., Kyoto Univ., Kyoto, Japan ²Dept. Anatomy, Meiji Univ. of Integrative Med., Kyoto Japan
³Electron Microscopy Group, NIPS, Okazaki, Japan ⁴Dept. Biomedical Engineering, Northwestern Univ., Evanston, IL, USA
- P3-156** **Cutaneous low-threshold mechanoreceptive A δ and C afferent units may contribute to anti-nociceptive effect of touch**
Nobuhiro Watanabe, Mathieu Piché, Harumi Hotta
Department of Autonomic Neuroscience, Tokyo Metropolitan Institute of Gerontology
- P3-157** **Three dimensional reconstruction of trigeminal ganglion cell processes labeled by intracellular injection: Emphasis on club-like endings**
Sotatsu Tonomura¹, Satomi Ebara¹, Inbal Meir², Knarik Bagdasarian², Daichi Kuroda¹, Daisuke Uta³, Hidemasa Furue³, Takahiro Furuta⁴, Ehud Ahissar², Kenzo Kumamoto¹
¹Dept Anatomy, Meiji Univ of Integrative Med, Kyoto, Japan ²Dept Neurobiol, Weizmann Institute of Science, Rehovot, Israel
³Dept Information Physiol, Div Neural Signaling, NIPS, Okazaki, Japan
⁴Dept Morphological Brain Science, Graduate School of Medicine, Kyoto Univ, Kyoto, Japan
- P3-158** **Suppressive effect of forelimb stimulation on the spatio-temporal pattern of hindlimb stimulation-induced neural response in the rat somatosensory cortex**
Noriyuki Hama, Minako Kawai, Shin-ichi Ito, Akihiko Hirota
Dept Physiol, Shimane Univ Sch of Medicine, Izumo, Japan
- P3-159** **Three dimensional distribution of lamellated corpuscles in the skin pad of the rat forehead**
Taeko Otsuki, Daichi Kuroda, Satomi Ebara, Kenzo Kumamoto
Dept Anatomy, Meiji Univ of Integrative Med, Kyoto, Japan
- P3-160** **Expression and interaction of GABAB receptors and KCTD proteins in rat trigeminal ganglion and spinal trigeminal nucleus caudalis**
Hana Hayasaki¹, Yoshiro Sohma², Yoshinori Otsuki³
¹Kansai University of Welfare Sciences ²Department of Pharmacology and Neuroscience, School of Medicine, Keio University
³Department of anatomy, Osaka medical college
- P3-161** **Three dimensional distribution of Pacinian corpuscles in a human toe**
Daichi Kuroda¹, Taeko Otsuki¹, Sotatsu Tonomura¹, Satomi Ebara¹, Kenzo Kumamoto¹, Hiroyoshi Fujiwara², Ryo Oda², Toshikazu Kubo²
¹Dept Anatomy, Meiji Univ of Integrative Med, Kyoto, Japan ²Dept Orthopedics, Kyoto Prefectural University of Medicine, Japan

Pain, Itch and Their Disorders

- P3-162** **Expression of Prostaglandin-Synthesizing Enzymes in Nucleus Pulposus of Mice**
Tomohiro Inoue¹, Takae Ibuki², Masakazu Ito¹, Kiyoshi Matsumura¹
¹Osaka Institute of Technology, Osaka, Japan ²Dept Anesthesiol, Kyoto Prefectural University of Medicine, Kyoto, Japan

- P3-163** **The relieving effect of bee venom acupuncture on oxaliplatin-induced cold allodynia in rats: serotonergic and cholinergic mechanism**
Sun Kwang Kim, Dong Xing Li, Heera Yoon
Dept Physiol, Coll of Korean Med, Kyung Hee Univ, Seoul, Korea
- P3-164** **Electrophysiological property of spinally projecting serotonergic neurons in the rostroventromedial medulla of bacterial artificial chromosome transgenic mice**
Teruyuki Fukushima, Masayuki Tsuda, Yuuichi Horii
Dept Physiol. & Biol. info., Dokkyo Med. Univ., Tochigi, Japan
- P3-165** **Crucial role of the astrocytes in the anterior cingulate cortex in the expression of neuropathic pain**
Yusuke Hamada¹, Akira Yamashita^{1,2}, Michiko Narita¹, Naoko Kuzumaki¹, Daigo Ikegami¹, Yuki Suhara¹, Rui Kawabe¹, Takashige Kondo¹, Hideki Tamura³, Yuji Ikegaya⁴, Akihiro Yamanaka², Minoru Narita^{1,3}
¹*Dept. of Pharmacol., Hoshi Univ., Tokyo, Japan.* ²*Dept. Neurosci. II, RIEM Nagoya Univ., Nagoya, Japan*
³*Life Science Tokyo Advanced Research Center (L-StaR), Tokyo, Japan*
⁴*Lab. Chem. Pharmacol., Grad. Sch. Pharm., Tokyo Univ. Tokyo, Japan*
- P3-166** **Running exercise attenuates neuropathic pain through epigenetic regulation in spinal microglia**
Katsuya Kami¹, Satoru Taguchi¹, Emiko Senba^{1,2}
*1**Dept. of Rehabilitation Med., Wakayama Med. Univ.* *2**Dept Physical Therapy, Osaka Yukioka College of Health Science*
- P3-167** **Analysis of bone marrow cell recruitment to the spinal dorsal horn after peripheral nerve injury**
Makoto Tsuda¹, Daisuke Tomiyama², Kazuhide Inoue²
*1**Dept Life Innovation, Kyushu Univ, Fukuoka, Japan* *2**Dept Mol Syst Pharmacol, Kyushu Univ, Fukuoka, Japan*
- P3-168** **Netrin acts as a pain-inducing factor in the adult spinal cord**
Yasufumi Hayano^{1,2}, Kazuhiro Kitada³, Toshihide Yamashita^{1,2}
*1**Dept of Molecular Neuroscience, Graduate School of Med, Osaka Univ, Osaka, Japan* *2**JST CREST*
*3**Graduate School of Science, Hokkaido Univ, Sapporo, Japan*
- P3-169** **The contribution of astrocytes in the anterior cingulate cortex to the negative emotion and hyperalgesia under neuropathic pain**
Junki Hashimoto¹, Kazuyuki Murase^{1,2}, Hiroshi Ikeda^{1,2}
*1**Dept. of Human and Artificial Intelligence Systems, Grad. Sch. of Engineering, Univ. of Fukui, Fukui, Japan*
*2**Res. and Edu. Program Life Sci., Univ. of Fukui, Japan*
- P3-170** **Involvement of Wnt/ β -catenin signaling in the development of neuropathic pain**
Takahide Itokazu^{1,2,3}, Yasufumi Hayano², Ryosuke Takahashi³, Toshihide Yamashita²
*1**Minami-kyoto National Hospital* *2**Dept Mol Neurosci, Osaka Univ, Osaka, Japan* *3**Dept Neurol, Kyoto Univ, Kyoto, Japan*
- P3-171** **Electrophysiological analyses of the effects of corticotropin-releasing factor on neuronal excitability in the dorsolateral bed nucleus of the stria terminalis**
Tomoyuki Kaneko, Soichiro Ide, Taiki Hara, Katsuyuki Kaneda, Masabumi Minami
Dept Pharmacol, Grad Sch Pharm Sci, Hokkaido Univ, Sapporo, Japan

Multisensory

- P3-172** **Gravitational effect on three-dimensional directional sensitivity in wind-evoked response of ascending projection neurons**
Kanako Tanimura¹, Hiroto Ogawa²
*1**Biosystem Sci, Grad Sch Life Sci, Hokkaido Univ, Hokkaido, Japan* *2**Dept Bio Sci, Fac Sci, Hokkaido Univ, Hokkaido, Japan*
- P3-173** **Temperature habituation is regulated by light and pheromone sensory neuron in *C. elegans***
Tomoyo Ujisawa, Akane Ohta, Atsushi Kuhara
Grad. school of Sci., Konan Univ.
- P3-174** **Cross-modal effect by preceding auditory stimulus on wind-elicited behavior in cricket**
Matasaburo Fukutomi¹, Makoto Someya¹, Hiroto Ogawa²
*1**Biosystem Sci, Grad Sch Life Sci, Hokkaido Univ, Hokkaido, Japan* *2**Dept Bio Sci, Fac Sci, Hokkaido Univ, Hokkaido, Japan*
- P3-175** **Multisensory ascending neurons responding to auditory and airflow stimuli in the cricket**
Makoto Someya¹, Hiroto Ogawa²
*1**Biosystem Sci, Grad Sch Life Sci, Hokkaido Univ, Hokkaido, Japan* *2**Dept Bio Sci, Fac Sci, Hokkaido Univ, Hokkaido, Japan*
- P3-176** **Telencephalic fiber connections of the medial hypothalamus in a percomorph teleost, tilapia**
Masami Yoshimoto¹, Naoyuki Yamamoto²
*1**University of Tokyo Health Sciences, Tokyo, Japan*
*2**Laboratory of Fish Biology, Graduate School of Bioagricultural Sciences, Nagoya University, Nagoya, Japan*

- P3-177** **Impaired multisensory responses in the posterior parietal cortex of mice with a reduced cluster number of protocadherin- α**
Kohei Yoshitake¹, Hiroaki Tsukano¹, Manabu Tohmi¹, Ryuichi Hishida¹, Takeshi Yagi^{2,3}, Katsuei Shibuki^{1,3}
¹Dept Neurophysiol, BRI, Niigata Univ ²KOKORO-Biology, Grad. Sch. of Frontier Biosci, Osaka Univ ³JST, CREST
- P3-178** **A rubber tail task in mice: effect of visual occlusion**
Makoto Wada^{1,2}, Hiroki Ora^{1,3}, Kouji Takano¹, Kenji Kansaku^{1,3}
Short Talk 6
ST-6-16
9/13 10:00-11:00
¹Sys Neurosci Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan
²Dev Disorders Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan
³Brain Sci Inspir Life Supp Res Cent, Univ of Electro-Communications
- P3-179** **Cross-modal interactions between auditory and somatosensory inputs in the thalamic reticular nucleus: a neural basis for cross-modal modulation of attention and perception**
Akihisa Kimura, Hiroki Imbe
Dept Physiol, Wakayama Medical Univ, Wakayama, Japan
- P3-180** **Impact of visuo-tactile experience on neural representation of materials of objects in monkey visual cortex: an fMRI study**
Naokazu Goda^{1,2}, Isao Yokoi^{1,2}, Atsumichi Tachibana³, Takafumi Minamimoto⁴, Hidehiko Komatsu^{1,2}
¹National Institute for Physiological Sciences, Aichi, Japan ²SOKENDAI, Aichi, Japan
³Dokkyo Medical University School of Medicine, Tochigi, Japan
⁴Molecular Imaging Center, National Institute of Radiological Sciences, Chiba, Japan
- P3-181** **Visual effects on neurons in the secondary somatosensory cortex of awake macaque monkeys**
Miki Taoka, Hihara Sayaka, Tanaka Michio, Iriki Atsusi
Laboratory for Symbolic Cognitive Development BRAIN SCIENCE INSTITUTE, RIKEN
- P3-182** **Visual and Proprioceptive Adaptation of Wrist Position during Ischemic Nerve Block in a Virtual Environment**
Nobuyuki Inui
Grad. Sch. Edu. Naruto Univ.

Stress

- P3-183** **Effects of chronic treadmill running with different intensity on neuronal activation in the dorsal raphe nucleus and hypothalamic paraventricular nucleus during acute running**
Ayu Nishii, Mana Shimoda, Megumi Aikawa, Takeshi Nishijima, Ichiro Kita
Dept Human Hlth. Sci., Tokyo Metropolitan Univ., Tokyo, Japan
- P3-184** **Mifepistone improves a dysfunction of hypothalamus-pituitary-adrenal axis in SART-stressed mice**
Yoshinori Funakami, Tomoyoshi Miyamoto, Kunimasa Sakasi, Keiko Ueshiba, Kanako Nishisaka, Tetsuyuki Wada, Seiji Ichida
Division of Biochemistry, Faculty of Pharmacy, Kinki University
- P3-185** **Genetic Mapping and Molecular Analysis of Behavioral Response to Stress in Wild-derived Mouse Strain**
Short Talk 5
ST-5-17
9/13 9:00-10:00
Akira Tanabe^{1,2}, Aki Takahashi^{1,2}, Tsuyoshi Koide^{1,2}
¹Dept Genetics, SOKENDAI, Kanagawa, Japan ²Mouse Genomics Resource Lab, Genetic Strains Research Center, Nat Inst Genet
- P3-186** **Behavioral Responses to Chronic Restraint Stress in Mice Lacking Phospholipase C-related Inactive Protein Type-1**
Yoshikazu Nikaido¹, Shuji Shimoyama², Taku Ozaki², Keisuke Migita³, Yuko Shiba³, Tomonori Furukawa³, Junko Yamada⁴, Takashi Kanematsu⁵, Masato Hirata⁶, Kazuhiko Nakamura^{2,7}, Shinya Ueno^{2,3}
¹Hirosaki Univ Grad Sch Med, Hirosaki, Japan ²Res Cent Child Ment Dev, Hirosaki Univ, Hirosaki, Japan
³Dept Neurophysiol, Hirosaki Univ, Hirosaki, Japan ⁴Dept Biomed Sci, Div Med Life Sci, Hirosaki Univ, Hirosaki, Japan
⁵Dept Dent Pharmacol, Hirosaki Univ, Hirosaki, Japan ⁶Lab Mol Cell Biochem, Univ of Kyushu, Fukuoka, Japan
⁷Dept Neuropsych, Hirosaki Univ, Hirosaki, Japan
- P3-187** **Effect of restricted High Fat Diet Intake on Behavior induced by Social Defeat Stress**
Airi Otsuka^{1,2}, Tetsuya Shiuchi², Sachiko Chikahisa², Junji Terao¹, Hiroyoshi Sei²
¹Dept Food Sci, Inst Health Biosci, The Univ of Tokushima Graduate School, Tokushima, Japan
²Dept Integ Physiol, Inst Health Biosci, The Univ of Tokushima Graduate School, Tokushima, Japan
- P3-188** **Effects of early life stress on palatable feeding behavior**
Takayo Sasagawa, Noriko Horii-Hayashi, Takashi Hashimoto, Mayumi Nishi
Department of Anatomy and Cell Biology, Nara Medical University, Kashihara, Japan

