

Poster Session

Day 1 - Wednesday, July 20

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Wednesday, July 20

Neurogenesis and Gliogenesis

- P1-001**  **Several transient neuronal populations with extracortical origin crucial for neocortical development in mammals are absent from the developing avian dorsal pallium**
Fernando Garcia-Moreno¹, Edward Anderton¹, Marta Krolak^{1,2}, Isabel Martinez-Garay³, Jo Begbie¹, Zoltan Molnar¹
¹University of Oxford, Oxford, UK ²University of Warsaw, Warsaw, Poland ³Cardiff University, Cardiff, UK
- P1-002** **Roles of serotonergic system in hippocampal neurogenesis**
Makoto Kondo, Yukiko Nakamura, Yusuke Ishida, Shoichi Shimada
Dept Neurosci & Cell Biol, Osaka Univ Grad Sch Med, Osaka
- P1-003** **Forebrain origin of optic nerve oligodendrocyte in the mouse**
Katsuhiko Ono¹, Hiroyuki Tominaga¹, Hitoshi Gotoh¹, Tadashi Nomura¹, Hirohide Takebayashi^{1,2}, Kazuhiro Ikenaka³
¹Dept Biol, Kyoto Pref Univ Med, Kyoto, Japan ²Div Neurobiol Anat, Niigata Univ Grad Sch Med Dent Sci, Niigata, Japan
³Div Neurobiol Bioinfo, Nat Inst Physiol Sci, Okazaki, Japan
- P1-004** **Expression pattern of a novel gene *inka2* in nervous system and analysis of its function in cell motility.**
Yumi Iwasaki¹, Hiroki Akiyama¹, Shinichi Sakakibara²
¹Lab. Molecular Neurobiology Faculty of Human Sciences Waseda University, Saitama, Japan
²Institute of Applied Brain Science, Waseda University, Saitama, Japan
- P1-005** **Neural progenitor cells in the anterior medullary velum of the adult mouse**
Mana Nagasawa, Sayaka Kato, Shin-Ichi Sakakibara
Department of Molecular Neurobiology, Faculty of Human Sciences, Waseda University
- P1-006** **Proper termination of migration for uppermost part of layers 2/3 neurons requires PlexinA2/A4-Semaphorin6A signaling in the mouse cerebral cortex**
Yumiko Hatanaka¹, Takahiko Kawasaki², Yasuo Kawaguchi¹, Tatsumi Hirata²
¹Div Cerebral Circuit, NIPS, Aichi, Japan ²Div Brain Function, NIG, Shizuoka, Japan
- P1-007** **Intracellular trafficking of the CXCR4 molecules in the neural progenitors during formation of hippocampal granule cell layer.**
Yuka Yamamoto¹, Hiroshi Shinohara¹, Taichi Kashiwagi¹, Toru Satou¹, Kenta Matsue¹, Seiji Shioda², Tatsunori Seki¹
¹Department of Histology and Neuroanatomy, Tokyo Medical University ²Institute for advanced Bioscience Research, Hoshi University
- P1-008** **Withdrawn**
- P1-009** **Ebf3, a downstream effector of Prdm8, regulates neural differentiation of the developing neocortex**
Ryota Iwai¹, Mayuko Inoue¹, Mariko Suzuki¹, Waka Teshima¹, Ken-Ichi Mizutani^{1,2}
¹Grad Sch Brain Sci, Doshisha Univ ²PRESTO, JST, Tokyo, Japan
- P1-010** **Roles of microRNA in the cerebral histogenesis of mouse embryos**
Ryuju Hashimoto¹, Akihiro Matsumoto², Hiroki Otani²
¹Dept Clinical Nursing, Univ of Shimane, Izumo, Japan ²Dept Dev Biol, Univ of Shimane, Izumo, Japan
- P1-011** **Prdm16 is critical for progression of multipolar phase during neural differentiation of the developing neocortex**
Chisato Watanabe¹, Mayuko Inoue¹, Hidenori Tabata², Koh-Ichi Nagata², Ken-Ichi Mizutani^{1,3}
¹Grad Sch Brain Sci, Doshisha Univ ²Institute for Developmental Research, Aichi Human Service Center, Aichi, Japan ³JST PRESTO
- P1-012** **The property of Gfap-expressing dentate granule cell progenitors is altered soon after birth.**
Kenta Matsue¹, Shiori Minakawa¹, Taichi Kashiwagi¹, Keiko Toda¹, Yuka Yamamoto¹, Seiji Shioda², Tatsunori Seki¹
¹Department of Histology and Neuroanatomy, Tokyo Medical University ²Institute for advanced Bioscience Research, Hoshi University
- P1-013** ***Cyclin D2* mRNA transportation in the cortical development is based on the 3' UTR element: a CRISPR/Cas9 analysis**
Takako Kikkawa¹, Yukiko U. Inoue², Takayoshi Inoue², Noriko Osumi¹
¹Dept. of Dev. Neurosci., Sch. of Med., Univ. of Tohoku, Sendai, Japan ²Dept Biochem and Cell Biol, NCNP, Tokyo, Japan

- P1-014 DNA polymerase β function in neural progenitors is required for postmitotic neuronal survival and differentiation in the developing cortex**
Kohei Ohnishi¹, Noriyuki Sugo^{1,2}, Shunsuke Toyoda^{1,2}, Teruyoshi Hirayama^{1,2}, Takeshi Yagi^{1,2}, Nobuhiko Yamamoto¹
¹Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan ²Japan Science and Technology Agency, CREST

Stem Cells and Reprogramming

- P1-015 Multifunctional neural stem cells in the sensory circumventricular organs of adult mouse.**
Eriko Furube¹, Ayaka Yoshida¹, Shiori Muneoka¹, Mitsuhiro Morita², Seiji Miyata¹
¹Dept of Applied Biol, Kyoto Inst of Technol, Kyoto, Japan ²Dept of Biol, Kobe Univ, Hyogo, Japan
- P1-016 PDGFR β -expressing brain pericytes following ischemia acquire microglia-generating multipotent stem cell activity**
Rika Sakuma¹, Maiko Kawahara^{1,2}, Akiko Doi¹, Ai Takahashi^{1,2}, Yasue Tanaka^{1,3}, Aya Narita¹, Sachi Otani⁵, Tetsu Hayakawa⁴, Hideshi Yagi⁵, Tomohiro Matsuyama¹, Takayuki Nakagomi¹
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⁴Laboratory of Tumor Immunology and Cell Therapy, Hyogo College of Medicine, Hyogo, Japan
⁵Department of Anatomy and Neuroscience, Hyogo College of Medicine, Hyogo, Japan
- P1-017 Enhanced neurogenesis after induction of status epilepticus in adult mice**
Tetsuji Mori¹, Hirofumi Kurata², Fumiaki Kawashima¹, Yoshihiro Maegaki²
¹Dept Biological Regulation, Sch Med, Tottori Univ
²Division of Child Neurology, Institute of Neurological Sciences, Faculty of Medicine, Tottori Univ
- P1-018 Stem cell therapy on Alzheimer's disease Animal Model**
Kuen-Jer Tsai
Institute of Clinical Medicine, National Cheng Kung University, Tainan, Taiwan
- P1-019 Differential roles of c-jun in the embryonic and adult stem/precursor cells**
Fumiaki Kawasima, Tetsuji Mori
Dept Biological Regulation, Sch Med, Tottori Univ

Axon/Dendrite Growth and Circuit Formation

- P1-020 Analysis of mitochondrial movement and its ATP production in elongating neurons**
Rika Suzuki, Kotaro Oka, Kohji Hotta
School of Fundamental Science and Technology, Keio University, Kanagawa, Japan
- P1-021 LOTUS functions as an antagonist for PirB**
Yuji Kurihara, Kohtaro Takei
Mol. Med. Biosci. Lab., Grad. Sch. of Med. Life Sci., Yokohama City Univ., Yokohama, Japan
- P1-022 Development of GluN2B NMDA receptor subtype in spinal motoneurons: A study using Grin2b-flox mice**
Takae Ohno¹, Satoshi Fukuda¹, Naoyuki Murabe¹, Noriko Isoo¹, Hiroaki Mizukami², Keiya Ozawa^{2,3}, Kenji Sakimura⁴, Masaki Sakurai¹
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³IMSUT Hospital, The Inst Med Sci, Univ Tokyo, Tokyo, Japan ⁴Dept Cell Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan
- P1-023 Distribution of corticospinal axons from motor-related and somatosensory cortical areas in mice**
Hiroshi Kameda¹, Naoyuki Murabe¹, 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
- P1-024 LOTUS, an endogenous Nogo receptor antagonist, contributes to spontaneous recovery of locomotor function after spinal cord injury.**
Tomoko Hirokawa¹, Yuji Kurihara¹, Yoshio Goshima², Kohtaro Takei¹
¹Mol. Med. Biosci. Lab., Grad. sch. of Med. Life Sci., Yokohama City Univ., Yokohama, Japan
²Dept Mol. Pharmacol. & Neurobio., Grad. Sch. of Med., Yokohama City Univ., Yokohama, Japan
- P1-025 Mechanism of functional recovery with rehabilitation after spinal cord injury**
Toru Nakanishi, Yuki Fujita, Toshihide Yamashita
Dept Mol Neurosci, Osaka Univ, Osaka, Japan

- P1-026 The role of singar during neuronal circuit development**
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
- P1-027 Is GluN2B involved in the corticomotoneuronal synapse elimination during development in rodents?**
Naoyuki Murabe¹, Satoshi Fukuda¹, Takae Ohno¹, Noriko Isoo¹, Takuma Mori^{2,3}, Hiroaki Mizukami⁴, Keiya Ozawa^{4,5}, Kenji Sakimura⁶, Yumiko Yoshimura², Masaki Sakurai¹
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⁵IMSUT Hospital, The Inst Med Sci, Univ of Tokyo, Tokyo, Japan ⁶Dept Cell Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan
- P1-028 Visualization and developmental analysis of the inter-areal connections in the mouse cortex using a new method for sparse labeling**
Yuichiro Oka¹, Tokuichi Iguchi¹, Makoto Sato^{1,2,3}
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²Dept Child Dev, United Grad Schl of Child Dev, Osaka Univ, Osaka, Japan
³Res Center for Child Mental Dev, Univ of Fukui, Fukui, Japan
- P1-029 Frequency and length of sugar codes in sulfated glycans regulate axonal regeneration and its failure through RPTP-autophagy axis**
Kazuma Sakamoto, Tomoya Ozaki, Yuanhao Gong, Kenji Kadomatsu
Dept Biochem, Univ of Nagoya, Aichi, Japan
- P1-030 Neuron morphology in forebrain-specific Ctgf knockout mice**
Yi-Ling Lu¹, Li-Jen Lee^{1,2,3}
¹Grad. Inst. of Anat. And Cell Biol., Natl. Taiwan Univ., Taipei, Taiwan ²Grad. Inst. of Brain and Mind Sci.
³Neurobio. and Cognitive Sci. Ctr., Natl. Taiwan Univ., Taipei, Taiwan
- P1-031 Development of hippocampal slice under culture : Toward the establishment of an *in vitro* model for the analysis of neural circuit formation**
Takuhiro Kawakami, Shintaro Yamamoto, Satoshi Kimura, Masaki Ogawa, Keiko Tominaga-Yoshino, Akihiko Ogura
Grad Sch Frontier Biosci, Osaka Univ, Suita, Japan
- P1-032 Thyroid Hormone-Induced Dendritic Growth of Cerebellar Purkinje Cells Is Mediated By PGC-1alpha**
Tetsu Hatsukano^{1,2}, Kansai Fukumitsu^{1,2}, Kazuto Fujishima², Mineko Kengaku^{1,2}
¹Graduate School of Biostudies, Kyoto University, Japan ²Institute for Integrated Cell-Material Sciences, Kyoto University
- P1-033 Microtubule Destabilizer KIF2A Undergoes Distinct Site-specific Phosphorylation Cascades that Differentially Affect Neuronal Morphogenesis.**
Tadayuki Ogawa, Nobutaka Hirokawa
Depart Cell Biol and Anat, Univ of Tokyo, Tokyo

Synaptogenesis and Activity-Dependent Development

- P1-034 Voltage-sensitive dye imaging of widely-spreading wave activity in the embryonic chick forebrain induced by olfactory nerve stimulation**
Katsushige Sato¹, Yoko Momose-Sato²
¹Department of Health and Nutrition Sciences, Faculty of Human Health, Komazawa Womens University, Tokyo, Japan
²Department of Nutrition and Dietetics, College of Nutrition, Kanto Gakuin University, Yokohama, Japan
- P1-035 Cav2.1 is indispensable to maintain wiring, survival, and compartmentalized expression in adult cerebellar Purkinje cells**
Taisuke Miyazaki¹, Miwako Yamasaki¹, Kenji Sakimura², Masahiko Watanabe¹
¹Dept Anat, Hokkaido Univ, Grad Sch of Med, Sapporo, Japan ²Dept Cell Neurobiol, Niigata Univ, Niigata
- P1-036 In vivo 2-photon imaging of neuronal activity in developing barrel cortex layer 4**
Hidenobu Mizuno^{1,2}, Takuya Sato¹, Takuji Iwasato^{1,2}
¹Div Neurogenetics, NIG, Shizuoka, Japan ²Dept Genetics, SOKENDAI, Shizuoka, Japan
- P1-037 A developmental stage-specific regulatory mechanism of synaptic transport of the *Drosophila* Hikaru genki protein**
Mayu Ota¹, Dennis Kruk¹, Akihiro Suzuki¹, Minoru Nakayama², Chihiro Hama², Masaki Sone¹
¹Faculty of Science, Toho University, Chiba, Japan ²Kyoto Sangyo Univ, Kyoto, Japan

- P1-038** **Cortical activity regulates refinement of afferent lemniscal synapses in the somatosensory thalamus.**
Madoka Narushima, Mariko Miyata
Dept Physiol, Tokyo Women's Med Univ, Tokyo, Japan
- P1-039** **Regulatory mechanism of alternative pre-mRNA splicing on neuronal cell adhesion molecules regulated by STAR proteins**
Chiharu Hidaka¹, Noriko Ayukawa¹, Satoko Suzuki¹, Yoko Hanno-Iijima¹, Peter Scheiffele², Takatoshi Iijima¹
¹*Div Med, IIST, Tokai Univ, Kanagawa, Japan* ²*Dept of Cell and Neurobiol, Biozentrum, Univ of Basel, Basel, Switzerland*
- P1-040** **Dynamic regulation of alternative splicing on a polymorphic immunoglobulin superfamily molecule Neurofascin in adult brains**
Takatoshi Iijima, Satoko Suzuki, Noriko Ayukawa, Chiharu Hidaka, Yoko Iijima
Tokai Univ, IIST, Kanagawa
- P1-041** **Activity-dependent tonotopic differentiation of nucleus magnocellularis in organotypic culture**
Ryota Adachi¹, Hiroshi Kuba^{1,2}
¹*Grad Sch of Med, Nagoya Univ, Japan* ²*PRESTO, JST, Saitama, Japan*

Epigenetic Control of Development and Evolution

- P1-042** **The novel histone deacetylase 8 inhibitors promote neuronal outgrowth and memory formation**
Ying-Chen Yang, Min-Chih Li, Hsin-Feng Chang, Tsun-Yung Kuo
National Ilan University Department of Biotechnology and Animal Science
- P1-043** **Analysis of construction mechanism of the telencephalon by post-hatch neurogenesis in medaka fish.**
Yasuko Isoe¹, Ryohei Nakamura¹, Yasuhiro Kamei², Shigenori Nonaka², Kei Itoh³, Teruhiro Okuyama¹, Atsushi Shimizu⁴, Azusa Kamikouchi⁵, Takeo Kubo¹, Hiroyuki Takeda¹, Hideaki Takeuchi⁶
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³*Institute of Molecular and Cellular Biosciences, The University of Tokyo, Tokyo, Japan*
⁴*Iwate Tohoku Medical Megabank Organization, Iwate, Japan* ⁵*Nagoya Univ., Nagoya, Japan*
⁶*Grad. Sch. of Natural Science and Technology, Okayama Univ., Okayama, Japan*
- P1-044** **Cis- and trans-regulatory controls of layer-specific genes in the development and evolution of the amniote brain**
Tadashi Nomura^{1,2}, Ei-Ichi Izawa³, Wataru Yamashita¹, Hitoshi Gotoh¹, Katsuhiko Ono¹
¹*Dev Neurobiol, Kyoto Pref Univ Med, Japan* ²*PRESTO JST, Saitama, Japan* ³*Dpt Psychology, Keio Univ, Japan*
- P1-045** **Involvement of DNA polymerase β in postnatal development of cortical neurons.**
Akiko Uyeda¹, Noriyuki Sugo^{1,2}, Kohei Ohnishi¹, Shunsuke Toyoda^{1,2}, Teruyoshi Hirayama^{1,2}, Takeshi Yagi^{1,2}, Nobuhiko Yamamoto¹
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Neural Death and Apoptosis

- P1-046** **Roles of p62 in BDNF-Dependent Autophagy Suppression and Neuroprotection against Mitochondrial Dysfunction in Rat Cortical Neurons**
Ding-I Yang, Chia-Lin Wu, Chien-Hui Chen
National Yang-Ming University
- P1-047** **Cell Division of Hypoxic Neurons**
Itsuki Ajioka^{1,2}, Mio Oshikawa¹
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- P1-048** **Neuroprotective and lifespan extension effects of Cordyceps militaris/cordycepin**
Koji Tabata¹, Syogo Ito¹, Junya Sonoda¹, Kentaro Takakura¹, Kaoru Nagai², Motoko Shiozaki³, Masahiro Shibata⁴, Masato Koike⁵, Yasuo Uchiyama⁶, Takahiro Gotow¹
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- P1-049 Mechanisms of seizures and edema after brain injury: Photolysis of a single neuron alters the cytoplasmic Cl⁻ in neighboring neurons.**
Kiyoshi KE. Egawa¹, Hideaki Shiraishi¹, Kevin Staley²
¹Dept of Pediatrics, Hokkaido Univ., Sapporo, Japan ²Dept. of Neurology, Massachusetts General Hospital
- P1-050 Draxin regulates hippocampal neurogenesis in the postnatal dentate gyrus by inhibiting DCC-induced apoptosis and Wnt-driven differentiation**
Hiroshi Tawarayama^{1,2,3}, Hirohisa Yamada³, Yuiko Fujimura⁴, Ruhul Amin¹, Helen M Cooper⁵, Yohei Shinmyo³, Masakado Kawata², Shuntaro Ikawa¹, Hideaki Tanaka³
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³Dept Dev Neurobiol, Grad Sch Life Sci, Kumamoto Univ, Kumamoto, Japan ⁴FRIS, Tohoku Univ, Sendai, Japan
⁵Inst Queensland Brain, Univ Queensland, Queensland, Australia
- P1-051 Study about the sensitivities of human induced pluripotent stem cell-derived neurons to excitotoxicity and apoptosis**
Kanao Takahashi¹, Yukari Mogami Shigemoto¹, Hideo Shimizu¹, Kaori Chujo¹, Kazue Hoshikawa¹, Yohei Okada², Hideyuki Okano³, Yuko Sekino¹, Kaoru Sato¹
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²Department of Neurology, School of Medicine, Aichi Medical University, Aichi, Japan
³Department of Physiology, School of Medicine, Keio University, Tokyo, Japan
- P1-052 Cytosine arabinoside induces DNA double strand breaks in hippocampal neurons in culture**
Nobuyuki Fukushima, Miyu Adachi, Misaki Harano
Dept Life Sci, Kindai Univ
- P1-053 How does BMP4 promote survival of mouse neural stem-like cells?**
Yasuki Ishizaki, Hanako Yamamoto, Masashi Kurachi, Masae Naruse, Koji Shibasaki
Dept Mol Cell Neurobiol, Gunma Univ Grad Sch Med, Gunma, Japan
- P1-054 Motoneuronal cell death in axotomized infant rat facial nucleus: Involvement of MAP Kinase**
Maasa Koshimoto¹, Shinichi Kohsaka², Kazuyuki Nakajima¹
¹Department of bioinformatics, Faculty of Engineering, Soka University, Tokyo 192-8577
²National Institute of Neuroscience, Tokyo 187-8502

iPS Cell Technologies

- P1-055 Widespread analysis of TSSs in human iPSC-derived neurons using CAGE-SEQ**
Mitsuru Ishikawa, Hideyuki Okano
Dept Physiol, Keio Univ, Tokyo
- P1-056 Development of highly efficient differentiation protocols from human iPS cells to GABAergic neural progenitor cells**
Yasunari Kanda¹, Yusuke Kubo¹, Takashi Inutsuka², Yuko Sekino¹
¹Div Pharmacol, NIHS ²PEIJ
- P1-057 Differentiation of hiPSC-neurons on mouse hippocampal slice cultures**
Toshimitsu Hiragi¹, Ryuta Koyama¹, Toshihiro Araki², Takayuki Shirakawa², Takashi Ono², Yuji Ikegaya¹
¹Lab Chem Pharmacol, Grad Sch Pharm Sci, Univ of Tokyo, Tokyo
²Biology Research Laboratories, Mitsubishi Tanabe Pharma Corporation, Kanagawa, Japan
- P1-058 Thrombospondin-1 induces an axon formation in early developmental stage of human iPS cell-derived neuron**
Hiroyuki Yamazaki¹, Yuki Arayama¹, Yuta Ishizuka¹, Kaoru Sato², Yuko Sekino², Tomoaki Shirao¹
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²National Institute for Health Sciences, Tokyo, Japan
- P1-059 Hypomethylation of COMT gene promoter in Parkinson's disease-specific iPS cell-derived dopaminergic neurons**
Yukari Suda¹, Naoko Kuzumaki^{1,2}, Michiko Narita¹, Katsuhide Igarashi³, Hideyuki Takeshima⁴, Toshikazu Ushijima^{3,4}, Nobutaka Hattori⁵, Hideyuki Okano^{2,3}, Minoru Narita^{1,3}
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⁴Div. of Epigenomics, National Cancer Center Res. Institute, Tokyo, Japan. ⁵Dept. Neurol., Juntendo Univ. Grad. Sch. Med., Tokyo, Japan