- P3-189** **The effect of maternal separation in the nucleus of accumbens and the bed nucleus of stria terminalis of the adult mouse: gene profiles after early life stress**
Takashi Hashimoto^{1,2}, Noriko Horii¹, Takayo Sasagawa¹, Mayumi Nishi¹
¹*Department of Anatomy and Cell Biology Nara Medical University, Nara Japan*
²*Department of Morphological and Physiological Sciences, University of Fukui Faculty of Medical Sciences, Fukui Japan*
- P3-190** **Neonatal chronic stress suppresses actin dynamics and synaptic plasticity through ADF/cofilin inactivation in the neocortex**
Hirobumi Tada¹, Kumiko Suyama¹, Takuya Takahashi^{1,2}
¹*Dept. of Physiol., Yokohama City Univ., Grad. Sch. of Med., Yokohama, Japan*
²*Albert Einstein College of Medicine, Dominick P. Purpura Department of Neuroscience, NY, USA*
- P3-191** **Sex difference of the effect of neonatal social isolation on experience driven synaptic delivery of AMPA receptors in rat neocortex**
Naoko Yamamoto, Akira Taka, Kumiko Suyama, Hirobumi Tada, Takuya Takahashi
Yokohama City University
- P3-192** **Effects of hormonal change during pregnancy and postpartum on the neuronal morphology and the expression of estrogen receptor α in the amygdala**
Seiki Matsuo^{1,2}, Ken-ichi Matsuda², Jo Kitawaki¹, Mitsuhiko Kawata²
¹*Dept obst and gynecol, Kyoto Prefectural Univ of Med, Kyoto, Japan*
²*Dept Anat and neurobiol, Kyoto prefectural Univ of Med, Kyoto, Japan*

Reproduction

- P3-193** **Difference and similarity in sex steroid action on formation of morphological sex difference between the anteroventral periventricular nucleus and the principal nucleus of the bed nucleus of the stria terminalis**
Moeko Kanaya¹, Mumeko C Tsuda², Shoko Sagoshi², Kazuyo Nagata², Chihiro Morimoto², Chaw Kyi Tha Thu¹, Katsumi Toda³, Shigeaki Kato⁴, Sonoko Ogawa², Shinji Tsukahara¹
¹*Div of Life Sci, Grad Sch of Sci and Eng, Saitama Univ, Saitama, Japan*
²*Lab of Behav Neuroendocrinol, Univ of Tsukuba, Tsukuba, Japan* ³*Dept of Biochem, Sch of Med, Kochi Univ, Nankoku, Japan*
⁴*Soma Central Hosp, Fukushima, Japan*
- P3-194** **Imaging analysis of gonadotropin hormone release from L β T2 gonadotroph cells**
Manami Oya, Takashi Tsuboi
Dept Life Sci, Grad Sch of Arts and Sci, Univ of Tokyo, Tokyo, Japan

Metabolism and Regulation of Food Intake

- P3-195** **Metabolic energy state dependent GluR2 expression onto POMC neurons of arcuate hypothalamic nucleus**
Shigetomo Suyama¹, Marcelo O Dietrich², Toshihiko Yada¹, Sabrina Diano^{2,3}, Xiao-Bing Gao^{2,3}, Tamas L Horvath^{2,3}
¹*Dept physiol, Jichi Med Univ, Tochigi, Japan* ²*Sec of CMed, Yale Univ Sch Med, New Haven, U.S.A*
³*Dept Neurophysiol, Yale Univ Sch Med, New Haven, U.S.A*
- P3-196** **Glucose, insulin and CCK activate nesfatin-1 neurons in the hypothalamic paraventricular nucleus**
Darambazar Gantulga¹, Yuko Maejima², Masanori Nakata², Toshihiko Yada^{2,3}
¹*Dept of Biol and Histology, Sch of Biomedicine, Health Sciences Univ, Ulaanbaatar, Mongolia*
²*Dept. of Physiol., Jichi Med. Univ., Shimotsuke, Japan*
³*Dept. of Developmental Physiology, Div. of Adaptation Develop., Natl. Inst. for Physiological Sci., Okazaki, Japan*
- P3-197** **Functional synergy between cholecystokinin 1 receptors and leptin receptors in the murine ventromedial hypothalamus**
Kouhei Takeuchi¹, Masayuki Ikeda^{1,2}, Shahid Mohammad¹, Aya Kataoka², Juhyon Kim^{1,2}, Soichi Takiguchi³
¹*Dept innovative life science, Postgraduate school, Toyama, Japan* ²*Dept science and engineering* ³*National Kyushu Cancer Center*
- P3-198** **Pharmacogenetic analysis of concurrent regulation of feeding and metabolism by orexin neurons**
Ayumu Inutsuka¹, Azusa Inui¹, Sawako Tabuchi¹, Tomomi Tsunematsu¹, Michael Lazarus², Akihiro Yamanaka¹
¹*Research Institute of Environmental Medicine, Nagoya University, Nagoya, Japan*
²*International Institute for Integrative Sleep Medicine (WPI-IIS), University of Tsukuba, Tsukuba, Japan*

Short Talk 6
ST-6-17
9/13 10 : 00-11 : 00

Short Talk 6
ST-6-18
9/13 10 : 00-11 : 00

- P3-199** The dorsomedial hypothalamic nucleus is involved in palatable food entrainment to diurnally scheduled delivery of high-sucrose diet in ad libitum-fed mice
Yasunobu Yasoshima, Tsuyoshi Shimura
Div. Behav. Physiol., Graduate Sch. of Human Sci., Osaka Univ.
- P3-200** Lowered plasma peptide YY levels in mice showing binge-like sugar overconsumption
Erina Yamaguchi, Yasunobu Yasoshima, Tsuyoshi Shimura
Osaka University
- P3-201** Altered glucostatic control of food intake in mice with daily intermittent access to sugar
Haruna Nishioka, Erina Yamaguchi, Yasunobu Yasoshima, Tsuyoshi Shimura
Division of Behavioral Physiology, Graduate School of Human Sciences, Osaka University, Suita, Japan
- P3-202** Orally GABA administration prevents ZFDM animal model from developing diabetes resulting from keeping the islet reactions
Kazuki Furukawa¹, Takumi Abe¹, Masato Nomura¹, Yujiro Nagai², Kazuki Iwaya², Mitsuru Satsukawa², Tetsuhiro Kawamoto², Sachiko Yoshida¹
¹Dept Environ & Life Sci, Toyohashi Univ of Technology, Aichi, Japan ²Tokai Pickling Co., Ltd., Aichi, Japan

Others

- P3-203** Protective barrier in the sensory circumventricular organs of adult mouse brain
Shoko Morita¹, Eriko Furube², Tetsuya Mannari², Kouko Tatsumi¹, Hiroaki Okuda¹, Seiji Miyata², Akio Wanaka¹
¹Department of Anatomy and Neuroscience, Nara Medical University, Kashihara, Nara
²Department of Applied Biology, Kyoto Institute of Technology, Kyoto, Japan
- Short Talk 5
ST-5-18
9/13 9:00-10:00

Learning and Long-term Memory

- P3-204** Slow oscillatory coupling between hippocampus and medial prefrontal cortex in rats under urethane anesthesia
Hiroshi Nishida^{1,2,3}, Johan Lauwereyns^{1,4,5}, Yuuji Takano^{2,6}
¹Graduate School of Systems Life Sciences, Kyushu University *²NTT Communication Science Labs., Kanagawa, Japan*
³Japan Society for the Promotion of Science, Tokyo, Japan *⁴Faculty of Arts and Science, Kyushu University, Fukuoka, Japan*
⁵Brain Science Institute, Tamagawa University, Tokyo, Japan *⁶CREST, JST*
- P3-205** Traumatic stress impairs learning and memory formation via an endocannabinoid system in *Lymnaea stagnalis*
Hiroshi Sunada¹, Jeremy Forest¹, Manabu Sakakibara², Ken Lukowiak¹
¹Dept Physiol and Pharm, HBI, Univ of Calgary, Calgary, Canada *²Dept Biosci, Tokai Univ, Shizuoka, Japan*
- P3-206** Memory persistence involves spine pruning and stabilization of cell assemblies dependent on late Arc expression
Daisuke Nakayama, Hiroshi Nomura, Hirokazu Iwata, Chie Teshirogi, Norio Matsuki, Yuji Ikegaya
Graduate School of Pharmaceutical Sciences Laboratory of Chemical Pharmacology
- P3-207** Fear extinction requires Arc/Arg3.1 expression in the basolateral amygdala
Kousuke Onoue¹, Hiroshi Nomura¹, Daisuke Nakayama¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Laboratory of Chemical Pharmacology, Graduate School of Pharmaceutical Sciences, The University of Tokyo.
²Center for Information and Neural Networks, NICT
- P3-208** Analysis of downstream signaling factors of the TIR-1/JNK-1 pathway for forgetting in *C.elegans*
Tomohiro Kitazono¹, Akitoshi Inoue¹, Takeshi Ishihara^{1,2}
¹Dept of Sys Life Sci, Kyushu Univ, Fukuoka, Japan *²Fac. of Sci., Dept. of Biol., Kyushu Univ., Fukuoka*
- Short Talk 6
ST-6-19
9/13 10:00-11:00
- P3-209** Analyses of molecular mechanisms that negatively regulate forgetting of olfactory adaptation in *C.elegans*
Takahiro Ito¹, Tomohiro Kitazono¹, Akitoshi Inoue¹, Takeshi Ishihara^{1,2}
¹Dept of Sys Life Sci, Kyushu Univ, Fukuoka, Japan *²Fac. of Sci., Dept. of Biol., Kyushu Univ., Fukuoka*
- P3-210** Effects of low frequency alternating magnetic field exposure on the spatial cognitive learning and memory in mice
Hiroki Matsubayashi, Kazuyuki Imamura
Dept. System Life Engineering, Maebashi Institute of Technology, Maebashi, Gunma, Japan

- P3-211** CREB/CRTC plays a dual role in LTM maintenance and LTM extinction
Naosuke Nakamura¹, Minoru Saitoe², Yukinori Hirano¹
¹SK Project, Medical Innovation Center, Grad. Sch. Med., Kyoto Univ., Kyoto, Japan ²Tokyo Metropolitan Institute of Medical Science
- P3-212** Effects of insulin administration on the “brain diabetes” rat: neurostructural mechanisms of the dentate gyrus
Akiko S. Shingo¹, Shozo Kito², Toshio Murase¹
¹Okinaka Memorial Institute for Medical Research ²Chigasaki Tokushu-kai Clinic
- P3-213** Changes in hippocampal synaptic functions and protein expression in monosodium glutamate-treated obese mice during development of glucose intolerance
Sachie Hamada, Yuuki Hojyo, Hajime Koyama, Jun-ichiro Oka
Dept Pharmacol, Tokyo Univ. of Science, Tokyo, Japan
- P3-214** Isolation rearing hastens the onset of reference memory deficit in β -amyloid protein infused rats
Masami Kaku¹, Kazuo Yamada², Yukio Ichitani², Hiroshi Nagata¹
¹Center for Med Sci, Ibaraki Pref Univ of Health Sci ²Dept Behav Neurosci, Univ of Tsukuba, Ibaraki, Japan
- P3-215** Roles of O-linked glycosylation in the hippocampus in consolidation of contextual fear memory
Masahiro Sakurai¹, Daisuke Kai¹, Hiroyoshi Inaba¹, Satoshi Kida^{1,2}
¹Dept. of Bioscience, Tokyo Univ. of Agriculture, Tokyo, Japan ²CREST, JST, Saitama, Japan
- P3-216** Erasure of hippocampus-dependent fear memory by enhancing memory forgetting through increase in adult hippocampal neurogenesis
Rie Ishikawa¹, Paul Frankland², Satoshi Kida^{1,3}
¹Dept. of Bioscience, Tokyo Univ. of Agriculture, Tokyo, Japan ²Univ. of Toronto, Toronto, Canada ³JST, CREST, Saitama, Japan
- P3-217** Roles of histone modifications in formation and regulation of fear memory
Shojiro Amano¹, Satoshi Kida^{1,2}
¹Dept. of Bioscience, Tokyo Univ. of Agriculture ²CREST, JST
- P3-218** Retinoic acid signaling pathway positively regulates hippocampus-dependent memory formation
Tei Ebihara¹, Takahiro Shinozawa¹, Masanori Nomoto¹, Yohei Takeda¹, Shusaku Uchida¹, Satoshi Kida^{1,2}
¹Dept. of Bioscience, Tokyo Univ. of Agriculture ²CREST · JST
- P3-219** Thiamine deficiency impairs formation of hippocampus-dependent memory and decreases in size of hippocampus
Takuya Kishimoto¹, Satoru Ohishi¹, Kan Nagata¹, Shunsuke Hasegawa^{1,2}, Satoshi Kida^{1,2}
¹Dept. of Bioscience, Tokyo Univ. of Agriculture, Japan ²JST, CREST
- P3-220** Acute effect of carbon ion irradiation on hippocampal neuronal cell death and fear memory formation
Anggraeini Puspitasari¹, Noriko Koganezawa¹, Nobuhiko Kojima^{1,2}, Mayu Isono³, Yukari Yoshida³, Tomoaki Shirao¹
¹Department of Neurobiology and Behavior, Gunma University Graduate School of Medicine, Maebashi, Japan
²Department of Life Sciences, Toyo University, Itakura, Japan
³Medicine and Biology Division, Gunma University Heavy Ion Medical Center, Maebashi, Japan
- P3-221** Remote memory deficit in three strains of mutant mice with immature dentate gyrus phenotype
Hirotaaka Shoji^{1,2}, Tsuyoshi Takagi^{3,4}, Shunsuke Ishii⁴, Isabella A Graef⁵, Gerald R Crabtree⁵, Paul W Frankland^{6,7}, Tsuyoshi Miyakawa^{1,2,8}
¹Div Sys Med Sci, ICMS, Fujita Health Univ, Toyoake, Japan ²CREST, JST, Saitama, Japan ³Dept Perinatol, Inst Dev Res, Aichi, Japan
⁴Lab Mol Genet, RIKEN, Ibaraki, Japan ⁵Dept Pathol, Stanford Univ Sch Med, Stanford, USA ⁶Hosp Sick Child, Toronto, Canada
⁷Dept Physiol, Toronto Univ, Toronto, Canada ⁸Ctr Gene Anal Behav, NIPS, Okazaki, Japan
- P3-222** Impaired spatial memory associated with nmda receptor alterations in hippocampus of rats prenatally exposed to lambda-cyhalothrin
Yogesh K Dhuriya, Rajendra Kumar Shukla, Pranay Srivastava, Lalit Pratap Chandravanshi, Vinay Kumar Khanna
Indian Institute of Toxicology Research, India
- P3-223** Individual difference in performance of pattern discrimination and its reversal learning in common marmosets
Atsushi Takemoto, Miki Miwa, Reiko Koba, Chieko Yamaguchi, Hiromi Suzuki
Cognitive Neuroscience Section, Primate Research Institute, Kyoto University

Short Talk 6
ST-6-20

9/13 10 : 00-11 : 00

- P3-224** Decoding from ECoG signals reveals the contents of color imagery in macaque inferior temporal and prefrontal cortices
Ren Takei¹, Hisashi Tanigawa², Kei Majima^{3,4}, Keisuke Kawasaki⁵, Hirohito Sawahata⁶, Kiyoshi Nakahara⁷, Atsuhiko Iijima¹, Takafumi Suzuki⁸, Yukiyasu Kamitani^{3,4}, Isao Hasegawa^{2,5}
¹Grad Sch of Sci & Tech, Niigata Univ, Niigata, Japan ²Cent for Transdiscipl Res, Niigata Univ, Niigata, Japan ³ATR, Kyoto, Japan ⁴Grad Sch of Info Sci, NAIST, Nara, Japan ⁵Niigata Univ Grad Sch of Med & Dent Sci, Niigata, Japan ⁶Toyohashi Univ of Tech, Aichi, Japan ⁷Kochi Univ of Tech, Kochi, Japan ⁸Natl Inst of Info & Comm Tech, Osaka, Japan

- P3-225** Distinct patterns of synaptic inputs onto pyramidal cell and interneuron subtypes in mouse hippocampal CA1
Takuma Mori, Yumiko Yoshimura
National Institute for Physiological Sciences

- P3-226** Distribution of Cortical Projection Neurons in the Rat Subiculum
Yoshiko Honda^{1,2}, Norio Ishizuka²
¹Dep Anat, Sci Med, Tokyo Women's Med Univ, Tokyo, Japan ²Tokyo Metropolitan Inst Med Sci, Tokyo, Japan

Working Memory and Executive Function

- P3-227** Prediction of learning plateau in a working memory training from intrinsic network connectivity
Masahiro Yamashita^{1,2}, Mitsuo Kawato^{1,2,3}, Hiroshi Imamizu^{1,3}
¹ATR BICR, Kyoto ²Grad Sch of Info Sci, NAIST, Nara ³NICT Center for Information & Neural Networks, Osaka

- P3-228** The evaluation of the effect of intra-oral cold stimulus on the activity of prefrontal cortex in young adult subjects
Yoshifumi Okura¹, Tetsuya Rikimaru², Shuji Aou³, Hidehiro Kaya², Takeshi Yamakawa⁴
¹Fukuoka College of Health Sciences, Fukuoka, Japan
²Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, Palo Alto, California, USA
³Department of human intelligence systems, Graduate School of Life Science and Systems Engineering (LSSE), Kyushu Institute of Technology, Fukuoka, Japan ⁴Fuzzy Logic Systems Institute, Fukuoka, Japan

- P3-229** Relationships between the left inferior frontal volume and working memory capacity in healthy children
Kazuo Kakinuma¹, Susumu Yokota¹, Atsushi Sekiguchi^{1,2}, Teruo Hashimoto¹, Hiroshi Hashizume¹, Benjamin Thyreau², Yuko Sassa¹, Kohei Asano¹, Michiko Asano¹, Kentaro Inoue¹, Hikaru Takeuchi¹, Ryuta Kawashima¹, Yasuyuki Taki^{1,2}
¹Institute of Development, Aging and Cancer, Tohoku University ²Tohoku Medical Megabank Organization, Tohoku University, Sendai

- P3-230** Differential roles of prefrontal, premotor, and posterior parietal cortices in performance of delayed response task revealed by functional disturbance with rTMS
Shinya Nakamura, Takayuki Hosokawa, Toshio Iijima, Ken-ichiro Tsutsui
Division of Systems Neuroscience, Graduate School of Life Sciences, Tohoku University, Sendai, Japan

- P3-231** Sensory and motor coding within the rat parietal cortex in performance of delayed response task
Yukina Tateyama, Kei Oyama, Kazune Omori, Toshio Iijima, Ken-ichiro Tsutsui
Div. of Sys. Neurosci., Grad. Sch. of Life Sci., Tohoku Univ., Sendai, Japan

- P3-232** Relationships between cognition-related prefrontal activation and nicotinic receptor activity in the healthy elderly and Alzheimer's disease patients
Yumi Oboshi^{1,2}, Mitsuru Kikuchi³, Tatsuhiro Terada¹, Yoshiyuki Shimizu^{1,4}, Yasuhiro Magata², Yasuomi Ouchi¹
¹Dept Biofunct Imaging, Hamamatsu Univ. Sch Med, Hamamatsu, Japan
²Dept Mol Imaging, Hamamatsu Univ. Sch Med, Hamamatsu, Japan ³Ctr Child Mental Develop, Kanazawa Univ., Kanazawa, Japan
⁴Hamamatsu Photonics, Hamamatsu, Japan

- P3-233** Prefrontal cortex-specific deletion of glial glutamate transporter GLT-1 causes behavioral changes relevant to schizophrenia in mice
Mariko Hashimoto¹, Hidenori Aizawa¹, Tomomi Aida¹, Wanpeng Cui¹, Hiroaki Mizukami², Kinya Ozawa², Masatoshi Nomura³, Ryuichi Takayanagi³, Kohichi Tanaka^{1,4,5}
¹Lab of Mol Neurosci, Med Res Inst, Tokyo Med Dent Univ, Tokyo, Japan
²Div of Genet Therapeutics, Cent Mo Med, Jichi Med Univ, Tochigi, Japan
³Dept of Med Bioreg, Grad Sch Med Sci, Kyushu Univ, Fukuoka, Japan ⁴JST, CREST, Saitama, Japan
⁵Cent Brain Int Res, Tokyo Med Dent Univ, Tokyo, Japan

- P3-234** Anxiety and Working Memory Performance - A Study on EEG Oscillation and Phase Synchronization
Yi-Li Tseng^{1,2}, Michelle Liou²
¹Department of Electrical Engineering, Fu Jen Catholic University, New Taipei City, Taiwan
²Institute of Statistical Science, Academia Sinica, Taipei, Taiwan

P3-235

Infralimbic cortical neuronal activities are related to inhibition of impulsive behavior

Iku Kimura^{1,2}, Yu Ohmura³, Takeshi Izumi³, Toshiya Matsushima⁴, Takayuki Yoshida³, Mitsuhiro Yoshioka³

¹Dept Neuropsychiatry, Keio Univ, Tokyo, Japan ²JSPS Research Fellow, Tokyo, Japan

³Dept Neuropharmacol, Hokkaido Univ, Sapporo, Japan ⁴Dept Biol Sci, Hokkaido Univ, Sapporo, Japan

Short Talk 5
ST-5-20
9/13 9:00-10:00

P3-236

Relationship between functional connectivity between bilateral premotor cortices and outcome of a short-term memory test

Ryo Kikuchi¹, Tsubasa Inaoka², Masanori Onda¹, Yumie Ono², Atsushi Ishiyama¹

¹Dept. of Elec. and Bioscience, Sch. of Advanced Sci. and Eng., Univ of Waseda, Tokyo, Japan

²Dept. of Elec. and Bioinformatics, Sch. of Sci. and Tech., Univ of Meiji, Kanagawa, Japan

Social Behavior

P3-237

Neuronal activity changes in empathy-like behaviors: A comparison among anterior cingulate, insular and motor cortices of rats

Wen-Yi Wu¹, Keng-Chen Liang², Chen-Tung Yen¹

¹Dept. Life Science, Taipei, Taiwan ²Dept. Psychology

Short Talk 5
ST-5-21
9/13 9:00-10:00

P3-238

Toward the Study of Rat Mirror System

Yuji Takano^{1,2}, Hiroshi Nishida^{1,2,3,4}, Masatoshi Ukezono^{1,2,5}

¹NTT Communication Science Laboratories ²CREST, JST ³Graduate School of Systems Life Sciences, Kyushu Univ,

⁴Japan Society for the Promotion of Science ⁵Meiji Gakuin Univ.

Short Talk 6
ST-6-21
9/13 10:00-11:00

P3-239

Effects of receiving monetary reward and punishment on successful encoding activations of episodic memories in social context

Yayoi Shigemune, Takashi Tsukiura

Dept Cogn Behav Sci, Kyoto Univ, Kyoto, Japan

P3-240

Gaze-triggered attention orientation is augmented in response to own child's referential gaze in mothers.-An ERP study

Hirokazu Doi, Kazuyuki Shinohara

Grad. Sch. of Biomed. Sch. Nagasaki Univ.

P3-241

Brain networks related to personality traits: A resting-state fMRI study

Tomohiro Donishi¹, Masaki Terada², Yoshiki Kaneoke¹

¹Dept System Neurophysiology, Wakayama Medical University, Wakayama, Japan

²Wakayama-Minami Radiology Clinic, Wakayama, Japan

P3-242

Analysis of the effects of oxytocin gene disruption on performance of social discrimination task in male mice using a new social interaction testing system

Mariko Nakata, Kazuyo Nagata, Tomoya Ishigaki, Shoko Sagoshi, Sonoko Ogawa

Behav Neuroendo, Univ Tsukuba, Japan

P3-243

Functional organization of resting-state networks in young healthy adults

Shoji Tanaka¹, Eiji Kirino²

¹Dept Information and Communication Sciences, Sophia Univ, Tokyo, Japan ²Shizuoka Hospital, Juntendo Univ, Shizuoka, Japan

P3-244

Effects of chronic mild social defeat stress on the behavioral characteristics in mice

Tatsuhiko Goto^{1,2}, Yoshifumi Kubota¹, Yuki Tanaka¹, Wataru Iio¹, Atsushi Toyoda^{1,2,3}

¹Col of Agri, Ibaraki Univ, Ibaraki, Japan ²Ibaraki Univ Coop between Agri and Med Sci (IUCAM), Ibaraki, Japan

³Unit Grad Sch of Agri Sci, Tokyo Univ of Agri and Tech, Tokyo, Japan

P3-245

Social environmental impact on brain serotonin modulating sociability: PET study in common marmosets

Chihiro Yokoyama, Akihiro Kawasaki, Chiho Takeda, Hirotaka Onoe

Bio-funct Imag Team, RIKEN CLST, Kobe, Japan

P3-246

Oxtr expressed in GABA neurons at the MeA are suspected to control social memory

Shinji Miyazaki, Yuuichi Hiraoka, Shizu Hidema, Katsuhiko Nishimori

Tohoku University

P3-247

A single prolonged stress disturbs pair bonding in the monogamous, prairie vole

Aki Arai¹, Yu Hirota², Shiori Miyata², Naoki Miyase², Young Larry³, Yoji Osako⁴, Kazunari Yuri⁴, Shinichi Mitsui^{1,2}

¹Dept Rehabili, Gunma Univ Grad School Health Sci, Gunma, Japan ²Dept Occupational Therapy, Gunma Univ, Gunma, Japan

³Center for Translational Social Neuroscience, York National Primate Center, Emory University, Atlanta, USA

⁴Dept Neurobiol Anat, Kochi Medical School, Kochi, Japan

- P3-248** **Developmental changes in the effect of conditioned-place preference by social reward**
Shuichi Chiba, Kota Furusawa, Natsumi Koichi, Miki Yuzawa, Toshiyuki Himi
Musashino University
- P3-249** **Empathetic behavior in fear observation of mice**
Tetsuya Sakaguchi¹, Kazuki Okamoto¹, Reimi Abe¹, Kohei Morishita¹, Ryuta Koyama¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Lab Chem Pharmacol, Grad Sch Pharmaceut Sci, Univ Tokyo, Tokyo, Japan
²Center for Information and Neural Networks, Osaka, Japan
- P3-250** **Analysis of social investigation and social anxiety using a new behavioral testing system for social interaction in mice**
Kazuyo Nagata, Yuka Miyata, Mariko Nakata, Sonoko Ogawa
Laboratory of Behavioral Neuroendocrinology, University of Tsukuba