Tissue Engineering and Transplantation

- P1-060** **Transplantation of choroid plexus epithelial cells promotes axon regeneration in spinal cord injury**
Kenji Kanekiyo¹, Norihiko Nakano¹, Tamami Homma¹, Toru Noda², Chizuka Ide¹
¹Inst. Regen. Rehab., Aino Univ., Osaka, Japan ²Dept. Phys. Ther., Fac. Health Sci., Aino Univ., Osaka, Japan
- P1-061** **The transplantation of the photoreceptor precursor cells into the adult *Drosophila* retina**
Takashi Suzuki, Takahisa Suzuki
Dept Biosci & Biotech, Tokyo Inst. of Tech., Kanagawa, Japan

Development and Regeneration: Others

- P1-062** **Sexual dimorphism of sulcal infolding in the cerebrum of ferrets**
Kazuhiko Sawada¹, Miwa Horiuchi-Hirose², Shigeyoshi Saito³, Ichio Aoki⁴
¹Dept Nutr, Fac Med Health Sci, Tsukuba Int Univ, Tsuchiura, Japan ²Dept Nursing, Ibaraki Christ Univ, Hitachi, Japan
³Dept Med Phys Engineer, Fac Health Sci, Osaka Univ Grad Sch Med, Suita, Japan ⁴Mol Imaging Cent, Natl Inst Radiol Sci, Chiba, Japan
- P1-063** **Developmental change in escape behavior after imaginal molt in the cricket**
Nodoka Sato¹, Hiroto Ogawa²
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- P1-064** **Gene expression Atlas of the Marmoset Brain**
Yoshiaki Kita, Satomi S Kikuchi, Chihiro Yoshida, Mami U, Hirozumi Nishibe, Tomomi Shimogori
Lab Molecular Mechanisms of Thalamus Development, BSI, RIKEN, Saitama, Japan
- P1-065** **Enhanced cell dispersion by estradiol establishes the sex difference in the rat preoptic area**
Tomohiro Hamada¹, Yasuo Sakuma²
¹Dept Physiol, Nippon Medical School, Tokyo, Japan ²Univ of Tokyo Health Sciences, Tokyo, Japan
- P1-066** **Investigation of the molecular mechanisms that regulate Reelin-induced neuronal aggregation in the mouse neocortex**
Seika Inoue, Kanehiro Hayashi, Ken-Ichiro Kubo, Kazunori Nakajima
Department of Anatomy, Keio University School of Medicine
- P1-067** **Experiment and modeling of the Reelin-dependent modification of intercellular adhesion among cells from the developing cerebral cortex**
Yuki Matsunaga¹, Mariko Noda¹, Hideki Murakawa², Takashi Miura³, Ken-Ichiro Kubo¹, Kazunori Nakajima¹
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Neurotransmitters and Signaling Molecules

- P1-068** **Identification of H₂S₃ as a novel signaling molecule in the brain, and its biosynthesis by 3-mercaptopyruvate sulfurtransferases.**
Yuka Kimura¹, Yukiko Toyofuku¹, Shin Koike^{1,2}, Norihiro Shibuya¹, Noriyuki Nagahara³, David Lefer⁴, Yuki Ogasawara², Hideo Kimura¹
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³Isotope Res Center, Nippon Med Sch, Tokyo, Japan ⁴Dept Pharmacol Exp Ther, LSU Health Sci Center, New Orleans, USA
- P1-069** **Neuritin enhances synaptic transmission in medial prefrontal cortex of mice via increasing Cav3.3 surface expression**
Junmei Lu
Fudan University
- P1-070** **Fingolimod regulates PKA/DARPP-32 signaling in striatal medium spiny neurons via neuronal S1P receptor mechanisms.**
Ken Uematsu^{1,2,3}, Yuuki Hanada^{2,3}, Takahide Shuto³, Yoshihisa Shoji^{1,2}, Naohisa Uchimura^{1,2}, Akinori Nishi³
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- P1-071 Visualized spinal NO production after ischemic treatment applied to the hindpaw and NO-induced spinal potentiation in mice**
Takeshi Onishi^{1,2}, Tatsunori Watanabe², Hiroaki Tsukano¹, Ryuichi Hishida¹, Tatsuro Kohno², Hiroshi Baba², Katsuei Shibuki¹
¹Dept Neurophysiol, Brain Res Inst, Niigata Univ, Niigata, Japan ²Dept Anesthesiol Sch Med, Niigata Univ, Niigata, Japan
- P1-072 Screening of substances affect noradrenergic neurons in the locus coeruleus by calcium-imaging in mouse acute brain slice**
Yasutaka Mukai^{1,2}, Kenji F Tanaka³, Takeharu Nagai⁴, Akihiro Yamanaka¹
¹Department of Neuroscience II, Research Institute of Environmental Medicine, Nagoya University, Nagoya, Japan
²Grad Sch of Med, Nagoya Univ, Nagoya, Japan ³Dept of Neuropsychiatry, School of Medicine, Keio Univ, Tokyo, Japan
⁴Dept of Biomol Sci and Eng, ISIR, Osaka Univ, Osaka, Japan
- P1-073 Role of histamine neurons in isoflurane anesthesia.**
Tadaho Nakamura^{1,2}, Takeo Yoshikawa², Fumito Naganuma^{1,2,3}, Toru Tamii¹, Nobuyuki Okamura^{1,2}, Kazuhiko Yanai¹
¹Dept. Pharmacol., Sch. Med., Tohoku Med. Pharm. Univ., Miyagi, Japan
²Dept. Pharmacol., Tohoku Univ. Grad. Sch. Med., Miyagi, Japan ³Dept. Neurol., BIDMC Harvard Med Sch., Boston, USA
- P1-074 Phenotypic comparison between glutamate decarboxylase 65-deficient mice and rats**
Toshikazu Kakizaki¹, Masahiko Watanabe², Yuchio Yanagawa¹
¹Dept Gen Behav Neurosci, Gunma Univ, Gunma ²Dept Anat, Hokkaido Univ, Sapporo
- P1-075 Characterization of Ca_v2 channel subtypes that mediate depolarization-induced retrograde suppression of excitation at cerebellar molecular layer interneurons**
Shin-Ichiro Satake^{1,2}, Keiji Imoto^{1,2}
¹Department of Information Physiology, National Institute for Physiological Sciences (NIPS), Okazaki, Japan
²SOKENDAI (The Graduate University for Advanced Studies), Okazaki, Japan
- P1-076 Preclinical in vitro prediction for the CNS adverse actions of drugs: a study in the iNCENS project**
Mengxuan Gao^{1,2}, Kaoru Sato^{2,3}, Yuji Ikegaya^{1,2}
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Synapse

- P1-077 Role of synaptic actin-regulatory pathway in the pathophysiology of manic disorder**
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- P1-078 Functional differences between human and rat neocortical excitatory synapses**
Gabor Molnar¹, Marton Rozsa¹, Judith Baka¹, Noemi Holderith³, Pal Barzo², Zoltan Nusser³, Gabor Tamas¹
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- P1-079 GABAergic inputs to spine of striatal medium spiny neuron**
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- P1-080 Simultaneous sodium and calcium imaging from dendrites of hippocampal pyramidal neurons**
Kenichi Miyazaki, William N Ross
Dept. of physiol, New York Medical College, New York, USA
- P1-081 The roles of Bral2 in synaptic transmission at the cerebellar output synapse**
Takeshi Sakaba¹, Rinako Miyano¹, Midori Edamatsu², Toshitaka Oohashi²
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- P1-082 GABAergic transmission onto striatal cholinergic interneurons is inhibited by muscarine receptor activation**
Etsuko Suzuki, Toshihiko Momiyama
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- P1-083** **Ca²⁺ entry duration determines effective coupling distance between Ca²⁺ channels and synaptic vesicles**
Yukihiro Nakamura^{1,2}, David A Digregorio²
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- P1-084** **Estimation of the synaptic delay at the neuromuscular junction in man and its temperature dependency**
Tomio Hayama, Mariko Higashikawa, Misa Matsumoto, Saori Koyanagi, Hiromi Sakamoto, Hiroko Ikari, Yuri Suzuki, Maya Taura, Eri Hujii, Chobun Tazaki, Asako Tamochi, Keiyu Morisaki
Fac of Life Sci, Kumamoto Univ, Kumamoto, Japan
- P1-085** **Presynaptic 5-HT_{1B} receptor-mediated inhibition of GABA release onto rat basal forebrain cholinergic neurons by potassium channel modulation**
Takuma Nishijo, Toshihiko Momiyama
Dept Pharmacol, Jikei Univ Sch Med, Tokyo, Japan
- P1-086** **Synaptic vesicle protein 2A regulates dopamine release in the nucleus accumbens via GABAergic transmission**
Kentaro Tokudome, Saki Shimizu, Naofumi Kunisawa, Ayako Ikari, Yumiko Iguchi, Takafumi Sugahara, Mayu Tamada, Shiori Fujiwara, Risa Miyake, Masato Kinboshi, Tadao Serikawa, Yukihiro Ohno
Lab. Pharmacol., Osaka Univ. Pharma. Sci., Osaka, Japan
- P1-087** **Dynamics of single synaptic vesicles at the presynaptic terminals of mammalian central synapses.**
Mitsuharu Midorikawa, Takeshi Sakaba
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Axonal Transport and Cytoskeleton

- P1-088** **Stability of drebrin in dendritic spines is increased by the isoform conversion during development in an actin-dependent manner**
Kenji Hanamura, Tomoaki Shirao
Dept Neurobiol & Behav, Grad Sch Med, Gunma Univ
- P1-089** **Mechanism of Activity-Dependent Cargo Loading via the Phosphorylation of KIF3A by PKA and CaMKIIa**
Sotaro Ichinose, Tadayuki Ogawa, Nobutaka Hirokawa
Department of Cell Biology and Anatomy, School of Medicine, University of Tokyo
- P1-090** **Semi-in-situ Atomic Force Microscopy Imaging of Intracellular Neurofilaments**
Fumiya Sato^{1,2}, Hitoshi Asakawa³, Takeshi Fukuma^{3,4}, Sumio Terada^{1,2}
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- P1-091** **Neuronal patterning using nanopillar and supported lipid bilayer**
Nahoko Kasai, Isabel Gonzalves, Akie Watanabe, Yoshiaki Kashimura, Touichiro Goto, Aya Tanaka, Shingo Tsukada, Koji Sumitomo, Hiroshi Nakashima
NTT Basic Res Labs, Kanagawa, Japan

Glial Mechanisms

- P1-092** **Calcium imaging reveals glial involvement in transcranial direct current stimulation (tDCS)-induced plasticity**
Hiromu Monai¹, Masamichi Ohkura², Mika Tanaka¹, Yuki Oe¹, Ayumu Konno³, Hirokazu Hirai³, Katsuhiko Mikoshiba¹, Shigeyoshi Itoharu¹, Junichi Nakai², Youichi Iwai¹, Hajime Hirase^{1,2}
¹RIKEN BSI, Saitama, Japan ²Saitama University Brain Science Institute, Saitama, Japan ³Gunma Univ., Maebashi, Japan
- P1-093** **An Interaction between Microglial Inflammation and Autophagy Contribute to Organophosphate-Induced Amygdaloid Seizure in Rats**
Faith Chia-Hsin Li¹, Alice Ya-Wen Chang^{1,2}
¹Department of Physiology, National Cheng Kung University, Tainan, Taiwan
²Institute of Basic Medical Sciences, National Cheng Kung University, Tainan, Taiwan