Language

- P3-251** **Voice adjustments in response to unrecognized changes in modified auditory feedback**
Mingdi Xu¹, Ryosuke O. Tachibana^{2,3}, Fumitaka Homae¹, RYU-ichiro Hashimoto¹, Kazuo Okanoya³, Hiroko Hagiwara¹
Short Talk 5 ST-5-22 9/13 9:00-10:00
¹Department of Language Sciences, Graduate School of Humanities, Tokyo Metropolitan University, Tokyo, Japan
²Japan Society for the Promotion of Science ³Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan
- P3-252** **An Early ERP Component for Sentence Structure Building**
Masahiro Hata, Fumitaka Homae, Hiroko Hagiwara
Department of Language Sciences, Tokyo Metropolitan University
- P3-253** **Distinct functions of cortical hubs during language processing in infants**
Fumitaka Homae¹, Hama Watanabe², Gentaro Taga²
¹Dept Lang Sci, Tokyo Metropolitan University, Tokyo, Japan ²Grad Sch Educ, Univ of Tokyo, Tokyo, Japan
- P3-254** **Learning-induced cerebral hemodynamic changes during non-native phonemic category processing in relation to maturation from late childhood to young adulthood**
Kiyomi Yatabe¹, Ei-ichi Hoshino², Reiko Akahane-Yamada³, Nozomi Naoi¹, Yasuyo Minagawa⁴
Short Talk 6 ST-6-22 9/13 10:00-11:00
¹Global Centre for Advanced Research on Logic and Sensibility, Keio Univ, Tokyo, Japan
²Dept Computational Intelligence and Systems Science, Titech, Kanagawa, Japan
³ATR Intelligent Robotics and Communication Laboratories, Kyoto, Japan ⁴Dept Psychology, Keio Univ, Tokyo, Japan
- P3-255** **Aging-related differences in pronoun comprehension — an ERP study**
Chia-Ho Lai¹, Chia-Lin Lee^{1,2,3}
*¹Graduate Institute of Brain and Mind Sciences, National Taiwan University, Taiwan
²Graduate Institute of Linguistics, National Taiwan University, Taiwan ³Department of Psychology, National Taiwan University, Taiwan*
- P3-256** **Functional localization of Broca's area using speech arrest induced by low intensity repetitive transcranial magnetic stimulation**
Yuichi Yamashita^{1,2,3}, Hiroaki Maeshima^{2,4}, Mitsunari Abe¹, Manabu Honda¹, Masato Okada^{2,5}, Kazuo Okanoya^{2,3,4}
*¹Dept Func Brain Res, NIN, NCNP ²JST, ERATO, Okanoya Emotional Information Project, Saitama, Japan
³Behav and Cog Joint Res Lab, RIKEN BSI, Saitama, Japan ⁴Dept Cog Behav Sci, Univ of Tokyo, Tokyo, Japan
⁵Dept Complexity Sci and Eng, Univ of Tokyo, Tokyo, Japan*
- P3-257** **Neurorehabilitation for Aphasia with transcranial DC stimulation and repetitive transcranial magnetic stimulation (tDCS and rTMS) -A case study-**
Aoi Ashizuka, Ryo Ishibashi, Hidenao Fukuyama, Tatsuya Mima
Short Talk 5 ST-5-23 9/13 9:00-10:00
Dept Med, Kyoto Univ., Kyoto, Japan
- P3-258** **An influence that sense of incongruity gives to event-related potential**
Yu Odagaki, Sakriani Sakuti, Graham Neubing, Tomoki Toda, Satoshi Nakamura
Short Talk 6 ST-6-23 9/13 10:00-11:00
Nara Institute Science and Technology
- P3-259** **ERP evidences of atypical language processing in stuttering**
Shinobu Murase^{1,2}, Takashi Kawashima¹, Hirotaka Satake¹, Seiichi Era¹
Short Talk 5 ST-5-24 9/13 9:00-10:00
¹School of Medicine, Gifu University, Gifu, Japan ²Faculty of Education, Gifu University, Gifu, Japan

Development of Cognition

- P3-260** Comparative analysis of developmentally regulated expressions of Gadd45a, Gadd45b, and Gadd45g between the mouse and marmoset cerebral cortex
Eiji Matsunaga, Sanae Nambu, Mariko Oka, Atsushi Iriki
Lab for Symbolic Cognitive Development, RIKEN BSI
- P3-261** The impact of reading habit on development of language related white matter structure: Cross-sectional and longitudinal analyses
Hikaru Takeuchi¹, Yasuyuki Taki^{1,2}, Hiroshi Hashizume¹, Kohei Asano¹, Michiko Asano¹, Sassa Yuko¹, Susumu Yokota¹, Yuka Kotozaki¹, Rui Nouchi¹, Ryuta Kawashima¹
¹Institute of Development, Aging and Cancer, Tohoku University ²Tohoku Medical Megabank Organization, Tohoku University
- P3-262** Correlations between study time at home, cognitive function and brain structures in healthy children
Michiko Asano¹, Yasuyuki Taki^{1,2}, Hiroshi Hashizume¹, Hikaru Takeuchi¹, Benjamin Thyreau^{1,2}, Kohei Asano¹, Yuko Sassa¹, Ryuta Kawashima¹
¹Inst. of Development, Aging and Cancer, Tohoku Univ. ²Department of Community Medical Supports, Tohoku Medical Megabank Organization, Univ of Tohoku, Miyagi, Japan
- P3-263** Brain activity that reflect the judgment of the face-likeness: a correlation between EEG and face-like evaluation
Yuji Nihei¹, Tetsuto Minami², Shigeki Nakauchi¹
¹Toyohashi University of Technology, Aichi, Japan ²EIRIS, Toyohashi Univ of Tech, Toyohashi, Japan
- P3-264** The neural basis for the development of sarcasm
Hisakazu Yanaka^{1,2}, Hitoshi T. Uchiyama^{1,2,3}, Ayumi Seki^{1,2}, Yuko Okamoto^{1,2,4}, Tatsuya Koeda^{1,2}
¹Faculty of Regional Sciences, Tottori University, Tottori, Japan
²Department of Clinical Research, Tottori Medical Center, National Hospital Organization, Tottori, Japan
³Department of Orthoptics and Visual Sciences, International University of Health and Welfare, Tochigi, Japan
⁴Research Center for Child Mental Development, University of Fukui, Fukui, Japan
- P3-265** Frontal-parietal alpha rhythm neurofeedback training improves episodic memory
Fu-Zen Shaw¹, Jen Jui Hsueh², Jia Jin Chen²
¹Department of Psychology, National Cheng Kung University, Tainan, Taiwan
²Institute of Biomedical Engineering, National Cheng Kung University, Tainan, Taiwan

Aging of Cognition

- P3-266** The effect of ingested sulfite of active avoidance learning in normal aged and sulfite oxidase-deficient rats
Aysel Agar¹, Ozlem Ozsoy², Sinem Aras², Burcu Gemici², Hande Parlak²
¹Akdeniz Univ. Faculty of Med, Antalya, Turkey ²Akdeniz Univ. Faculty Med, Arapsuyu, Antalya, Turkey
- P3-267** A Possibility of Cognitive Impairment Prevention in the Elderly Induced by a Regularly Programmed Dancing Game Play
Kazuko Watanabe¹, Kazumasa Yamada¹, Kiminobu Furukawa¹, Tomokazu Abe¹, Daisuke Kimura¹, Nozomi Kobata¹, Yuna Miyajima¹, Maiko Fuji-i¹, Rika Matsubara¹, Akane Ezaki¹, Narumi Takemoto¹, Tatsuya Suzuki², Yasunori Nomoto³, Yumie Ono²
¹Fac Rehabil & Care, Seijoh Univ, Aichi, Japan ²Dept Elect & Bioinfo, Meiji Univ, Kanagawa, Japan
³Grad Sch Science & Techn, Meiji Univ, Kanagawa, Japan

Others

- P3-268** Subicular activation preceding hippocampal sharp waves in vitro
Nobuyoshi Matsumoto¹, Hiroaki Norimoto¹, Takeyuki Miyawaki¹, Norio Matsuki¹, Yuji Ikegaya^{1,2}
¹Lab. Chem. Pharmacol., Grad. Sch. Pharmaceut. Sci., Univ. Tokyo, Tokyo, Japan
²Center for Information and Neural Networks, NICT, Suita city, Osaka, Japan
- P3-269** Stabilization effect of vocalization on whole-body movement occurs even without auditory feedback
Kohei Miyata^{1,2}, Kazutoshi Kudo¹
¹Graduate School of Arts and Sci, Univ. of Tokyo, Tokyo, Japan ²Japan Society for the Promotion of Science, Japan

- P3-270** **Task-dependent changes of mirror-image sensitivity in visual processing streams**
Thuy Dinh¹, Kimihiro Nakamura¹, Tania Fernandes³, Hidenao Fukuyama¹, Regine Kolinsky²
¹Human Brain Research Center, Kyoto University Graduate School of Medicine ²Faculty of Psychology, Université Libre de Bruxelles
³University of Porto
- P3-271** **Changes in bodily self-consciousness and body representations by manipulating virtual body part**
Satoshi Shibuya, Yukari Ohki
Dept of Physiol, Kyorin Univ, Sch of Med, Japan
- P3-272** **The change in amplitude of H-reflex during numerical processing**
Manami Ohya
Gumma paz college
- P3-273** **Music class lower students' stress level**
Anri Hattori, Kumiko Toyoshima, Hajime Fukui
Nara University of Education
- P3-274** **Molecular and genetic analyses of a QTL for increased home-cage activity exclude *Edem1* from the candidate genes**
Tsuyoshi Koide¹, Ayako Ishii^{1,2}, Nobuko Hosokawa³, Akinori Nishi^{1,2}
¹Mouse Genomics Resource Lab, National Inst. of Genets. ²SOKENDAI, Mishima ³Inst Frontier Med Sci, Kyoto Univ
- P3-275** **Analysis of cortical and hippocampal neural activity following basal forebrain stimulation in rats**
Kazuaki Nagasaka¹, Yumiko Watanabe², Nobuo Kunori^{1,2}, Riichi Kajiwara³, Ichiro Takashima²
¹Grad Sch Comp Human Sci, Univ of Tsukuba, Ibaraki, Japan ²Human Tech Res Inst, AIST, Ibaraki, Japan
³Dept Electr Bioinfo, Univ of Meiji, Kanagawa, Japan

Alzheimer's Disease, Other Dementia, Aging

- P3-276** **β -hydroxybutyrate improves cognitive dysfunction induced by A β oligomer**
Yu Otagaki, Takashi Miyano, Tsuyoshi Inoue
Dept of Biophys Chem, Grad Sch of Med Dent and Pharm Sci, Okayama Univ
- P3-277** **Wnt1 inducible signaling pathway protein1(WISP1) may prevent neuronal injury through anti-apoptosis signaling**
Karin Ueda¹, Kiwamu Watanabe², Masato Maesako¹, Kengo Uemura², Maiko Uemura², Haruhiko Akiyama³, Megumi Asada¹, Ryosuke Takahashi², Shun Shimohama⁴, Ayae Kinoshita¹
¹Department of Human Health Science, Kyoto University Graduate School of Medicine, Kyoto, Japan
²Department of Neurology, Kyoto University Graduate School of Medicine, Kyoto, Japan
³Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
⁴Department of Neurology, Sapporo Medical University, Hokkaido, Japan
- P3-278** **Age dependent change of the distribution of amyloid beta protein in macaque monkeys**
Katsuo Kimura^{1,2}, Ken-ichi Inoue¹, Fumiaki Tanaka², Masahiko Takada¹
¹Sys Neurosci, Pri Res Inst, Kyoto Univ, Inuyama, Japan ²Dept Neurol, Yokohama City Univ, Yokohama, Japan
- P3-279** **Association with apolipoproteinE genes and chronic cerebral hypoperfusion in onset of Alzheimer's disease**
Haruna Kikuchi, Fumiyo Matsuda, Harutoshi Sakakima, Yoshihiro Yoshida
Course of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University
- P3-280** **Role of ATP-binding cassette transporters in efflux of amyloid- β at the human blood-brain barrier**
Yasuteru Sano¹, Kazuyuki Saito², Masaaki Abe¹, Hideaki Nishihara¹, Takashi Kanda¹
¹Department of Neurology and Clinical Neuroscience, Yamaguchi University Graduate School of Medicine
²Department of Neurology and Neurological Science, Tokyo Medical and Dental University Graduate School, Tokyo, Japan
- P3-281** **Involvement of microbleeds, representative of cerebral amyloid angiopathy, in cognitive dysfunction in Alzheimer's disease and Parkinson's disease: an MRI study**
Tomohiko Murai^{1,2}, Masako Kinoshita³, Yoshifumi Nakaya²
¹Dept Neurology, Kyoto University Graduate School of Medicine ²Dept Neurology, Kyoto City Hospital
³Dept Neurology, Utano National Hospital, National Hospital Organization
- P3-282** **TMEM106B expression is reduced in Alzheimer's disease brains**
Jun-ichi Satoh, Yoji Yamamoto, Natsuki Kawana, Naohiro Asahina, Shyouta Kitano, Yoshihiro Kino
Dept Bioinformatics, Meiji Pharm Univ, Tokyo, Japan
- P3-283** **Determination of trypsin-digested α -casein peptides that effectively inhibit Concanavalin A aggregation**
Yu Miyagawa, Hiroko Inoue
Faculty of Science and Engineering, Waseda University, Tokyo, Japan

- P3-284** Involvement of lysosomal dysfunction in the pathology of the brain in aged progranulin-deficient mice
Yoshinori Tanaka^{1,2}, James Chambers³, Takashi Matsuwaki², Keitaro Yamanouchi², Masugi Nishihara²
¹Dept Dementia and Higher Brain Function, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
²Dept Veterinary Pathology, Univ of Tokyo, Tokyo, Japan ³Dept Veterinary Pathology, Univ of Tokyo, Tokyo, Japan
- P3-285** An infant Japanese monkey exhibits progeroid symptoms in nervous and other systems
Takao Oishi¹, Hiroo Imai², Yasuhiro Go^{3,4}, Hirohisa Hirai², Masahiko Takada¹
¹Systems Neurosci. Sect., Primate Res. Inst., Kyoto Univ., Aichi, Japan ²Mol. Biol. Sect., Primate Res. Inst., Kyoto Univ., Aichi, Japan
³Dept Brain Sci., Ctr. Novel Sci. Initiatives, Natl. Inst. Natural Sci., Tokyo, Japan
⁴Dept. Dev. Physiol., Natl. Inst. Physiol. Sci., Okazaki, Japan
- P3-286** 2014 Annual Report of the Japanese Brain Bank Network for Neuroscience Research
Shigeo Murayama¹, Maki Obata¹, Masaki Takao^{1,3}, Hiroyasu Akatsu⁴, Yuko Saito²
*Short Talk 6
ST-6-24
9/13 10 : 00-11 : 00*
¹Departments of Neurology and Neuropathology, Tokyo Metropolitan Geriatric Hospital & Institute of Gerontology
²Dept Pathol & Laboratory Med, Nat Cent for Neurol & Psychiatr, Tokyo ³Mihara Memorial Hospital, Gunma
⁴Fukushima Hospital, Aichi

Parkinson's Disease and Related Disorders

- P3-287** The downregulation of longevity-related gene, FOXO3 induces the neurodegeneration of the Lewy body disease model cells
Makoto Minamiyama¹, Ne Long¹, Yumi Kurokawa Nose¹, Noboru Motoyama¹, Masayo Shimamoto Nagai¹, Kyouko Ibaraki¹, Tomohisa Hayakawa¹, Hiromi Yamada¹, Kumiko Kanamori¹, Akiko Yamaoka², Makoto Naoi³, Wakako Maruyama¹
¹National Center for Geriatrics and Gerontology ²Dept Neurol, Natl Cent for Geriat and Gerontol, Aichi, Japan
³Facul Psychol and Physic Sci, Aichi Gakuin Univ, Aichi, Japan
- P3-288** Cytokine dynamics in environmental chemical models of Parkinson's disease
Masami Ishido
*Short Talk 6
ST-6-25
9/13 10 : 00-11 : 00*
National Institute for Environmental Studies
- P3-289** Adiponectin potentiates insulin signaling and ameliorates α -synuclein pathology in a rat neuroblastoma cell line
Kazunari Sekiyama, Yoshiki Takamatsu, Makoto Hashimoto
Div Sensory and Motor Systems, Tokyo Metro Inst Med Sci, Tokyo, Japan
- P3-290** Exogenous administration of human synthetic α -synuclein fibrils induce Parkinson-like degeneration
Victor Tapias Molina^{1,2}, Xiaoping Hu^{1,2}, Kelvin C Luk³, Virginia M.Y Lee³, John T Greenamyre^{1,2}
*Short Talk 6
ST-6-26
9/13 10 : 00-11 : 00*
¹Dept Neurol, Univ of Pittsburgh, USA ²Pittsburgh Institute for Neurodegenerative Diseases
³Dept of Pathol and Lab Medicine, Univ of Penn, USA
- P3-291** Stomach-brain interaction induced by molecular hydrogen in Parkinson's disease model animal
Taikai Inoue¹, Akio Matsumoto^{2,3,5}, Megumi Yamafuji¹, Tomoko Tachibana², Haruaki Nakaya², Yusaku Nakabeppu^{4,5}, Mami Noda^{1,5}
*Short Talk 5
ST-5-27
9/13 9 : 00-10 : 00*
¹Laboratory of Pathophysiology, Faculty of Pharmaceutical Sciences, Graduate School of Pharmaceutical Sciences, School of Pharmaceutical Sciences, Kyushu University ²Department of Pharmacology, Graduate School of Medicine, Chiba University, Chiba
³Division of Molecular Design, Medical Institute of Bioregulation, Kyushu University, Fukuoka
⁴Division of Neurofunctional Genomics, Medical Institute of Bioregulation, Kyushu University, Fukuoka
⁵Research Center for Nucleotide Pool, Kyushu University, Fukuoka, Japan
- P3-292** Generating mice models for idiopathic Parkinson's disease
Hodaka Yamakado, Masashi Ikuno, Takeshi Asano, Ryosuke Takahashi
Dept.of Neurol., Grad.Sch. of Med., Kyoto Univ.
- P3-293** Analysis of the ATP13A2 (PARK9) mutant medaka
Yosuke Taruno¹, Hideaki Matsui², Norihito Uemura¹, Hotaka Yamakado¹, Ryosuke Takahashi¹
¹Kyoto University Graduate School of Medicine. Department of Neurology.
²Department of Neuroscience, Section of Integrative Physiology, Faculty of Medicine, Graduated School of University of Miyazaki
- P3-294** Involvement of HDAC10 in MPP+ treated neuronal cell death and in brains with Parkinson's disease
Yoshito Nagano, Takashi Kurashige, Eisuke Dohi, Takeo Shishido, Tetsuya Takahashi, Hirofumi Maruyama, Masayasu Matsumoto
Dept Clinical Neuroscience and Therapeutics, Hiroshima Univ, Hiroshima, Japan
- P3-295** Creating mice models for sporadic Parkinson's disease based on its genetic risk factors
Masashi Ikuno, Takeshi Asano, Hodaka Yamakado, Ryosuke Takahashi
Department of Neurology, Kyoto University Graduate School of Medicine

- P3-296** **Generation of iPS cells harboring GBA heterozygous mutations**
Naoto Jingami^{1,2}, Hodaka Yamakado¹, Yasushi Koshiba^{1,2}, Tomoko Oeda³, Hideyuki Sawada³, Akitsu Hotta², Haruhisa Inoue², Jun Takahashi², Ryosuke Takahashi¹
¹Department of Neurology, Kyoto University Graduate School of Medicine, Kyoto, Japan
²Center for iPS Cell Research and Application, Kyoto University, Kyoto, Japan ³Clinical Research Center, Utano Hospital, Kyoto, Japan
- P3-297** **Dopamine-mediated oxidation of methionine 127 in alpha-synuclein causes neurotoxicity**
Kazuhiro Nakaso¹, Naoko Tajima¹, Yosuke Horikoshi¹, Satoru Ito², Tatsuya Matsura¹
¹Div. Medical Biochemistry, Tottori Univ. Fac. of Med. Tottori, Japan ²Div. Neurology, Tottori Univ. Fac. of Med.
- P3-298** **α -Synuclein present as a monomer in CSF**
Harutsugu Tatebe^{1,2,3}, Takahiko Tokuda^{3,4}, Ryotaro Ishii³, Takashi Kasai³, Toshiki Mizuno³
¹Dept of Zaitaku (Home care), Kyoto Pref Univ of Med, Kyoto, Japan
²Dept of Medical Education & General Medicine, Kyoto Pref Univ of Med, Kyoto, Japan
³Dept of Neurology, Kyoto Pref Univ of Med, Kyoto, Japan
⁴Dept of Molecular Pathobiology of Brain Diseases, Kyoto Pref Univ of Med, Kyoto, Japan
- P3-299** **Astrocyte as a reservoir of L-DOPA**
Ikuko Miyazaki, Shinki Murakami, Masato Asanuma
Dept. of Brain Sci., Okayama Univ. Grad. Sch. of Med., Dent. & Pharmaceut. Sci.
- P3-300** **Invitation to collaborative curation effort to implement molecular mechanisms of Parkinson's disease into a computationally tractable map**
Short Talk 6
ST-6-27
9/13 10:00-11:00
Kazuhiro A Fujita^{1,2}, Stephan Gebel³, Marek Ostaszewski³, Piotr Gawron³, Paul Antony³, Christophe Trefois³, Sabine Mosch³, Yukiko Matsuoka¹, Samik Ghosh^{1,2}, Hiroaki Kitano^{1,2}, Rudi Balling³
¹The Systems Biology Institute ²RIKEN Center for Integrative Medical Sciences, Yokohama, Japan
³Luxembourg Centre for Systems Biomedicine (LCSB), University of Luxembourg, Esch-sur-Alzette, Luxembourg
- P3-301** **Mechanism of nicotine for induction of tremor**
Saki Shimizu, Naofumi Kunisawa, Yuto Mizuguchi, Takahiro Okumura, Kentaro Tokudome, Miyuki Ohtaka, Hisao Chikamochi, Yuichi Takakubo, Tadao Serikawa, Yukihiko Ohno
Lab Pharmacol, Osaka Univ Pharm Sci, Osaka, Japan

Polyglutamine Diseases, ALS, SCD, Other Neurodegenerative Disorder

- P3-302** **Effects by repetitive Transcranial Magnetic Stimulation (rTMS) on neurosychiatric and neurodegenerative disorder**
Tetsuro Ikeda¹, Nobuyuki Nukina²
¹The University of Tokyo ²SNP team BSI RIKEN
- P3-303** **Loss of *WT1* gene in neuron and glia affects the phenotypes of Huntington's disease model mice**
Short Talk 5
ST-5-28
9/13 9:00-10:00
Shohei Yokoyama, Atsushi Harima, Keiko Kamimura, Yuuki Takeda, Koyo Suzuki, Toshiaki Koda
Graduate School of Life Science, Univ of Hokkaido, Hokkaido, Japan
- P3-304** **Histological analysis of the brain in Dystonin-deficient mice**
Masao Horie¹, Keisuke Watanabe¹, Hiromi Sano², Jun-ichiro Nashimoto¹, Satomi Chiken², Atsushi Nambu², Katsuhiko Ono³, Kazuhiro Ikenaka⁴, Akiyoshi Kakita⁵, Hirohide Takebayashi¹
¹Div. Neurobiol. & Anat., Dept. Sensory & Integr. Med., Niigata Univ., Grad. Sch. of Med. & Dent. Scis.
²Div of System Neurophysiol., NIPS, Okazaki, Japan ³Dept of Biol, Kyoto Pref Univ of Med
⁴Div of Neurobiol and Bioinformatics, NIPS, Okazaki, Japan ⁵Dept of Pathol. Neurosci., BRI, Niigata Univ
- P3-305** **Depletion of *p62/SQSTM1* reduces nuclear inclusions and paradoxically ameliorates disease phenotypes in Huntington's model mice**
Masaru Kurosawa^{1,3,7}, Gen Matsumoto^{1,2,3}, Yoshihiro Kino^{1,2,3}, Misako Okuno³, Mizuki Kurosawa³, Harumi Taniguchi^{1,2,3}, Kazuhiro Nakaso⁴, Toru Yanagawa⁵, Eiji Warabi⁵, Tomomi Shimogori¹, Takashi Sakurai⁷, Hattori Nobutaka⁶, Nobuyuki Nukina^{1,2,3}
¹Lab Molecular Mechanisms of Thalamus Development, RIKEN BSI, Saitama, Japan
²Dept Neuroscience for Neurodegenerative Disorders, Juntendo Univ Grad Sch of Med, Tokyo, Japan
³Lab Structural Neuropathology, RIKEN BSI, Saitama, Japan ⁴Div of Medical Biochemistry, Tottori Univ Sch of Med, Tottori, Japan
⁵Fac of Med, Univ of Tsukuba, Ibaraki, Japan ⁶Dept Neurology, Juntendo Univ Grad Sch of Med, Tokyo, Japan
⁷Dept Cellular and Molecular Pharmacology, Juntendo Univ Grad Sch of Med, Tokyo, Japan
- P3-306** **AAV9 vector-mediated production of animal models of spinocerebellar ataxia type 3**
Ayumu Konno, Hirokazu Hirai
Dept NeuroPhysiol, Gunma Univ, Gunma, Japan

- P3-307** **One-year follow-up of transgene expression by integrase-defective lentiviral vectors and their therapeutic potential in inherited neurodegenerative disease model mice**
Yasunori Matsuzaki¹, Hanae Saida¹, Kiyohiko Takayama¹, Akira Iizuka¹, Ayumu Konno¹, Shigeru Yanagi², Hirokazu Hirai¹
¹Dept Neurophysiol, Univ of Gunma, Gunma, Japan ²Dept Mol Biochem, Tokyo Univ of Pharm Life Sci, Tokyo, Japan
- P3-308** **Alternation of miRNA expression in TDP-43 depleted spinal motor neuron**
Atsushi Shiga, Chigusa Kondo, Sachiko Hirokawa, Akinori Miyashita, Toshiya Sato, Kenji Sakimura, Masatoyo Nishizawa, Osamu Onodera
Brain Research Institute, Niigata University, Niigata, Japan
- P3-309** **Development of gene therapy for ALS using sporadic ALS model mice**
Takenari Yamashita¹, Hui Lin Chai¹, Sayaka Teramoto¹, Shoji Tsuji², Kuniko Shimazaki³, Shin-ichi Muramatsu⁴, Shin Kwak^{1,5}
¹Div Clin Biotechnol, Cent Dis Biol, Integr Med, Univ of Tokyo, Tokyo, Japan ²Dept Neurol, Grad Schl Med, Univ of Tokyo, Tokyo, Japan
³Dept Physiol, Jichi Med Univ, Tochigi, Japan ⁴Dept Neurol, Jichi Med Univ, Tochigi, Japan
⁵Clin Res Cent Med, Intrnatl Univ Health Welfare, Chiba, Japan
- P3-310** **Clinical, histopathological, and biochemical characterization of the canine model of SOD1-mediated amyotrophic lateral sclerosis**
Yui Kobatake¹, Kanae Oyake², Toshihiro Tsukui³, Hiroki Sakai^{1,2}, Osamu Yamato⁴, Miyoko Saito⁵, Makoto Urushitani⁶, Shinsuke Kato⁷, Jun Sasaki⁸, Sanae Shibata^{1,2}, Sadatoshi Maeda^{1,2}, Hiroaki Kamishina^{1,2}
¹The United Graduate School of Veterinary Sciences Gifu Univ, Gifu, Japan
²Faculty of Applied Biological Sciences Gifu Univ, Gifu, Japan ³Nippon Zenyaku Kogyo Co. Ltd., Fukushima, Japan
⁴Joint Faculty of Veterinary Medicine Kagoshima Univ, Kagoshima, Japan
⁵School of Veterinary Medicine, Azabu Univ, Kanagawa, Japan ⁶Graduate School of Medicine Kyoto Univ, Kyoto, Japan
⁷Tottori Univ Faculty of Medicine, Tottori, Japan ⁸Faculty of Agriculture Iwate Univ, Iwate, Japan
- P3-311** **Microarray analysis in spinal cords of sporadic ALS patients with cell-type specific transcriptome**
Hirofumi Yamashita¹, Okiru Komine^{2,3}, Noriko Fujimori², Hidefumi Ito^{1,5}, Yohei Iguchi⁴, Naoki Atsuta⁴, Fumiaki Tanaka³, Gen Sobue⁴, Ryosuke Takahashi¹, Koji Yamanaka^{2,3}
¹Department of Neurology, Kyoto University ²RIKEN, BSI, Laboratory for motor neuron disease
³Research Institute of Environmental Medicine, Nagoya University ⁴Department of Neurology, Nagoya University
⁵Department of Neurology, Wakayama Medical University
- P3-312** **Profiling of miRNAs in cerebrospinal fluid from patients with multifocal motor neuropathy and amyotrophic lateral sclerosis**
Takuya Ohkubo¹, Akira Machida^{1,11}, Kaoru Mogushi², Hidenori Matsuo³, Atsushi Tsunoda⁴, Taketoshi Maehara⁵, Yu-ichi Noto⁶, Toshio Shimizu⁷, Satoshi Kuwabara⁸, Takashi Kanda⁹, Nobuyoshi Kosaka¹⁰, Takahiro Ochiya¹⁰, Takanori Yokota¹
¹Dept Neurol & Neurosci, Univ of Tokyo Med & Dent, Japan ²Div Genome Res, CBRR, Univ of Juntendo, Tokyo, Japan
³NHO, Nagasaki Kawatana Med Cent, Nagasaki, Japan ⁴Dept Otolaryngol, Univ of Tokyo Med & Dent, Tokyo, Japan
⁵Dept Neurosurg, Univ of Tokyo Med & Dent, Tokyo, Japan ⁶Dept Neurol, Kyoto Prefectural Univ of Med, Kyoto, Japan
⁷Dept Neurol, Tokyo Metro Neurol Hosp, Tokyo, Japan ⁸Dept Neurol, Univ of Chiba, Chiba, Japan
⁹Dept Neurol and Clin Neurosci, Univ of Yamaguchi, Ube, Japan ¹⁰Div Mol Cell Med, Nat Cancer Cent Res Ins, Tokyo, Japan
¹¹Dept Neurol, Tsuchiura Kyodo General Hosp, Ibaraki, Japan
- P3-313** **Systems biology analysis of Drosophila in vivo screen data elucidates core networks for DNA damage repair in SCA1**
Takuya Tamura¹, Sam S Barclay², Hikaru Ito¹, Kyota Fujita¹, Kazuhiko Tagawa¹, Teppei Shimamura⁴, Asuka Katsuta³, Hiroki Shiwaku¹, Masaki Sone³, Seiya Imoto⁴, Satoru Miyano⁴, Hitoshi Okazawa¹
¹Tokyo Medical and Dental University ²Imperial College School of Medicine, London, UK
³Dept Biomolecular Science, Toho University, Funabashi, Japan ⁴Inst Medical Science, Univ of Tokyo, Tokyo, Japan