- P1-094** **Activation of ephrinB/EphB forward signaling induces retinal Müller cell inflammation response**
Shuting Liu
Institutes of Brain Science, Fudan University, Shanghai, China
- P1-095** **Distribution of GFAP immunopositive cells in the rat mesencephalic trigeminal nucleus**
Akira Kawata, Shingo Maeda, Tomonori Inoue, Takao Tsuboi, Kouta Watanabe, Tomohiro Kato, Naomi Miyagi, Kazuyoshi Higashi, Osamu Takahashi
Dept Histol, Embryol and Neuroanat, Kanagawa Dent Univ, Yokosuka, Japan
- P1-096** ***In vivo* imaging of microglial activation in aging and dementia using a new PET tracer.**
Masamichi Yokokura¹, Yasuomi Ouchi², Kiyokazu Takebayashi¹, Etsuji Yoshikawa³, Masami Futatsubashi³, Tatsuhiro Terada², Tomoyasu Bunai², Kyoko Nakaizumi¹, Norio Mori¹
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²Dept Biofunctional imaging, Hamamatsu Univ. Sch. of Med., Hamamatsu, Japan ³Hamamatsu Photonics KK, Hamamatsu, Japan
- P1-097** **Functional analysis of activated astrocytes induced by brain injury for blood-brain barrier**
Hiroko Ikeshima-Kataoka^{1,2}, Motoko Furukawa², Sayaka Inui², Manae Imamura², Masato Yasui²
¹Faculty of Science and Engineering, Univ of Waseda, Tokyo ²Dept Pharmacol & Neurosci, Keio Univ Sch Med, Tokyo, Japan
- P1-098** **Fusion of plasma membrane between NG2-Expressing Progenitor Cells and Neurons in the Cerebral Cortex of Rats**
Mitsuyo Maeda¹, Asami Eguchi², Yasuhisa Tamura^{1,2}, Mitsuo Suga¹, Yuji Hasebe¹, Yosky Kataoka^{1,2}
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²Cell Func Imag Team, Imag Func Gro, Divi of Bio-func Dyna Imag, Riken Cent for Life Sci Techno, Hyogo, Japan
- P1-099** **Expressional analysis of astrocytic Kir4.1 channels in audiogenic seizure-susceptible *Lgi*^{L385R/+} mutant rats**
Masato Kinboshi¹, Takahiro Mukai¹, Kentaro Tokudome¹, Naofumi Kunisawa¹, Higor A. Iha¹, Saki Shimizu¹, Tadao Serikawa¹, Hidefumi Ito², Akio Ikeda³, Yukihiro Ohno¹
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²Dept Neurology, Wakayama Medical University, Wakayama, Japan
³Dept Epilepsy, Movement Disorders and Physiology, Kyoto University, Kyoto, Japan
- P1-100** **Function of activated microglia following hypoglossal nerve axotomy**
Tatsuhide Tanaka, Koichi Murakami, Taichi Nomura, Yoshio Bando, Shigetaka Yoshida
Dept. of Functional Anatomy and Neuroscience, Asahikawa Med. Univ.
- P1-101** **NG2 glial cells suppress neuroinflammation and support the survival of hippocampal neurons**
Masayuki Nakano¹, Yasuhisa Tamura^{1,3}, Asami Eguchi¹, Masanori Yamato^{1,3}, Satoshi Kume^{1,3}, Yosky Kataoka^{1,2,3}
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Myelin Mechanisms

- P1-102** **TET Enzymes and DNA Hydroxymethylation as New Players in the Regulation of Oligodendrocyte Differentiation**
Xianghui Zhao
Department of neurosciences, Fourth military medical university, Xi'an China

Blood-Brain Barrier

- P1-103** **Microglia participate in the formation of blood-brain barrier by regulating the cytokine/chemokine circumstances**
Yukari Mogami, Kazue Hoshikawa, Yuko Sekino, Kaoru Sato
Divi of Pharmacol, Natl. Inst. Hlth. Sci., Tokyo, Japan
- P1-104** **Regulation of blood-brain barrier function by astrocytes through interleukin-6 family of cytokines**
Natsuko Hitora-Imamura¹, Kou Matsubara¹, Takuya Minamishima¹, Soichiro Ide^{1,2}, Masabumi Minami¹
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- P1-105** **Classification of astrocyte images for pre- and post-hypoxia adaptation using higher-order features extracted by deep convolutional neural network**
 Sosuke Tanaka¹, Masahiro Nitta², Kazuto Masamoto², Yoichi Miyawaki³
¹Faculty of Informatics and Engineering, The University of Electro-Communications
²Graduate School of Informatics and Engineering, The University of Electro-Communications
³Center for Frontier Science and Engineering, The University of Electro-Communications

Gene Regulation and Epigenetics

- P1-106** **A PSD-attached mRNA coding ASD-related gene Rai1: Alternative 5'UTRs, mRNA localization to dendrites and RNA binding proteins**
 Yoshinori Shirai, Tatsuo Suzuki
 Dept Neuroplasticity, Shinshu Univ, Matsumoto, Japan

Posttranslational Modulation and Proteolysis

- P1-107** **Expression profile of SENP5 in the central nervous system**
 Hiroki Akiyama¹, Mikoto Nomura¹, Kazuhiko Nakadate², Shin-Ichi Sakakibara^{1,3}
¹Faculty of Human Sciences, Waseda University
²Dept Basic Science, Educational and Research Center for Pharmacy, Meiji Pharmaceutical University
³Institute of Applied Brain Science, Waseda University
- P1-108** **Possible role of reversible acetylation in TSC2 activity**
 Yoshiharu Kawaguchi, Masahide Fukada, Kyoko Takeshima, Atsuo Nakayama
 Department of Embryology, Institute for Developmental Research, Aichi Human Service Center

Neural Excitability, Synapse and Glia: Others

- P1-109** **Another pathway to produce H2S**
 Norihiro Shibuya¹, Shin Koike², Makiko Tanaka¹, Mari Yuasa¹, Yuka Kimura¹, Yuki Ogasawara², Kiyoshi Fukui³, Noriyuki Nagahara⁴, Hideo Kimura¹
¹Dept Mol Pharm, Natl Inst Neurosci, NCNP ²Dept Anal Chem, Meiji Pharm Univ ³Inst Enzyme Res, Univ of Tokushima
⁴Isotope Res Center, Nippon Med Sch
- P1-110** **Voltage imaging analysis of neural signal responding to chemical stimulation using rapid electrochemical micropump**
 Kantaro Harada, Yasuo Yoshimi
 Dept Appl Chem, Shibaura Inst of Technol, Tokyo, Japan
- P1-111** **Role of KCC2 down-regulation for recovery after sciatic nerve injury**
 Takuya Toda¹, Hiroaki Wake^{1,2}, Junichi Nabekura^{1,2}
¹Dept Physiol, SOKENDAI, Okazaki, Japan ²Division of Homeostatic Development, NIPS, Okazaki, Japan
- P1-112** **Estrogen Modulates the Sensitivity of Lung Vagal C Fibers in Female Rats Exposed to Intermittent Hypoxia**
 Ya-Chen Huang^{1,2}, Jyun-Yi Lin^{1,2}, Chang-Huan Yang³, Ching Jung Lai²
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²Master program in Physiological and Anatomical Medicine, School of Medicine, Tzu Chi University, Hualien, Taiwan
³Institute of Physiology, National Yang-Ming University, Taipei, Taiwan
- P1-113** **Analysis of adducin-induced cell death mechanism**
 Haruka Takezoe^{1,2}, Shingo Fujisaki², Mitsushi J Ikemoto^{1,2}
¹Biomedical Research Institute, AIST, Ibaraki, Japan ²Grad Sch of Sci, Toho Univ, Chiba, Japan
- P1-114** **Laser confocal calcium imaging of neurosteroid-modulated neural activities in mouse hippocampal slices**
 Naoki Iwata¹, Ken Kawamura², Yuuta Hamasaki³, Hiromi Osanai³, Minoru Saito^{1,3}
¹Grad Sch of Integrated Basic Sciences, Nihon Univ, Tokyo, Japan ²College of Science and Technology, Nihon Univ, Tokyo, Japan
³College of Humanities and Sciences, Nihon Univ, Tokyo, Japan
- P1-115** **Cellular and subcellular distribution of Na/K-ATPase isoforms in the mouse brain**
 Tatsuya Ishikawa, Koshi Murata, Kazuki Kuroda, Yugo Fukazawa
 Div Brain struct and func, Sch Med, Univ of Fukui, Fukui, Japan

Audition

- P1-116 Robust cross-modal alterations of auditory response by somatosensory stimulation in auditory thalamic nuclei**
Akihisa Kimura, Hiroki Imbe
Department of Physiology, Wakayama Medical University, Wakayama, Japan
- P1-117 Long-Lasting Sound-Evoked Afterdischarge in the Auditory Midbrain**
Munenori Ono¹, Deborah C Bishop², Douglas L Oliver²
¹Dept Physiol 1, Kanazawa Med Univ, Japan ²Dept neurosci, University of Connecticut Health Center
- P1-118 Identification of novel glutamatergic circuits in the mouse inferior colliculus**
Hisataka Fujimoto, Shozo Jinno
Dept of Anatomy and Neuroscience, Med, Kyushu Univ
- P1-119 Functional localization of neural subprocesses underlying mismatch negativity generation in macaque auditory cortex**
Yuki Suda¹, Mariko Tada², Takeshi Matsuo³, Keisuke Kawasaki⁴, Takafumi Suzuki⁵, Isao Hasegawa⁴, Kenji Matsumoto¹, Kiyoto Kasai², Takanori Uka⁶
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⁵CiNet, NICT, Osaka, Japan ⁶Dept Neurophysiol, Grad Sch Med, Univ of Juntendo, Tokyo, Japan
- P1-120 Auditory hypersensitivity in autism may be related to loss of inhibition exerted by auditory brain nuclei in autism model rats**
Michiru Eto¹, Nao Hara², Takeshi Ohkawara¹, Masaaki Narita¹
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- P1-121 Evoked Magnetic Fields Elicited by Frequency Modulated Sounds**
Hidehiko Okamoto, Ryusuke Kakigi
Dept Integr Physiol, NIPS, Okazaki, Japan
- P1-122 Visualization of Corticocollicular Inputs onto the Projection Neurons in the Inferior Colliculus Belt Region**
Kousuke Taki, Fuduki Inoguchi, Yoshinari Aimi, Motoi Kudo, Yu Katsuyama
Dept Anat, Shiga Univ of Med Sci
- P1-123 Heterogeneity of antennal mechanosensory neurons that respond to high-frequency sound in fruit flies**
Azusa Kamikouchi, Natsuki Okamoto, Mizuki Nakamura, Eriko Matsuo, Yuki Ishikawa
Graduate School of Science, Nagoya University, Nagoya, Japan
- P1-124 Localization of auditory steady-state response (ASSR) in humans and non-human primates as measured using electrocorticogram (ECoG)**
Mariko Tada¹, Yohei Ishishita², Yuki Suda³, Takeshi Matsuo⁴, Keisuke Kawasaki⁵, Takafumi Suzuki⁶, Kenji Kiriha¹, Isao Hasegawa⁵, Kenji Matsumoto³, Nobuhito Saito², Takanori Uka⁷, Naoto Kunii², Kiyoto Kasai¹
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⁷Dept Neurophysiol, Juntendo Univ Sch Med, Tokyo, Japan
- P1-125 A Rat model for human speech sound discrimination: Discrimination leaning of synthetic vowels by rats**
Go Ogawa¹, Nishida Yoko², Masaharu Kudoh¹
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Vision