Neurodevelopmental Disorders

- P3-314** **Exposure of neonicotinoid pesticide disrupts gene expression profiles in cerebellar cultures from neonatal rats -possible causal factors for developmental disorders-**
Junko Kimura-Kuroda¹, Yasumasa Nishito², Hiroko Yanagisawa³, Yoichiro Kuroda⁴, Yukari Komuta⁵, Hitoshi Kawano⁶, Masaharu Hayashi¹
¹Mental Develop Project, Tokyo Metro Inst Med Sci, Tokyo, Japan ²Basic Tech Res Center, Tokyo Metro Inst Med Sci, Tokyo, Japan
³ALS/Neuropathy Project, Tokyo Metro Inst Med Sci, Tokyo, Japan ⁴Environ Neurosci Info Center, Tokyo, Japan
⁵Dept Rehab Sensory Function, NRCD, Saitama, Japan ⁶Dept Health & Dietetics, Teikyo Heisei Univ, Tokyo, Japan
- P3-315** **Prenatal exposure to histone deacetylase inhibitors delays neuronal maturation**
Takuya Kawanai¹, Ryo Watanabe¹, Aya Inoue¹, Yukio Ago¹, Kazuhiro Takuma¹, Toshio Matsuda^{1,2}
¹Lab. of Medicinal Pharmacol., Grad. Sch. of Pharmaceut. Sci, Osaka Univ., Osaka, Japan
²Unit-Grad. Sch. of Child Dev., Osaka Univ., Kanazawa Univ., Hamamatsu Univ. Sch. of Med., Chiba., Fukui Univ., Osaka, Japan

- P3-316** **Trappc5, a constituent of TRAPP complex, is up-regulated in cerebellum expressing FOXP2 and involved in synaptogenesis**
Eriko Jimbo¹, Yuko Tanabe², Beat Imhof³, Takashi Momoi²
¹Department of Pediatrics, Jichi Medical University ²Center for Medical Science, International Univ Health and Welfare, Tochigi, Japan
³Dept Pathol Immunol, University of Geneva, Switzerland
- P3-317** **DBZ, a CNS-specific DISC1 binding protein, positively regulates oligodendrocyte differentiation**
Shoko Shimizu¹, Yoshihisa Koyama², Tsuyoshi Hattori³, Shingo Miyata¹, Takashi Tanaka¹, Taiichi Katayama⁴, Akira Ito³, Masaya Tohyama¹
¹Div Mol Brain Sci, Res Ins Tra Asian Med, Kinki Univ, Osaka, Japan ²Dept Anat and Neurosci, Osaka Univ, Osaka, Japan
³Dept Mol Neuropath, Osaka Univ, Osaka, Japan ⁴Dept Mol Brain Sci, Osaka Univ, Osaka, Japan
- P3-318** **Comprehensive gene expression profiling associated with the prefrontal circuit maturation**
Shuhei Ueda¹, Minae Niwa², Akira Sawa², Takeshi Sakurai¹
¹Medical Innovation Center, Grad Sch of Med, Kyoto Univ, Kyoto, Japan
²Dept of Psychiatry, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
- P3-319** **Maternal dietary vitamin B12 restriction is associated with increased oxidative stress in brain regions of C57BL/6 mouse offspring**
Shampa Ghosh, Jitendra K. Sinha, Manchala Raghunath
Endocrinology and Metabolism Division, National Institute of Nutrition (NIN), Hyderabad, India
- P3-320** **Enhanced remodeling of specific synapses in mouse models of autism**
Shinji Tanaka¹, Masaaki Isshiki¹, Toshihiko Kuriu², Katsuhiko Tabuchi³, Toru Takumi⁴, Shigeo Okabe¹
¹Dept Cell Neurobiol, Univ of Tokyo, Tokyo, Japan ²Dept Neurophysiol, Kagawa Sch of Pharmaceutical Sci, Kagawa, Japan
³Dept of Mol Cell Physiol, Shinshu Univ Sch of Med, Nagano, Japan ⁴Lab for Mental Biol, RIKEN BSI, Saitama, Japan
- P3-321** **Functional analyses of the CDKL5, a causative gene for neurodevelopmental disorders**
Teruyuki Tanaka¹, Aya Watanabe¹, Mai Hagiwara¹, Takuto Murakami¹, Shizuka Kobayashi², Toshiya Manabe², Keizo Takao³, Tsuyoshi Miyakawa³, Masahiro Fukaya⁴, Hiroyuki Sakagami⁴, Masashi Mizuguchi¹, Kosuke Okuda¹
¹Grad.Sch. of Med., The Univ. of Tokyo, Tokyo, Japan
²Division of Neuronal Network, Dept. of Basic Medical Sciences, The Univ. of Tokyo, Tokyo, Japan
³Center for Genetic Analysis of Behavior, National Institute for Physiological Sciences
⁴Dept. of Anatomy, Kitasato Univ. School of Medicine, Sagami-hara, Japan
- P3-322** **PRRT2 mutation correlated with phenotype of paroxysmal kinesigenic dyskinesia and drug response**
Hong-Fu Li¹, Wan-Jin Chen², Wang Ni¹, Kai-Yan Wang¹, Gong-Lu Liu¹, Ning Wang², Zhi-qi Xiong³, Jian-Feng Xu⁴, Zhi-Ying Wu¹
¹Huashan Hospital, Fudan University, Shanghai, China
²Department of Neurology and Institute of Neurology, First Affiliated Hospital, Fujian Medical University, Fuzhou, China
³Institute of Neuroscience, State Key Laboratory of Neuroscience, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China
⁴State Key Laboratory of Genetic Engineering and Fudan-VARI Center for Genetic Epidemiology, School of Life Science, Fudan University, Shanghai, China
- P3-323** **Long-term consequences of neonatal fluoxetine exposure in adult rats**
Li-Jen Lee, Meng-Ching Ko
Graduate Institute of Anatomy and Cell Biology, National Taiwan University, Taipei, Taiwan
- P3-324** **Weak individualization of spontaneous eye movements in individuals with autism spectrum disorders**
Aya Shirama^{1,2,3}, Nobumasa Kato⁴, Makio Kashino^{1,2}
¹NTT Communication Science Laboratories, Kanagawa, Japan ²CREST, JST, Kanagawa, Japan
³Japan Society for the Promotion of Science, Tokyo, Japan ⁴Dept of Psychiatry, Showa Univ, Tokyo, Japan
- P3-325** **The smiles of children with autism spectrum disorder during animal-assisted activities may facilitate their positive social behaviors and decrease negative social behaviors -Quantitative analysis with smile-detecting interface**
Atsushi Funahashi¹, Anna Gruebler², Takeshi Aoki³, Masakazu Hirokawa⁴, Hideki Kadone⁵, Kenji Suzuki^{5,6}
¹Dept Educ and Social Service, Institute Devel Res, Aichi Human Service Center, Aichi, Japan
²Sch Computer Science and Electronic Engineering, Univ. Essex, Colchester, UK
³Chubu Animal-assisted Therapy Association, Aichi, Japan
⁴Faculty of Engineering, Information and Systems, University of Tsukuba, Ibaraki, Japan
⁵Center for Cybernetics Res, Univ Tsukuba, Ibaraki, Japan ⁶Japan Science and Technology Agency, Tokyo, Japan

Other Psychiatric Disorders

P3-326 Aggressive biting behavior toward inanimate objects in female mice

Toshiko Kuchiiwa¹, Kae Miura¹, Satoshi Kuchiiwa²

¹Dept Clin Psychol, Grad Sch Human Sci, Kagoshima Immaculate Heart Univ, Kagoshima, Japan

²Dept Neuroanatomy, Grad Sch Med Dent Sci, Kagoshima Univ, Kagoshima, Japan

Cerebrovascular Disease and Ischemia

P3-327 Phosphorylation enhances recombinant HSP27 neuroprotection against focal cerebral ischemia in mice

Yoshiaki Shimada¹, Ryota Tanaka¹, Hideki Shimura^{2,3}, Kazuo Yamashiro¹, Takao Urabe², Nobutaka Hattori¹

¹Department of Neurology Juntendo University School of Medicine, Tokyo, Japan.

²Department of Neurology at Juntendo University Urayasu Hospital, Chiba, Japan.

³Institute for Environment and Gender Specific Medicine, Juntendo University School of Medicine Chiba, Japan

P3-328 Neuroprotective effects of lycopene against neuronal damage in the gerbil hippocampus induced by transient cerebral ischemia

Kimikazu Fujita¹, Nobuko Yoshimoto², Hideki Imada³, Hiroyuki Suganuma⁴, Yutaka Nagata¹, Eiichi Miyachi¹

¹Dept Physiol, Sch Med, Fujita Health Univ ²Dept. Nutrition and Food Sciences, Nagoya Bunri Univ. Col. Nagoya, Japan

³Dept Registered Dietitians, Health and Welfare, Tokai Gakuin Univ. Kagamigahara, Japan

⁴Research Institute KAGOME Co. Ltd. Tohigi, Japan

P3-329 Ameliorative effects of yokukansan on behavioral deficits following transient forebrain ischemia in gerbils

Yanan Liu¹, Takehiro Nakamura¹, Tetsuhiko Toyoshima¹, Feng Lu^{1,2}, Tohru Yamamoto¹, Toshifumi Itano¹

¹Department of Molecular Neurobiology, Kagawa University Faculty of Medicine, Kagawa, Japan

²Department of Physiology 2, Kawasaki Medical University, Okayama, Japan

P3-330 The neuroprotective effects of a novel nucleoside analogue (2C1-C.OXT-A) on intracerebral hemorrhage

Feng Lu¹, Naohiko Okabe¹, Naoyuki Himi¹, Emi Nakamura-Maruyama¹, Takashi Shiromoto¹, Kazuhiko Narita¹, Ikuko Tsukamoto², Tokumi Maruyama³, Norikazu Sakakibara³, Osamu Miyamoto¹

¹Physiology2, Kawasaki Medical School ²Department of Pharmaco-Bio-Informatics, Faculty of Medicine, Kagawa University

³Kagawa School of Pharmaceutical Sciences, Tokushima Bunri University

P3-331 Reduction of Cerebral Hemorrhage by Dabigatran via Neurovascular Protection after Recanalization with tPA in Ischemic Stroke of Rat

Syoichiro Kono, Kentaro Deguchi, Toru Yamashita, Nozomi Hishikawa, Koji Abe

Department of Neurology, Okayama University

P3-332 Glial glutamate transporter GLT-1 determines sensitivity to the cortical spreading depression

Saori Toyoda¹, Weinan Sun¹, Yukiko Itou¹, Wanpeng Cui¹, Tomomi Aida¹, Michiko Yanagisawa¹, Masatoshi Nomura², Ryoichi Takayanagi², Kohichi Tanaka^{1,3,4}, Hidenori Aizawa¹

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⁴Cent Brain Int Res, Tokyo Med & Dent Univ

P3-333 Drug efficacies are influenced by the difference of delivery routes: intraperitoneal or intravenous administration, in neonatal hypoxic-ischemic encephalopathy model of mice

Makiko Ohshima¹, Akihiko Taguchi², Tomoaki Ikeda³, Masahiro Tsuji¹

¹Dept Regenerative Medicine and Tissue Engineering, National Cerebral and Cardiovascular Center, Osaka, Japan

²Dept Regenerative Medicine Research, Institute of Biomedical Research Innovation, Hyogo, Japan

³Dept of Obstetrics and Gynecology, Mie University School of Medicine, Mie, Japan

P3-334 Temporal evaluation of hypoxic-ischemic brain injury in immature rats by using a hybrid MR/PET imaging