- P1-126 Monkeys perceive reversed depth in anti-correlated random dot stereograms**
Tomofumi Oga¹, Mitsuhiro Nakatani¹, Ichiro Fujita^{1,2}
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- P1-127 Snakes elicit stronger and early gamma oscillations in the superior colliculus**
 Le Van Quang¹, Quan Van Le², Hiroshi Nishimaru¹, Ha Trong Dinh¹, Jumpei Matsumoto¹,
 Yusaku Takamura¹, Taketoshi Ono¹, Hisao Nishijo¹
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- P1-128 The effect of face inversion on the neuronal population activity in the monkey area TE**
 Yasuko Sugase-Miyamoto¹, Narihisa Matsumoto¹, Shotaro Akaho¹, Kenji Kawano²
¹Human Informatics Res Inst, AIST, Tsukuba, Japan ²C-PIER, Kyoto Univ, Kyoto, Japan
- P1-129 Neuronal variability across repeated visual presentations of face: comparison between the temporal cortex and amygdala of monkeys**
 Mikio Inagaki^{1,2}, Ichiro Fujita^{1,2}
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- P1-130 The role of retinal dopamine in refractive development and form-deprivation myopia in C57BL/6 mice as revealed by intraocular 6-hydroxydopamine administration**
 Yong-Mei Zhong, Xiao-Hua Wu, Kang-Wei Qian, Guo-Zhong Xu, Xiong-Li Yang, Shi-Jun Weng
 Institutes of Brain Science, State Key Laboratory of Medical Neurobiology, Fudan University, Shanghai, China
- P1-131 Visual information conveyed by callosal projection neurons in the mouse visual cortex**
 Kenta M Hagihara¹, Yoshiaki Tagawa², Kenichi Ohki^{1,3}
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³Dept Physiol, Univ of Tokyo, Tokyo, Japan
- P1-132 Functional role of alpha oscillations in illusory jitter perception**
 Sorato Minami^{1,2}, Kaoru Amano^{1,2}
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- P1-133 Relationship of individual differences in stereoacuity to the visual white matter pathways**
 Hiroki Oishi¹, Hiromasa Takemura^{1,2,3}, Shuntaro C Aoki¹, Ichiro Fujita^{1,2}, Kaoru Amano^{1,2}
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- P1-134 Fiber connections of the densocellular and intercalated parts of the hyperpallium in the pigeon**
 Yasuro Atoji
 Lab Vet Anat, Fac Appl Biol Sci, Gifu Univ, Gifu, Japan
- P1-135 Physiological contribution of P2X-purinoceptor at postreceptoral processing in the mouse retina**
 Sho Ichinohe^{1,2}, Toshiyuki Ishii¹, Hiroshi Takahashi², Makoto Kaneda¹
¹Department of Physiology, Nippon Medical School ²Department of Ophthalmology, Nippon Medical School
- P1-136 Distinct neural representation of perspective of hand in the lateral occipito-temporal cortex**
 Yuko Okamoto¹, Ryo Kitada², Sumiyoshi Arai³, Takanori Kochiyama⁴, Shunsuke Ishikawa⁵,
 Norihiro Sadato^{2,6}, Hidehiko Okazawa⁶, Hirotaka Kosaka¹
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⁵Department of Neuropsychiatry, Department of Neuropsychiatry, Faculty of Medical Sciences, University of Fukui, Fukui, Japan
⁶Biomedical Imaging Research Center, University of Fukui, Fukui, Japan
- P1-137 Inhibitory synapses onto retinal ganglion cells in accordance with electrical synapses between gap-junctionally connected retinal amacrine cells**
 Soh Hidaka
 Dept Physiol, Fujita Health Univ School of Medicine
- P1-138 Axon topography of layer 6 spiny cells to orientation map and its convergence property in the cat primary visual cortex.**
 Fuyuki Karube^{1,2}, Kisvarday F Zoltan²
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- P1-139 Voxelwise modeling with distributed word representations reveals the similarity and dissimilarity of semantic structures between a large-scale text corpus and the human brain**
 Satoshi Nishida^{1,2}, Alexander G Huth³, Jack L Gallant³, Shinji Nishimoto^{1,2}
¹CiNet, NICT, Osaka, Japan ²Grad Sch Frontier Biosci, Osaka Univ, Osaka, Japan ³Univ. of California, Berkeley, US
- P1-140 The spatial frequency of the three-dimensional feature of the rooms affect the reward**
 Masahiro Yamamoto
 Corporate Research & Development Center, TOSHIBA Co. Kanagawa, Japan

- P1-141 Disruptions of the albino mouse retinal pigment epithelium during retinal ganglion cell genesis**
Lena Iwai-Takekoshi¹, Anna Ramos¹, Ari Schaler¹, Samuel Weinreb¹, Kiera Robinson¹, Richard Blazeski¹, Carol Mason^{1,2,3}
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³Dept Ophthalmology, Columbia University, NY, USA
- P1-142 Recording from face patch AM neurons of a macaque monkey using implanted microwire bundles**
Kenji Koyano, Brian E Russ, David A Leopold
NIMH, NIH, Bethesda, USA
- P1-143 Direction-specific spectral shift of local field potentials in the rat visual cortices found by a combination of electrocorticogram and optogenetics**
Haruo Toda¹, Keisuke Kawasaki¹, Masao Horie², Kiyoshi Nakahara³, Asim K Bepari², Hirohito Sawahata⁴, Takafumi Suzuki⁵, Hirohide Takebayashi², Isao Hasegawa¹
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- P1-144 Temporal dynamics of responses of gloss selective neurons**
Akiko Nishio^{1,2}, Takeaki Shimokawa², Hidehiko Komatsu^{1,3}
¹NIPS, Okazaki, Japan ²ATR CNS, Kyoto, Japan ³SOKENDAI, Okazaki, Japan
- P1-145 A Study on Dopaminergic Modulation in Optomotor Response of *Drosophila***
Kentaro Sugimoto¹, Yoshinori Suzuki¹, Toru Aonishi¹, Takako Morimoto²
¹Dept Comp Intell & Sys Sci, Tokyo Inst of Tech, Yokohama, Japan ²Lab Cellular neurobiol, Tokyo Univ Pharm Life Sci, Tokyo
- P1-146 Long-range inputs required for synchronized activity within individual functional units of the neocortical output circuit**
Hisato Maruoka, Nao Nakagawa, Toshihiko Hosoya
Lab for Local Neuronal Circuits, RIKEN BSI, Saitama

Somatosensation

- P1-147 Facilitated mechanical response of myelinated A δ -afferents in a rat model of delayed onset muscle soreness**
Toru Taguchi¹, Takanori Matsubara^{1,2}, Noriyuki Ozaki², Akihiro Yamanaka¹, Kazue Mizumura³
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²Dept Funct Anat, Kanazawa Univ Grad Sch Med Sci, Kanazawa, Japan.
³Dept Phys Ther, Coll Life Health Sci, Chubu Univ, Kasugai, Japan
- P1-148 Functional consideration of the nerve plexus in the peritoneum covering the abdominal wall in the rat**
Koichi Tanaka, Sachi Kuwahara-Otani, Seishi Maeda, Yusuke Minato, Hideshi Yagi
Dept Anat, Hyogo College of Med.
- P1-149 Neuron-satellite glia-microglia signaling in the rat trigeminal ganglion**
Haruki Iwai, Eriko Kuramoto, Atsushi Yamanaka, Tetsuya Goto
Dept Oral Anat & Cell Biol, Kagoshima Univ, Kagoshima, Japan
- P1-150 Neurophysiological and Neuroanatomical Correlates of Independent Use of Opposable Thumb in Macaque Monkeys**
Neeraj Jain, Leslee Lazar, Prem Chand, Radhika Rajan
National Brain Research Centre
- P1-151 Intracerebroventricular injection of resiniferatoxin induces brain-selective TRPV1 desensitization in mice**
Akihiro Fukushima¹, Kizuku Mamada¹, Hideki Ono^{1,2}
¹Lab Clin Pharm Pharmacol, Musashino Univ, Tokyo, Japan ²Res Inst Pharm Sci, Musashino Univ, Tokyo, Japan
- P1-152 Difference in prefrontal activity in response to occlusal discomfort given at different types of teeth**
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¹School of science and technology, meiji univ, kanagawa, japan
²dept. of special denture and occlusion & Liaison, kanagawa dental university hospital
- P1-153 Acute changes due to the ulnar and median nerve crush in the propagation pattern of the excitation wave in the rat somatosensory cortex**
Minako Kawai, Noriyuki Hama, Shin-Ichi Ito, Akihiko Hirota
Dept of Physiol, Shimane Univ. Sch of Medicine, Izumo, Japan

- P1-154** **ERK phosphorylation of thalamic and parabrachial projection neurons in medulla and upper cervical cord is involved in orofacial nociception in rats**
Ayano Katagiri, Hiroto Saito, Koichi Iwata
Dept Physiol, Nihon Univ Sch Dent, Tokyo, Japan
- P1-155** **Central and Peripheral Analgesic and Anti-inflammatory Effects of Asiatic Dogwood in Rat**
Eric P. Wiertelak, Daniel W. Yee, Julia E. Meyers-Manor
Macalester College
- P1-156** **Top-down motor inputs precede bottom-up sensory information in the primary somatosensory cortex**
Tatsuya Umeda¹, Tadashi Isa^{2,3}, Yukio Nishimura^{2,4}
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⁴Dept Physiol, SOKENDAI, Aichi, Japan
- P1-157** **A crossed hands illusion task in an amputee with a prosthesis**
Yuki Sato¹, Hiroki Ora^{1,2}, Kouji Takano¹, 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 Cen, Univ of Electro-Communication, Chofu, Japan