Masahiro Tsuji¹, Jun-ichiro Enmi², Tetsuaki Moriguchi², Kazuhiro Koshino², Makiko Ohshima¹, Hidehiro Iida²

¹Dept Regen Med Tissue Eng, Natl Cerebral & Cardiovascular Ctr, Osaka, Japan

²Dept Invest Radiol, Natl Cerebral & Cardiovascular Ctr, Osaka, Japan

- P3-335** **Spatiotemporal effects of rehabilitation therapy on motor map reorganization after stroke**
Naohiko Okabe¹, Takashi Shiromoto¹, Feng Lu¹, Emi Nakamura-Maruyama¹, Naoyuki Himi¹, Kazuhiko Narita¹, Nobuhisa Iwachidou², Osamu Miyamoto¹
¹Physiol 2, Kawasaki medical school, Okayama, Japan
²Tissue Biology & Electron Microscopy Research Center, Kawasaki medical school, Okayama, Japan
- P3-336** **Functional reorganization for movement of affected hand was induced in the contralesional hemisphere of the rat brain following focal ischemia**
Saramu Momma¹, Megumi Goto¹, Tomoko Shimizu¹, Takashi Mikami², Akira Mitani¹
¹Dept Human Health Sciences, Graduate School of Medicine, Univ of Kyoto ²Biotex Research Laboratory, Kyoto
- P3-337** **The Association between neurogenesis and functional recovery after cerebral ischemia**
Takashi Shiromoto¹, Naohiko Okabe¹, Fung Lu¹, Emi Nakamura-Maruyama¹, Naoyuki Himi¹, Kazuhiko Narita¹, Kazumi Kimura², Osamu Miyamoto¹
¹Dept Physiol, Kawasaki medical school, Okayama, Japan ²Dept Neurology, Nippon Medical School, Tokyo Japan
- P3-338** **Indirect minor damage in the corticospinal neurons in the developing white matter injury model rat**
Sachiyo Misumi, Yoshitomo Ueda, Yuko Shimizu, Akimasa Ishida, Cha-Gyun Jung, Hideki Hida
Dept. of Neuro-Physiol., Brain Sci., Grad. Sch. of Med. Sci., Nagoya City Univ.
- P3-339** **Overrepresented transcription factor binding sites identified following an animal model of ischemic stroke**
Monique Surlés Zeigler, Yonggang Li, Alicia S Gates, Byron Ford
Neuroscience Institute, Morehouse School of Medicine, Atlanta, USA

Injury

- P3-340** **Identification of a new variant of mouse KLK6 having high enzymatic activity**
Koichi Murakami, Tatsuhide Tanaka, Yoshio Bando, Shigetaka Yoshida
Department of Functional Anatomy and Neuroscience
- P3-341** **In vivo Magnetic Resonance Imaging at 11.7 Tesla Visualized the Effects of Neonatal Transection of Infraorbital Nerve upon Primary and Secondary Trigeminal Pathways in Rats**
Yasuhiro Ooi^{1,2}, Chizuko Inui-Yamamoto³, Hiroshi Toyoda², Akitoshi Seiyama⁴, Yoshichika Yoshioka^{2,5}, Junji Seki⁶
¹Division of Pathogenesis and Control of Oral Disease, Graduate School of Dentistry, Osaka University, Osaka, Japan
²Center for Information and Neural Networks (CiNet), National Institute of Information and Communication Technology (NICT) and Osaka University, Osaka, Japan ³Department of Oral Anatomy, Osaka Dental University, Osaka, Japan
⁴Division of Medical Devices for Diagnoses, Faculty of Human Health Sciences, Graduate School of Medicine, Kyoto University, Kyoto, Japan
⁵Biofunctional Imaging Laboratory, Immunology Frontier Research Center, Osaka University, Osaka, Japan
⁶Organization for Research and Development of Innovative Science and Technology, Kansai University, Osaka, Japan
- P3-342** **Aspects of oscillatory wave propagation in the neocortex after neocortical lesion of rats**
Hiroshi Yoshimura^{1,2}, Tokio Sugai², Takashi Tominaga³, Yoko Tominaga³, Takahiro Hasegawa¹, Chenjuan Yao¹, Tetsuya Akamatsu¹, Nobuo Kato²
¹Dept Mol Oral Physiol, Univ of Tokushima Grad Sch, Tokushima, Japan ²Dept Physiol, Kanazawa Med Univ, Ishikawa, Japan
³Inst Neurosci, Tokushima Bunri Univ, Kagawa, Japan
- P3-343** **Endothelin ET_B receptor antagonists ameliorated cold injury-induced vasogenic brain edema through attenuation of matrixmetalloproteinase-9 and vascular endothelial growth factor-A expressions in Mice**
Shotaro Michinaga, Naoki Seno, Mayu Fuka, Yui Yamamoto, Yutaka Koyama
Lab. of Pharmacol., Faculty of Pharmacy, Osaka Ohtani Univ., Osaka, Japan
- P3-344** **New reliable scoring system, Toyama Mouse Score, to evaluate locomotor function following spinal cord injury in mice**
Michiko Shigyo¹, Norio Tanabe¹, Tomoharu Kuboyama¹, Song-Hyen Choi², Chihiro Tohda¹
¹Div. of Neuromedical Science, Inst. of Natural Med, Univ. of Toyama, Toyama, JAPAN
²Dong-A ST Pharm. Research Center, Republic of Korea, Yongin, Korea

Neuro-oncology

- P3-345** **Cytotoxic Effect of Gambogic Acid on Human SH-SY5Y Neuroblastoma Cells Is Mediated by Intrinsic Caspase-Dependent Signaling Pathway**
Md. Aatur Rahman, Haijie Yang, Nam-Ho Kim, Sung-Oh Huh
Hallym University

P3-346

Short Talk 6
ST-6-33
9/13 10:00-11:00

Reversibility of motor symptoms during awake surgery for brain tumor involving the supplementary motor area (SMA): Intraoperative SMA syndrome

Riho Nakajima¹, Mitsutoshi Nakada², Katsuyoshi Miyashita², Masashi Kinoshita², Hirokazu Okita³, Tetsutaro Yahata³, Yutaka Hayashi²

¹Pharmaceutical and Health Sciences, Kanazawa University, Kanazawa, Japan ²Department of Neurosurgery, Kanazawa University
³Department of Physical Medicine and Rehabilitation, Kanazawa University Hospital

P3-347

Spatial working memory and dorsal fronto-parietal network subserved by the superior longitudinal fasciculus I: Anatomofunctional consideration in brain tumor surgery

Yutaka Hayashi¹, Harumichi Shinohara², Riho Nakajima³, Katsuyoshi Miyashita¹, Shingo Tanaka¹, Masashi Kinoshita¹, Hirokazu Okita⁴, Mitsutoshi Nakada¹

¹Department of Neurosurgery, Kanazawa University, Kanazawa, Japan
²Department of Anatomy 2, Kanazawa Medical University, Kanazawa, Japan
³Pharmaceutical and Health Science, Kanazawa University, Kanazawa, Japan
⁴Physical Medicine and Rehabilitation, Kanazawa University Hospital, Kanazawa, Japan

Behavioral Pharmacology

P3-348

Cilostazol, a phosphodiesterase 3 inhibitor, improves memories in senescence accelerated mice

Shogo Endo, Shuichi Yanai, Kai Kojima, Tomoko Arasaki

Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan

P3-349

Effects of SKF83959 on fixed-ratio type schedule-controlled behavior: lack of interaction with dopamine receptor agonists

Ruey-Ming Liao^{1,2,3}, Chuen-Yu Chuang¹, Pei-Pei Liu¹

¹Department of Psychology, National Cheng-Chi University ²Institute of Neuroscience, National Cheng-Chi University
³Research Center for Mind, Brain and Learning, National Cheng-Chi University

P3-350

Effects of antidepressants on encounter-induced hyperactivity in isolation-reared mice

Shigeru Hasebe¹, Yukio Ago¹, Saki Nishiyama¹, Satoshi Oka¹, Daiki Nakamori¹, Kazuhiro Takuma¹, Toshio Matsuda^{1,2}

¹Lab. of Medicinal Pharmacol., Grad. Sch. of Pharmaceut. Sci., Osaka Univ., Osaka, Japan
²Unit-Grad. Sch. of Child Dev., Osaka Univ., Kanazawa Univ., Hamamatsu Univ. Sch. of Med., Chiba Univ., Fukui Univ., Osaka, Japan

P3-351

Roles of serotonin and serotonin-1A receptor during the postnatal period in the anxiety, depression, and the spatial learning in adult BALB/c mice

Chihiro Ishikawa¹, Akiko Ohtani¹, Masaaki Yoshikawa², Tomoyuki Masuda¹, Takashi Shiga¹

¹Prog in Kansei, Behav and Brain Sci, Grad Sch of Comp Human Sci, Univ of Tsukuba, Ibaraki, Japan
²Dept of Funct Morphol, Nihon Univ Sch of Med, Tokyo, Japan

P3-352

Methylphenidate improves ADHD-like behavior only in adult DAT KO mice but not in juveniles

Yumiko Kubo^{1,2}, Yoshiyuki Kasahara^{1,2}, Hiroaki Tomita^{1,2}, Yosefu Arime², Yukio Takamatsu³, Kazutaka Ikeda³, Ichiro Sora^{2,4}

¹Dept. of Disaster Psychiatry, IRIDeS, Miyagi, Japan ²Dept. of Biol Psychiatry, Tohoku Univ Grad. Sch. of Med., Miyagi, Japan
³Res. Project for Addictive Substances, Tokyo Metropolitan Inst. of Med Sci., Tokyo, Japan
⁴Dept. of Psychiatry, Kobe Univ Grad. Sch. of Med. Hyogo, Japan

P3-353

Working memory impairment in chronic phencyclidine-treated mice

Yosefu Arime, Kazufumi Akiyama

Department of Biological Psychiatry and Neuroscience, Dokkyo Medical University of Medicine

P3-354

Impairment of social behavior in HPC-1/syntaxin1A knockout mice relate with reduction of DA and OXT release

Tomonori Fujiwara¹, Takefumi Kofuji², Masumi Sanada¹, Kimio Akagawa¹

¹Dept Cell Physiol., Kyorin Univ. Sch. of Med., Tokyo, Japan ²Radio Isotope Lab., Kyorin Univ. Sch. of Med., Tokyo, Japan

P3-355

Psychiatric disorder-related abnormal behavior and hypersensitivity to sound in Wnt1-cre and Wnt1-GAL4 double transgenic mice

Mitsunari Nakajima¹, Hisamichi Mori¹, Chisa Nishikawa¹, Momoko Tsuruta¹, Yuki Miyasaka^{2,3}, Yoshiaki Kikkawa², Satoshi Okuyama¹, Yoshiko Furukawa¹

¹Matsuyama University ²Mammalian Genetics Project, Tokyo Metropolitan Inst Med Sci, Tokyo, Japan
³Graduate School Med Dent Sci, Niigata Univ, Niigata, Japan

Others

- P3-356** **Effect of chronic intermittent hypoxia on hippocampal neuronal activities**
Wing Ho Yung, Linhao Xu, Ya Ke
School of Biomedical Science, The Chinese University of Hong Kong
- P3-357** **Developmental neurotoxicity of dendrimer nanoparticles: an in vitro study**
Yoshika Kurokawa, Yang Zeng, Qin Zeng, Tin-Tin Win-Shwe, Seishiro Hirano, Hideko Sone
Research Center for Environmental Risk, National Institute for Environmental Studies
- P3-358** **MRI approach to detect acute methylmercury toxicity on mouse brain**
Ryohei Takahashi¹, Kouichi Itoh², Yasuhiro Ishihara¹, Megumi Yamamoto³, Atsuhiko Ishida¹, Takeshi Yamazaki¹
¹Dept Integra Art & Sci, Hiroshima Univ, Hiroshima Japan ²Kagawa Sch of Pharm Sci, Tokushima Bunri Univ, Kagawa, Japan
³National Institute for Minamata Disease, Kumamoto, Japan
- P3-359** **Immunohistochemical localization of brain-derived neurotrophic factor (BDNF), glial cell line-derived neurotrophic factor (GDNF) and glial fibrillary acidic protein (GFAP) in the superior olivary complex of mice after 3 month radiofrequency exposure at SA**
Dhiraj Maskey¹, Myeung Ju Kim²
¹Nepalese Army Institute of Health Sciences, Nepal ²Dankook University
- P3-360** **Plexin-A1 is required for Toll-like receptor-mediated microglial activation**
Takuji Ito, Kenji Yoshida, Takayuki Negishi, Kazunori Yukawa
Faculty of Pharmacy, Meijo University
- P3-361** **Altered behaviors and cerebellar activation during sequential finger tapping in pianists with focal hand dystonia**
Kahori Kita^{1,2}, Takashi Hanakawa¹, Shinichi Furuya⁴, Takashi Sakamoto¹, Rieko Osu³
¹NCNP, Tokyo, Japan ²Chiba Univ, Chiba, Japan ³ATR, Kyoto, Japan ⁴Sophia Univ, Tokyo, Japan
- P3-362** **Evolutionary Psychiatry: Reconsideration of Biological Mechanisms of Psychiatric Disorders with Evolutionary Perspective**
Yukiori Goto¹, Young-A Lee²
¹Primate Research Institute, Kyoto University, Aichi, Japan
²Department of Food Science and Nutrition, Catholic University of Daegu, Gyeongsan, Korea