Autonomic Regulation

- P1-158** **Glutamate stimulation of the pre-sympathetic RVLM pressor area produces hindlimb vasodilation in baroreceptor-denervated rats**
Yumi Takemoto
Hiroshima University Institute of Biomedical and Health Sciences Basic Life Sciences
- P1-159** **Expression of connexin43 at astrocytes in the nucleus of the solitary tract**
Yohei Ishizaki, Seiji Miyata
Dept Applied Biol, Kyoto Inst of Technol, Kyoto, Japan
- P1-160** **The interaction between novel oscillation within the ventromedial hypothalamus and the sympathetic nervous system**
Kamon Iigaya^{1,2}, Hiroshi Onimaru¹
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- P1-161** **Kölliker-Fuse nucleus contains FoxP2-positive glutamatergic and GABAergic neurons that project to distinct targets**
Shigefumi Yokota¹, Joel C Geerling², Tatsuro Oka¹, Irma Rukhadze³, Yukihiro Yasui¹, Nancy L Chamberlin²
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²Department of Neurology, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, USA
³Department of Medicine, David Geffen School of Medicine at UCLA and VA, Greater Los Angeles Healthcare System, Los Angeles, USA
- P1-162** **Effects of orexins on neurons in the paraventricular nucleus of the hypothalamus**
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¹Department of Physiology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan
²Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University, Taipei, Taiwan
- P1-163** **An in vivo voltage imaging study of respiration-related activities in the ventral medulla of adult rats.**
Yuki Kaku¹, Shun-Ichi Kuwana²
¹Center for Med Sci, Ibaraki Pref Univ of Health Sci, Ibaraki, Japan ²Faculty of Health Sciences, Uekusa Gakuen University, Chiba, Japan
- P1-164** **Age-related correlation between body mass index and cardiac autonomic induces by transfer function analysis between instantaneous lung volume and heart rate in healthy Japanese women.**
Yoshinao Nagashima, Katsumi Umeno, Yuko Ohsugi, Yoshifumi Niki, Kouji Maeda
Integr Physiol Res Proj, PHC Res Lab, Kao Corp, Tokyo, Japan
- P1-165** **Heart rate responses to skeletal muscle mechanical pressure stimulation are sympathetically regulated in rats**
Nobuhiro Watanabe, Harumi Hotta
Dept Auton Neurosci, Tokyo Metropol Inst Gerontol, Tokyo, Japan
- P1-166** **Pre-hibernation remodeling includes decreases in body temperature and body weight in a facultative mammalian hibernator, Syrian hamster.**
Yoshifumi Yamaguchi^{1,2}, Yuichi Chayama¹, Lisa Ando¹, Yutaka Tamura³, Masayuki Miura^{1,4}
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Neuroendocrine Processes

- P1-167 Modulation of Memory -related Synapses by Hippocampus-synthesized Estrogen and Androgen**
Asami Kato¹, Yasushi Hojo¹, Suguru Kawato^{1,2,3}
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²Dep of urology medical school of Juntendo Univ ³Dep of urology medical school of Teikyo Univ
- P1-168 A comparative study of morphological sex differences in the brain of mice, suncus, and common marmosets**
Tomoko Tanaka¹, Yadanar Moe¹, Masahiro Morishita¹, Chihiro Nakahara¹, Satowa Yahashi², Ichiro Sakata¹, Goro Katsuura³, Fumihiro Iwashige², Atsushi Akune², Akio Inui³, Takafumi Sakai¹, Shinji Tsukahara¹
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³Graduate School of Medical and Dental Sciences, Kagoshima University, Kagoshima 890-8544, Japan
- P1-169 Pineal Allopregnanolone Saves Cerebellar Purkinje Cells from Cell Death through PACAP Action**
Shogo Haraguchi¹, Masaki Kamata¹, Miku Sato¹, Mitsuki Nozaki¹, Kouhei Matsuda³, Toshinobu Tokumoto², Kazuyoshi Tsutsui¹
¹Dept Biol, Waseda Univ, Tokyo, Japan ²Dept Biol Sci, Shizuoka Univ, Shizuoka, Japan
³Grad Sch Sci Engin, Toyama Univ, Toyama, Japan
- P1-170 Expression and subcellular localization of CD38 in the hypothalamo-neurohypophyseal system in rats**
Hirotaaka Sakamoto, Keita Satoh, Takumi Oti, Keiko Takanami, Hazuki Hirakawa, Tatsuya Sakamoto
Ushimado Marine Institute (UMI), Okayama Univ, Okayama
- P1-171 Role of β -endorphin released by the hypothalamic POMC neurons in the anti-tumor immune response**
Yusuke Hamada¹, Yoshihiko Tasaki¹, Kana Morita¹, Wataru Ito¹, Yuri Fujimori¹, Michiko Narita¹, Hideki Tamura², Masami Suzuki³, Naoko Kuzumaki¹, Kazunori Aoki⁴, Akihiro Yamanaka⁵, Minoru Narita^{1,2}
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⁴Div. Mol. & Cell. Med., NCCRI, Tokyo, Japan ⁵Dept. Neurosci.II, RIEM, Nagoya Univ., Aichi, Japan
- P1-172 Sex difference in synaptic input onto CRH neurons in the BST in CRF-Venus Δ Neo mice.**
Hiroko Hagiwara¹, Kenji Sakimura², Keiichi Itoi³, Tatsuo Akema¹, Toshiya Funabashi¹
¹Department of Physiology, St. Marianna University School of Medicine, Kawasaki, Japan
²Department of Cellular Neurobiology, Brain Research Institute, Niigata University, Niigata, Japan
³Laboratory of Information Biology, Graduate School of Information Sciences, Tohoku University, Sendai, Japan
- P1-173 Biphasic effect of estrogen on serotonergic neuron in developing zebrafish**
Zulvikar Syambani Ulhaq, Mitsuyo Kishida
Graduate School of Science and Technology, Kumamoto University
- P1-174 Oxytocin neurons in the supraoptic nucleus receive synaptic inputs from the contralateral supraoptic nucleus in cyclic Female and Male rats**
Kazumasa Honda, Chisato Komori
Faculty of Nursing and Social Welfare Sciences, Fukui prefectural University, Fukui

Neuroimmunology


- P1-175 Activation of TLR4-NF- κ B signaling in the circumventricular organs by LPS stimulation**
Shiori Muneoka, Seiji Miyata
Dept Applied Biol, Kyoto Inst of Technol, Kyoto, Japan
- P1-176 Robust microglial increase in certain brain stem regions after a single LPS stimulation**
Shintaro Kawai, Eriko Furube, Seiji Miyata
Dept of Appl Biol, Kyoto Inst Technol, Kyoto
- P1-177 Sustained suppressive effects of transforming growth factor beta 1 on LPS-stimulated microglia; distinctions from interleukin-4 actions**
Afsana Islam, Mohammad E Choudhury, Hajime Yano, Junya Tanaka
Department of Molecular and Cellular Physiology, Ehime University Graduate School of Medicine 454 Shitsukawa, Toon, Ehime

- P1-178 Heat stress affects intracerebral immune system**
Yu Kamakura, Kana Sugimoto, Yuichiro Hirata, Motonori Yoshida, Ryuichi Katada, Hiroshi Matsumoto
Dept Legal Med, Osaka Univ, Suita, Japan
- P1-179 Characteristics of interleukin 1 β producing cells involved in suppression of luteinizing hormone surge by LPS in the organum vasculosum of the lamina terminalis in ovarian steroid-primed ovariectomized rats**
Hitomi Fujioka, Atsushi Fukushima, Toshiya Funabashi, Tatsuo Akema
Dep Physiol St.Marianna Univ School of Med, Kanagawa, Japan
- P1-180 Deterioration of TCA cycle in the brain induced prolonged suppression of locomotor activity by involvement of neuroinflammation in rats**
Masanori Yamato^{1,2}, Satoshi Kume^{1,2}, Masayuki Nakano¹, Yasuhisa Tamura^{1,2}, Asami Eguchi¹, Yosky Kataoka^{1,2}
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Stress

- P1-181 Dexamethasone Modulates GABAergic Response in Primary Cultured Neurons of Mouse Cerebral Cortex**
Ban Wang¹, Yasuyuki Tanahashi², Ryusuke Ono¹, Naoki Kawakita¹, Yoshii Nishino^{1,2}, Toshiyuki Saito^{1,2}
¹Graduate School of Life Sciences, Kyoto Sangyo University, Kyoto, Japan
²Faculty of Life Sciences, Kyoto Sangyo University, Kyoto, Japan
- P1-182 Establishment of habituation method for functional MRI of an awake mouse**
Keitaro Yoshida¹, Ryosuke Ishihara², Hiroshi Nishida¹, Yuji Komaki³, Masaru Mimura¹, Hideyuki Okano², Kenji F Tanaka¹, Norio Takata¹
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³Central Institute for Experimental Animals
- P1-183 Effect of glucocorticoid on the oscillation of field potentials in the anterior cingulate cortex**
Yasushi Hojo, Rina Shinozaki, Miki Hashizume, Takayuki Murakoshi
Dept Biochem, Saitama-Med Univ
- P1-184 Effects of early life stress on motivated behavior for palatable foods**
Takayo Sasagawa¹, Noriko Horii-Hayashi¹, Akinori Okuda², Mayumi Nishi¹
¹Department of Anatomy and Cell Biology, Nara Medical University ²Department of Orthopaedic Surgery, Nara Medical University
- P1-185 New insight into the effect of cold shock protein on autophagy in brain**
Takuma Aihara¹, Sarasa Yano², Fuminori Tsuruta¹, Tomoki Chiba¹
¹Grad Sch of Life and Env of Sci, Univ of Tsukuba, Ibaraki, Japan
²Coll. of Biol. Sci., Sch. of Life and Env. Sci., Univ. of Tsukuba, Ibaraki, Japan
- P1-186 Mapping of corticotropin-releasing factor neurons in mouse brain: a study using a modified yellow fluorescent protein knock-in mouse**
Keiichi Itoi¹, Junko Kono^{1,2}, Kotaro Konno³, Talukder H. Ashraf¹, Katsuya Uchida¹, Toshimitsu Fuse¹, Manabu Abe⁴, Rie Natsume⁴, Shuhei Horio⁵, Kenji Sakimura⁴, Masahiko Watanabe^{3,4}
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⁵Inst. Biomed. Sci., Tokushima Univ., Tokushima, Japan

Food and Water Intake

- P1-187 Nucleobindin-2/nesfatin-1 in the hypothalamic paraventricular nucleus is regulated by metabolic factors.**
 Darambazar Gantulga¹, Yuko Maejima², Masanori Nakata², Toshihiko Yada^{2,3}
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³Dept. of Developmental Physiology, Div. of Adaptation Develop., Natl. Inst. for Physiological Sci., Okazaki, Japan
- P1-188 Serotonin signaling mediates the dehydration-induced changes in tolerance for bitter water**
Yoshikage Muroi, Masaki Iwai, Ken-Ichi Kinoshita, Toshiaki Ishii
Dept Basic Vet, Obihiro Univ, Obihiro, Japan

- P1-189** **Dysfunction of enteric glial cells and impairment of the small intestine in glial calcineurin B α -knockout mice**
Masahiko Tanaka, Takaki Yagi, Maya Fujita, Jun'ichi Tanaka, Umi Okura, Naohide Hirashima
Dept Cell Biophys, Grad Sch Pharmaceut Sci, Nagoya City Univ, Nagoya, Japan
- P1-190** **Intranasal oxytocin administration reduces food intake and increases c-Fos induction in oxytocin neurons in the hypothalamic paraventricular nucleus via the vagal afferent nerves.**
Tatsuki Shiiba, Ryoko Morikawa, Takeshi Nishijima, Ichiro Kita
Dept Human Health Sci, Tokyo Metropolitan Univ, Tokyo, JAPAN
- P1-191** **LGR4 regulates feeding behavior via JNK1 in the arcuate nucleus**
Ayano Otsuka¹, Yuichi Hiraoka¹, Yuko Maejima², Kenju Shimomura², Katsuhiko Nishimori¹
¹*Lab of Mol Biol, Tohoku Univ, Miyagi, Japan* ²*Dep of Tumor living body electronics, Fukushima Med Univ, Fukushima, Japan*

Reproduction

- P1-192** **Neural circuits involved in paternal and infanticidal behavior in mice**
Kenichi Tokita¹, Yousuke Tsuneoka², Taiju Amano³, Manami Sato⁴, Kumi Ozaki Kuroda¹
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³*Department of Pharmacology, Graduate School of Pharmaceutical Sciences, Hokkaido University, Hokkaido, Japan*
⁴*Department of Animal Sciences, Teikyo University of Science, Tokyo, Japan*
- P1-193** **Neural basis of premating isolation in *Rhinogobius* species.**
Masahumi Kawaguchi¹, Koji Matsumoto², Kei Nakayama³, Naoyuki Yamamoto⁴, Junya Shibata⁵, Atsushi Sogabe⁶, Ryota Kawanishi⁷, Yo Yamasaki⁸, Yasuhisa Akazome⁹, Fumikazu Suto¹⁰, Hiroyuki Ichijo¹, Yasunori Murakami¹¹
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¹⁰*Nat Inst Neurosci, NCNP, Kodaira, Japan* ¹¹*Grad Sch Sci Eng, Ehime Univ, Matsuyama, Japan*
- P1-194** **Involvement of neurons expressing corticotropin-releasing hormone (CRH) and vgf nerve growth factor inducible (VGF) in the central part of the medial preoptic nucleus on sexual behavior in male rats**
Sho Maejima, Shohei Yamaguchi, Kei Uchiyama, Masahiro Morishita, Shinji Tsukahara
Graduate school of science and engineering, Saitama University, Saitama, Japan

Sleep and Biological Rhythms

- P1-195** **Optogenetic activation of serotonergic terminals inhibited orexin/hypocretin neurons by both direct and indirect manner**
Srikanta Chowdhury¹, Kenji F. Tanaka², Akihiro Yamanaka¹
¹*Dept of Neuroscience II, RIEM, Nagoya University, Nagoya, Japan*
²*Department of Neuropsychiatry, School of Medicine, Keio University, Tokyo 160-8582, Japan*
- P1-196** **Real-Time Monitoring of Circadian Per1 and Per2 Expression in the Suprachiasmatic Nucleus of Freely Moving Rats**
Yoshiaki Yamaguchi^{1,2}, Kazuki Okada¹, Takanobu Mizuno¹, Hajime Tei³, Yasufumi Shigeyoshi⁴, Masaki Kobayashi⁵, Hitoshi Okamura^{1,2}
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⁴*Department of Anatomy and Neurobiology, Faculty of Medicine, Kinki University, Osaka, Japan*
⁵*Department of Electronics and Intelligent Systems, Tohoku Institute of Technology, Sendai, Japan*
- P1-197** **Serotonergic neurons in the dorsal raphe mediate anti-cataplectic action of orexin neurons by suppressing amygdala activity**
Emi Hasegawa¹, Takayuki Yoshida², Takashi Maejima¹, Masashi Yanagisawa³, Takeshi Sakurai¹, Michihiro Mieda¹
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- P1-198** **Light responsiveness of the cells in the suprachiasmatic nucleus under jet lag condition**
Motomi Tainaka¹, Yulin Chen¹, Yoshiaki Yamaguchi^{1,2}, Toru Suzuki¹, Hitoshi Okamura^{1,2}
¹Department of Systems Biology, Graduate School of Pharmaceutical Sciences, Kyoto, Japan ²CREST, JST, Japan
- P1-199** **The variation of skin blood flow after administration of sleep-promoting substances**
Yuko Ogawa^{1,2}, Ayana Minamizawa², Sachie Tada², Tenji Konishi²
¹Dept Regen Med Tissue Eng, Natl Cerebral & Cardiovascular Ctr, Osaka, Japan ²Doshisha Women's College of Liberal Arts
- P1-200** **Sleep depth is affected by acute running exercise in mice**
Noriyuki Shimizu¹, Yu Yoshioka^{1,2}, Takafumi Misaki^{1,2}, Yuki Kito¹, Sachiko Chikahisa¹, Tetsuya Shiuchi¹, Hiroyoshi Sei¹
¹Dept Integ Physiol, Inst of Biomed Sci, Grad Sch Univ of Tokushima, Tokushima, Japan
²Student lab, Fac Med Sch Univ of Tokushima, Tokushima, Japan
- P1-201** **Interhemispheric Asymmetry of Sleep EEG Following Skilled Reaching Task in Rats**
Akihiro Karashima¹, Ryo Tsukada², Yuka Anzai², Norihiro Katayama², Mitsuyuki Nakao²
¹Dept Elect Intel, Fac Eng, Tohoku Inst of Tech, Sendai, Japan ²Grad Sch Info & Sci, Tohoku Univ, Sendai, Japan
- P1-202** **A Neuronal Network Model with Log-Normal Distributed Couplings Enables Slow Oscillatory Dynamics**
Chi Chung Alan Fung¹, Tomoki Fukai^{1,2}
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²CREST, Japan Science and Technology 4-1-8 Honcho, Kawaguchi, Saitama 332-0012, JAPAN
- P1-203** **Simultaneous measurement of circadian rhythms of multiple functions in the suprachiasmatic nucleus**
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¹Photonic Bioimaging Section, Research Center for Cooperative Projects, Hokkaido Univ Grad School of Medicine, Sapporo, Japan
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³Health Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Kagawa, Japan
- P1-204** **Simultaneous imaging of fast neuronal activities and circadian calcium rhythms in the suprachiasmatic nucleus.**
Yoshiaki Oda¹, Ryosuke Enoki^{1,2,3}, Ken-Ichi Honma¹, Sato Honma¹
¹Dept Chronomed, Grad Sch Med, Hokkaido Univ, Sapporo, Japan
²Photonic Bioimaging, Grad Sch Med, Hokkaido Univ, Sapporo, Japan ³PRESTO, JST
- P1-205** **Effect of Sleep Deprivation on Expression of Ca-Permeable AMPA Receptors in Rat Cortex**
Yukiteru Masuda¹, Aritaka Nakamura¹, Akihiro Karashima², Norihiro Katayama¹, Mitsuyuki Nakao¹
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- P1-206** **Neural pathways from the dorsal horn of the cervical spinal cord and the caudal part of the spinal trigeminal nucleus to the perifornical hypothalamic area via the parabrachial nucleus**
Hirohiko Asano, Shigehumi Yokota, Tatsuro Oka, Yukihiko Yasui
Department of Anatomy and Morphological Neuroscience, Shimane University School of Medicine
- P1-207** **Mapping of neurons that send direct input to lateral hypothalamic orexin neurons**
Yuki Saito, Takashi Maejima, Takeshi Sakurai
Dept Molec Neurosci & Integr Physiol, Kanazawa Univ, Ishikawa
- P1-208** **Role of ascending cholinergic system for the regulation of blood pressure fluctuation during REM sleep**
Yoshimasa Koyama, Hikaru Satou, Nozomi Takaku, Naoto Haruyama, Kunihiro Nishimura
Dept Sci Technol, Fukushima Univ, Fukushima, Japan
- P1-209** **Importance of histamine N-methyltransferase in brain functions**
Takeo Yoshikawa¹, Fumito Naganuma¹, Tadaho Nakamura¹, Takatoshi Mochizuki², Tomomitsu Iida¹, Aniko Karpati¹, Takuro Matsuzawa¹, Kazuhiko Yanai¹
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Homeostatic Regulation: Others

- P1-210** **Role of preoptic area thermo transient receptor potential vanilloid type II (TRPV2) channel in thermoregulation in rats**
Rajesh Yadav, Hruda Nanda Mallick, Ashok Kumar Jaryal
All India Institute of Medical Sciences (AIIMS)

- P1-211 The intervals of electrical stimulus influences synchronized activity in living neuronal network.**
Hidekatsu Ito¹, Wataru Minoshima^{1,2}, Suguru N Kudoh^{1,2}
¹Dept. Human System Interaction, Graduate school of Sci. and Tech., Kwansei Gakuin University, Japan
²Reserch Institute of Bio Robotics

Motivation

- P1-212 A dedicated retina-EmT-habenula pathway controls light preference of larval zebrafish**
Baibing Zhang^{1,2}, Yuanyuan Yao^{1,2}, Koichi Kawakami⁴, Marnie E. Halpern⁵, Jiulin Du^{1,2,3}
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⁴Division of Molecular and Developmental Biology, National Institute of Genetics, Shizuoka, Japan
⁵Department of Embryology, Carnegie Institution for Science, Department of Biology, Johns Hopkins University, Baltimore, MD
- P1-213 A new paradigm for evaluating an avoidance motivation**
Iku Kimura^{1,2}, Youcef Bouchekioua¹, Akiyo Natsubori³, Youji Nishida¹, F. Kenji Tanaka¹
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- P1-214 Fibroblast growth factor 5 in the brain: distribution and functional implication**
Kai Kimura¹, Kazuo Yamada², Tsuyoshi Hamada³, Junko Imaki⁴, Yasuhiko Kondo¹
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³Dept Med Sports, Teikyo Heisei Univ, Chiba, Japan ⁴Dept Anat Regen Biol, Nat Def Med Col, Tokorozawa, Japan
- Rethinking of the boundary and the projection pattern of the medial amygdala subnuclei**
Kazuki Ito, Masabumi Minami, Taiju Amano
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- P1-216 Effect of an intrinsic motivational change on behavioral control in patients with schizophrenia**
Kazuyoshi Takeda¹, Madoka Matsumoto², Yousuke Ogata³, Keiko Maida⁴, Hiroki Murakami³,
Kou Murayama⁵, Keigo Shimoji⁶, Takashi Hanakawa³, Kenji Matsumoto⁷, Kazuyuki Nakagome⁴
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⁶Dept of Radiology, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Tokyo, Japan
⁷Brain Science Institute, Tamagawa Univ, Tokyo, Japan
- P1-217 Behavioral and neurological bases of tameness in selection groups of wild-derived hetero-geneous stock**
Hiromichi Nagayama¹, Yuki Matsumoto^{1,2}, Tatsuhiko Goto³, Tsuyoshi Koide^{1,2}
¹Department of Genetics, SOKENDAI, Hayama, Japan
²Mouse Genomics Resource Laboratory, National Institute of Genetics (NIG), Mishima, Japan
³Department of agriculture, Ibaraki University, Ibaraki, Japan
- P1-218 Behavioral test to evaluate tone preference**
Ryo Soga¹, Tomoyo Isoguchi Shiramatsu², Hirokazu Takahashi²
¹Department of Mechano-Informatics Graduate School of Information Science and Technology, University of Tokyo
²RCAT, Univ of Tokyo, Tokyo

Emotion

- P1-219 Neural correlates of subjective evaluation from facial skin color**
Hirokazu Doi¹, Norimichi Tsumura², Kazuyuki Shinohara¹
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- P1-220 Contribution of facial color to expression recognition of blurred images : Analysis of eye movement**
Satoshi Nakakoga, Yuji Nihei, Shigeki Nakauchi, Tetsuto Minami
TOYOHASHI University of Technology
- P1-221 Protein phosphatase 2A mediates antidepressant effects of NMDA receptor blockade**
Chih-Hua Chang
National Cheng-Kung University Department of Pharmacology