BMI/BCI

- P3-363** **An application of P300-based BMI in patients with spinocerebellar ataxia**
Kouji Takano¹, Shiro Ikegami^{1,2}, Toshihiro Kawase¹, Masahiro Nagao³, Tetsuo Komori⁴, Kenji Kansaku^{1,5}
¹Sys Neurosci Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan
²Dept of Neurol Surg, Grad Sch of Med, Chiba Univ, Chiba, Japan ³Dept of Neurol, Tokyo Metropolitan Neurolog Hosp, Tokyo, Japan
⁴Natl Hakone Hosp, Kanagawa, Japan ⁵Univ of Electro-Communications, Chofu, Japan
- P3-364** **Parameters tuning of EEG cortical currents for vowel imagery decoding**
Natsue Yoshimura^{1,3,4}, Atsushi Nishimoto^{2,3,4}, Abdelkader Nasreddine Belkacem², Hiroyuki Kambara^{1,2,4,5}, Duk Shin^{1,5}, Takashi Hanakawa^{3,4}, Yasuharu Koike^{1,2,5,6}
¹P&I Lab, Tokyo Inst Tech, Yokohama, Japan ²Interdiscip Grad School of Sci and Eng, Tokyo Inst Tech, Yokohama, Japan
³Dept Func Brain Res, Nat Inst Neurosci, NCNP, Tokyo, Japan ⁴Dept Adv Neuroimaging, IBIC, NCNP, Tokyo, Japan
⁵CREST, JST, Tokyo, Japan ⁶Solution Sci Res Lab, Tokyo Inst Tech, Yokohama, Japan
- P3-365** **Subject-independent BMI through sparse learning of spatial bases common across sessions and subjects**
Hiroshi Morioka^{1,2}, Atsunori Kanemura³, Jun-ichiro Hirayama², Manabu Shikauchi², Takeshi Ogawa², Shigeyuki Ikeda², Motoaki Kawanabe², Shin Ishii^{1,2}
¹Graduate School of Informatics, Kyoto Univ. ²Cognitive Mechanisms Laboratories, ATR, Kyoto, Japan ³AIST, Ibaraki, Japan
- P3-366** **Learning the subject-independent discriminative features from the large-scale fMRI database**
Sotetsu Koyamada¹, Yumi Shikauchi^{1,2}, Ken Nakae¹, Shin Ishii^{1,2}
¹Graduate School of Informatics, Kyoto Univ, Kyoto ²ATR Cognitive Mechanisms Laboratories, Kyoto, Japan

- P3-367** **Classification of Wrist Movements from Electrocorticography in Primary Sensorimotor Cortex**
Duk Shin¹, Kenji Kato², Yasuhiko Nakanishi¹, Hiroyuki Kambara¹, Tadashi Isa², Yukio Nishimura², Yasuharu Koike¹
¹Precision & Intelligence Lab.,Tokyo Institute of Technology
²Department of Developmental Physiology, National Institute for Physiological Sciences
- P3-368** **A brain-machine interface to reveal functions and plasticity of medial prefrontal cortex in regulation of impulsivity**
Shota Tachibana¹, Susumu Takahashi², Yoshio Sakurai¹
¹Dept Psychol, Kyoto Univ, Kyoto, Japan ²Dept Neural Circuitry, Doshisya Univ, Kyoto, Japan
- P3-369** **A Multi-channel Stimulation System with Wireless Communication and Power Transmission for Visual Cortical Prostheses**
Short Talk 5
ST-5-34
9/13 9 : 00-10 : 00
Seiji Kameda¹, Takatsugu Kamata¹, Yuki Hayashida², Yoshinori Takeuchi³, Masaharu Imai³, Tetsuya Yagi²
¹MEI Center, Osaka Univ, Osaka, Japan ²Grad Eng, Osaka Univ, Osaka, Japan ³Grad Info, Osaka Univ, Osaka, Japan
- P3-370** **A BMI-based robotic exoskeleton for neurorehabilitation and daily actions: Reaching and grasping movements controlled by EEG and EMG signals**
Toshihiro Kawase¹, Kenji Kansaku^{1,2}
¹Sys Neurosci Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan
²Brain Sci Inspir Life Supp Res Cent, Univ of Electro-Communications, Chofu, Japan

Large Scale Simulation

- P3-371** **Selection of outputs by horizontal connection in a realistic model of primary motor cortex**
Jun Igarashi, Jan Moren, Junichiro Yoshimoto, Kenji Doya
Neural Computation Unit, Okinawa Institute of Science and Technology
- P3-372** **A real-time emulation system for reproducing neural activities in the retina and the primary visual cortex**
Short Talk 6
ST-6-35
9/13 10 : 00-11 : 00
Hirotugu Okuno, Takumi Kawasetsu, Ryoya Ishida, Tetsuya Yagi
Graduate School of Engineering, Osaka University

Other Applications

- P3-373** **Multiscale Modeling of Neural Mechanism of Valuation for Control of Cognitive Bias in Communication Systems**
Miki Hirabayashi¹, Hiroaki Kojima¹, Hirotada Ohashi²
¹NICT, Hyogo, Japan ²Dept Sys Innov, Univ of Tokyo, Tokyo, Japan
- P3-374** **Mechanism of Reduced Capacity and Imprecision of Working Memory in Schizophrenia**
Tsukasa Okimura¹, Takaki Maeda¹, Akihiro Koreki¹, Motoichiro Kato¹, Masaru Mimura¹, Shoji Tanaka²
¹Department of Neuropsychiatry, Keio University School of Medicine, Tokyo, Japan
²Department of Information and Communication Sciences, Sophia University, Tokyo, Japan

Optogenetics

- P3-375** **Difference in frequency properties between vertical- and horizontal-propagation of local field potentials in the rat visual cortices**
Haruo Toda¹, Keisuke Kawasaki¹, Sho Sato¹, Masao Horie², Kiyoshi Nakahara³, Asim K Bepari², Hirohito Sawahata⁴, Takafumi Suzuki⁵, Hirohide Takebayashi², Isao Hasegawa¹
¹Dept Physiol, Niigata Univ. Sch. of Med., Niigata, Japan ²Dept Neurobiol and Anatomy, Grad. Sch. Med. Dent. Sci., Niigata, Japan
³BrainCom, Kochi Univ of Tech, Kochi 782-8502, Japan, ⁴Dept Elec and Elec Inform Eng, Toyohashi Univ of Tech, Aichi, Japan
⁵CINet, NICT, Osaka 565-0871, Japan

Other Applications

- P3-376** fMRI responses to optogenetic tactile pattern of whiskers in barrel cortex of channelrhodopsin-2 expressing rat
Yukinobu Yokoyama^{1,2}, Akira Sumiyoshi³, Ryuta Kawashima³, Hiromu Yawo^{1,2}
¹Tohoku University Graduate School of Life Sciences Laboratory of Molecular and Cellular Neurosciences ²CREST, JST
³Tohoku Univ. IDAC, Sendai, Japan
- P3-377** Non-invasive manipulation of neuronal activities by optogenetic activation of ChR2-expressing astrocytes
Keitaro Yoshida, Ming Xu, Masaru Mimura, Norio F Takata, Kenji F Tanaka
Dept. Neuropsychiatry, School of Medicine, Keio University
- P3-378** Optical inactivation of AMPA receptors for artificial memory erasure
Kiwamu Takemoto^{1,4}, Hiroko Iwanari³, Takeharu Nagai², Takao Hamakubo³, Takuya Takahashi¹
¹Dept. of Physiol., Yokohama City Univ, Yokohama Japan ²Dept of Biomol Sci and Eng, ISIR, Osaka Univ, Osaka, Japan
³Dpet of Quantitative Biology and Medicine, RCAST, Univ of Tokyo, Tokyo, Japan ⁴JST, PRESTO

Electrophysiology

- P3-379** Mapping Extracellular Spike Shapes to Neuronal Location and Type: A Study with Microelectrode Arrays and Fluorescence Imaging
Kosmas Deligkaris^{1,2}, Freddy Gunneweg^{1,3}, Douglas Bakkum⁴, Andreas Hierlemann⁴, Urs Frey^{1,2,4}
¹RIKEN Quantitative Biology Center ²Osaka University, Graduate School of Frontier Biosciences, Osaka, Japan
³University of Twente, Enschede, The Netherlands ⁴ETH Zurich, Department of Biosystems Science and Engineering, Basel, Switzerland
- P3-380** Network plasticity induced by tetanic stimulation of single neurons in dissociated neuronal cultures
Takeshi Mita¹, Douglas J Bakkum², Urs Frey³, Andreas Hierlemann², Ryohei Kanzaki¹, Hirokazu Takahashi¹
¹The University of Tokyo ²ETH Zurich, Basel, Switzerland ³RIKEN
- P3-381** Current clamp recordings of human iPS cell-derived cardiomyocytes on automated patch clamp system, QPatch
Keita Takeuchi¹, Soren Friis², Emma Older², Kristina M Christensen², Richard Kondo³
¹Sophion Bioscience K.K., Saitama, Japan ²Sophion Bioscience A/S, Ballerup, Denmark
³Sophion Bioscience, Inc., New Jersey, United States

Others

- P3-382** Identifying excitatory-inhibitory neurons in culture using micropatterned surfaces
Sho Kono¹, Takatoshi Kushida¹, Hideaki Yamamoto², Takashi Tani¹
¹Fundamental School of Science and Engineering, Waseda Univ, Tokyo, Japan
²Frontier Research Institute for Interdisciplinary Sciences, Tohoku Univ, Miyagi, Japan
- P3-383** Microcontact printing of cell-adhesion molecules for directing axon-dendrite polarity of mouse hippocampal neurons in culture
Hidesato Takaoki¹, Hideaki Yamamoto², Shutaro Katsurabayashi³, Yasuo Kimura⁴, Ayumi Hirano-Iwata¹, Michio Niwano^{1,5}
¹Graduate School of Biomedical Engineering, Tohoku Univ, Miyagi, Japan ²FRIS, Tohoku Univ, Miyagi, Japan
³Fac Pharm Sci, Fukuoka Univ, Fukuoka, Japan ⁴Sch Comput Sci, Tokyo Univ of Technol, Tokyo, Japan
⁵RIEC, Tohoku Univ, Miyagi, Japan
- P3-384** Development of On-chip artificial neuronal circuits construction technique and electrophysiological measurements
Hideyuki Terazono^{1,2}, Fumimasa Nomura¹, Akihiro Hattori², Hyonchol Kim², Kenji Yasuda^{1,2}
¹Tokyo Medical and Dental University ²Kanagawa Academy of Science and Technology.
- P3-385** Development and evaluation of 3-D analysis systems for mouse behaviors
Atsushi Toyoda^{1,2,3}, Tatsuhiko Goto^{1,2}, Tsuyoshi Okayama^{1,2,3}
¹Col of Agri, Ibaraki Univ, Ibaraki, Japan ²Ibaraki Univ Coop between Agri and Med Sci
³Unit Grad Sch of Agri Sci, Tokyo Univ of Agri and Tech, Tokyo, Japan

P3-386

***In vivo* PET imaging of the behaviorally active designer receptor in macaques**

Short Talk 6
ST-6-36
9/13 10:00-11:00

Yuji Nagai¹, Erika Kikuchi¹, Walter Lerchner², Ken-ichi Inoue³, Arata Oh-Nishi¹, Hiroyuki Kaneko¹, Yoko Kato¹, Yukiko Hori¹, Bin Ji¹, Katsushi Kumata¹, Ming-Rong Zhang¹, Ichio Aoki¹, Tetsuya Suhara¹, Masahiko Takada³, Makoto Higuchi¹, Barry J Richmond², Takafumi Minamimoto^{1,4}
¹Molecular Imaging Center, National Institute of Radiological Sciences, Chiba, Japan ²Lab Neuropsychology, NIMH, NIH, Bethesda, USA
³Primate Research Institute, Kyoto Univ, Aichi, Japan ⁴PRESTO, JST, Tokyo, Japan

P3-387

Extracting spatiotemporal patterns from spontaneous human brain activities

Yusuke Takeda, Masa-Aki Sato
ATR Neural Information Analysis Labs.

P3-388

Computational Anatomy in Paleoneurology: Reconstruction of the Brain from Skull Fossil

Takanori Kochiyama¹, Hiroki C. Tanabe², Hideki Amano³, Kunihiro Hasegawa², Naomichi Ogihara³
¹Brain Info Com Res Lab Gp, ATR, Kyoto, Japan ²Grad Sch of Environ Stud, Nagoya, Japan
³Fac of Sci and Tech Keio Univ, Kanagawa, Japan

Neuroethics

P3-389

Effect of arginine methylation via PRMT1 on organella

Shinsuke Matsuzaki^{1,2,3}, Ko Miyoshi^{1,3}, Yasutake Mori², Taiichi Katayama¹
¹Dept. of Mol. Brain Sci., United Grad. Sch. of Child Development, Osaka Univ., Osaka, Japan
²Dept of Anatomy and Neurosci., Grad. Sch. of Med., Osaka University, Osaka, Japan
³Molecular Research Center for Children's Mental Development, United Grad. Sch. of Child Development, Osaka Univ., Osaka, Japan

Social and Legal Issues of Neuroscience

P3-390

"Brain bank" in the media: a comparative analysis of newspaper articles in Japan and the United States

Yatsuka Iwamoto¹, Yusuke Inoue², Yuichi Maru², Taichi Isobe³, Kaori Muto²
¹Dept. MGS, GSFS, Univ. of Tokyo, Tokyo, Japan ²Dept. Public Policy, IMSUT, Tokyo, Japan
³Ctr. Development in Higher Education, Sch. Dentistry, Health Sci. Univ. of Hokkaido, Hokkaido, Japan

Industrial Application

P3-391

Pharmaceutical-economic cross study about the development and marketing of the drug for neurological diseases in Japan

Toshiki Teshima, Takeshi Suzuki
Fac Pharm, Keio University, Tokyo, Japan

Others

P3-392

Relation between the competition level and COMT Val158Met polymorphism in male competitive swimmers

Daisuke Abe¹, Taishi Asai¹, Hirokazu Doi¹, Shota Nishitani¹, Yuusuke Takahashi², Takaaki Matsumoto³, Kazuyuki Shinohara¹
¹Graduate School of Biomedical Sciences Nagasaki University ²Chuo University ³Kokushikan University

P3-393

GABAA-receptors-mediated anesthetic effects by menthol in fishes

Masanori Kasai, Ryotaro Okayama, Hirotohi Kawano, Akiteru Tokunaga
Dept Chem BioSci, Facult Sci, Kagoshima Univ. Kagoshima, Japan