- P1-222 Association between an HTR2A Polymorphism and Positive Emotional Contagion**
Masahiro Matsunaga¹, Hiroaki Kawamichi², Hideki Ohira³, Tomohiro Umemura¹, Reiko Hori¹, Eiji Shibata¹, Fumio Kobayashi¹, Keiko Ishii⁴, Yohsuke Ohtsubo⁴, Yasuki Noguchi⁴, Hidenori Yamasue⁵
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³Dept Psychology, Nagoya Univ, Nagoya, Japan ⁴Dept Psychology, Kobe Univ, Kobe, Japan
⁵Dept Neuropsychiat, Univ Tokyo, Tokyo, Japan
- P1-223 Emotional behaviors in prenatal nicotine exposure mice**
Shu-Chuan Yang^{1,2}, Ching-Lu Chen², Cheng-Ya Yeh³, Kun-Ruey Shieh³
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²Institute of Radiological Sciences, Tzu Chi University of Science and Technology, Hualien, Taiwan
³Department of Physiology/Institute of Physiological and Anatomical Medicine, Tzu Chi University, Hualien, Taiwan
- P1-224 Locomotor activity in male mice with prenatal nicotine exposure**
Kun-Ruey Shieh¹, Shu-Chuan Yang^{2,3}, Ching-Lu Chen³, Cheng-Ya Yeh¹, Hsien-Yong Lai⁴
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³Institute of Radiological Sciences, Tzu Chi University of Science and Technology, Hualien, Taiwan
⁴Division of Anesthesiology, Mennonite Christian Hospital, Hualien, Taiwan
- P1-225 Behavior alteration of offspring born from mother lived in the different feeding rhythm during pregnancy**
Tetsuya Shiuchi^{1,2}, Noriyuki Shimizu¹, Airi Otsuka¹, Sachiko Chikahisa¹, Hiroyoshi Sei¹
¹Dept Integ Physiol, Inst Biomedical Sci, Tokushima Univ Grad Sch, Tokushima, Japan ²PRESTO, JST, Kawaguchi, Japan
- P1-226 Learning of inter-individual space in social dominance formation of crows**
Kazuaki Takeda, Ei-Ichi Izawa
Dept Psychology, Keio Univ, Tokyo, Japan
- P1-227 Sex differences in dynamics of neural activation following fear extinction**
Shingo Matsuda¹, Noritaka Ichinohe^{1,2}, Fumikazu Suto¹
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²Ichinohe Neural System Group, Lab for Molecular Analysis of Higher Brain Functions, RIKEN BSI, Saitama, Japan

Appetitive and Aversive Learning

- P1-228 P11, a possible mood regulator, is essential for the reward-related dopamine responses.**
Yuuki Hanada, Yukie Kawahara, Yoshinori Ohnishi, Takahide Shuto, Mahomi Kuroiwa, Naoki Sotogaku, Akinori Nishi
Dept. of Pharmacol., Kurume Univ. Sch. of Med.
- P1-229 Value coding neurons in mice orbitofrontal cortex: Economic decision-making in a genetically tractable model**
Masaru Kuwabara, Timothy Holy, Camillo Padoa-Schioppa
Washington University in St Louis
- P1-230 The role of striatal patch neurons in reward-based learning**
Tomohiko Yoshizawa^{1,2}, Makoto Ito¹, Kenji Doya¹
¹Neural Computation Unit, OIST, Okinawa, Japan ²NAIST, Nara, Japan
- P1-231 Activity of primate dopamine neurons is influenced by the prospect of others' reward**
Atsushi Noritake, Masaki Isoda
Dept Physiol, Kansai Medical University, Osaka
- P1-232 The aversive stimulus affect decision making, modulate autonomic response and neuronal activity in the primate caudate**
Yasumasa Ueda, Kae Nakamura
Dept Physiol, Kansai Medical University, Osaka
- P1-233 Delay-induced activity in hippocampus and medial prefrontal cortex during a delay-discounting task**
Akira Masuda¹, Chie Sano¹, Shigeyoshi Fujisawa², Shigeyoshi Itohara¹
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Motivation and Emotion: Others

- P1-234** **Live Interaction Distinctively Shapes Primate Social Gaze Dynamics**
Olga Dal Monte, Matthew Piva, Steve Chang
Dep. psychology, Yale University, New Haven, CT, USA
- P1-235** **Behavioral inhibition system relates to the responses of the dorsal anterior cingulate cortex and the orbitofrontal cortex to infant emotional faces**
Katsuko Niwano¹, Ayahito Ito², Motoko Tanabe³, Yosuke Sato³, Toshikatsu Fujii^{2,3}
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³Faculty of Health Science, Tohoku Fukushi Univ, Miyagi, Japan
- P1-236** **Orbitofrontal-hypothalamic functional interaction revealed by high-resolution resting-state fMRI**
Akitoshi Ogawa¹, Takahiro Osada^{1,2}, Satoshi Hirose^{1,2}, Masaki Tanaka¹, Hiroyuki Wada³, Yasunori Yoshizawa³, Yoshio Imai³, Toru Machida^{3,4}, Masaaki Akahane³, Ichiro Shirouzu³, Seiki Konishi^{1,2}
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⁴Diagnostic Radiology Center, Mita Hospital, International University of Health and Welfare, Tokyo, Japan

Learning, Memory and Plasticity

- P1-237** **Neuritin reverses deficits in murine novel object associative recognition memory caused by exposure to extremely low-frequency (50 Hz) electromagnetic fields**
Qianru Zhao, Junmei Lu, Jinjing Yao, Zhengyu Zhang
Dept Biophysics, School of Life Sci, Fudan Univ, Shanghai, China
- P1-238** **Integrative transcriptome profiling of cognitive aging and its preservation through Ser/Thr protein phosphatase regulation**
C. Sehwan Park¹, Amandine Valomon², Hans Welzl³
¹Department of Health Science and Technology, ETH Zurich, Zurich, Switzerland
²Institute of Pharmacology and Toxicology, University of Zurich, Zurich, Switzerland
³Institute of Anatomy, University of Zurich, Zurich, Switzerland
- P1-239** **Maternal chewing during prenatal stress ameliorates stress-induced vulnerability of the brain to novel stress in the adult pups in mice**
Ayumi Suzuki¹, Sakurako Hayashi¹, Hiroko Kondo¹, Chika Murabayashi¹, Mitsuo Iinuma¹, Kagaku Azuma², Kin-Ya Kubo³
¹Dept Pediatric Dent, Asahi Univ, Sch Dent, Fifu, Japan ²Dept Anat, Sch Med, UOEH ³Seijoh Univ Grad Sch Health Care Studies
- P1-240** **Optogenetic identification of granule cell activity in the dentate gyrus of freely behaving mice**
Luis Fernando Cobar Zelaya¹, Vanja Cnops^{1,2}, Salman Zaferanlouei^{1,2}, Stephanie Lee^{1,2}, Shruti Suresh^{1,2}, Congshu Liao^{1,2}, Ayumu Tashiro^{1,2}
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- P1-241** **Distributions of calcium-binding proteins in the rabbit mammillary nuclei**
Hideshi Shibata¹, Yoshiko Honda²
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- P1-242** **Increased functional connectivity of the precuneus in musicians**
Shoji Tanaka¹, Eiji Kirino²
¹Dept Information and Communication Sci, Sophia Univ, Tokyo, Japan ²Dept Psychiatry, Juntendo Univ, Tokyo, Japan
- P1-243** **Dopamine D2L receptor is required for cognitive learning in a visual discrimination task**
Makiko Morita¹, Yanyan Wang², Toshikuni Sasaoka³, Kinya Okada⁴, Minae Niwa⁴, Akira Sawa⁴, Takatoshi Hikida¹
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⁴Dept Psychiatry, Johns Hopkins Univ Sch Med, Baltimore, MD, USA
- P1-244** **Modulation of alpha-band oscillation during short-term pitch memory task in absolute pitch possessors: EEG-TMS study.**
Hiroaki Maeshima, Kazuo Okanoya
Dept Cognitive and Behav Sci, Graduate School of Arts and Sciences, Univ of Tokyo, Tokyo, Japan

- P1-245 Band-like Zonal Distribution of the Cells of Origins of CA1, Subicular and Presubicular Projections in the Rabbit Entorhinal Cortex**
Yoshiko Honda¹, Hideshi Shibata²
Dept Anat, Tokyo Women's Med Univ Sch Med, Tokyo, Japan
- P1-246 Fasting enhances olfactory learning in *Drosophila* by increasing dopamine signaling**
Shintaro Nagano¹, Yukinori Hirano², Minoru Saitoe¹
¹Tokyo Metropolitan Institute of Medical Science, Learning and Memory Project, Tokyo, Japan
²Kyoto University Graduate School of Medicine, Kyoto, Japan
- P1-247 Nucleus accumbens dopamine D2-receptor expressing neurons control behavioral flexibility in a place learning task**
Tom Macpherson¹, Makiko Morita¹, Yanyan Wang², Toshikuni Sasaoka³, Akira Sawa⁴, Takatoshi Hikida¹
¹Kyoto University Graduate School of Medicine, Kyoto, Japan
²Department of Pharmacology, Beckman Institute, University of Illinois, Urbana, IL, USA
³Brain Research Institute, Niigata University, Niigata, Japan
⁴Department of Psychiatry, Johns Hopkins University School of Medicine, Baltimore, MD, USA
- P1-248 Representations of behaviorally relevant locations are preferentially stabilized in hippocampal CA1 spatial maps**
Masaaki Sato^{1,2}, Kotaro Mizuta¹, Tanvir Islam¹, Masako Kawano¹, Takashi Takekawa³, Daniel Gomez-Dominguez⁴, Hiroshi Yamakawa¹, Masamichi Ohkura^{5,6}, Tomoki Fukai¹, Junichi Nakai^{5,6}, Yasunori Hayashi^{1,5,7}
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⁴Instituto Cajal, Madrid, Spain ⁵Brain Sci Inst, Saitama Univ, Saitama, Japan ⁶Grad Sch Sci Eng, Saitama Univ, Saitama, Japan
⁷Sch Life Sci, South China Normal Univ, Guangzhou, China
- P1-249 Functional switch between GABA-A and GABA-B receptor determines the sensitive period for filial imprinting in domestic chicks (*Gallus gallus domesticus*)**
Naoya Aoki¹, Shinji Yamaguchi¹, Yuriko Saheki², Akihiko Takehara¹, Toshiya Matsushima², Koichi J Homma¹
¹Sch Pharm Sci, Teikyo Univ, Tokyo, Japan ²Dept Biol, Fac Sci, Hokkaido Univ, Hokkaido, Japan
- P1-250 Dynamic changes in ensemble activities associated with contextual fear memory generalization**
Naoki Matsuo^{1,2}, Marie Yokoyama²
¹Grad Sch Med, Osaka Univ, Osaka, Japan ²CPLS, Kyoto Univ, Kyoto, Japan
- P1-251 Modulation of Hippocampal Sharp waves / ripples by Spontaneous Synaptic Plasticity**
Hiroaki Norimoto¹, Kenichi Makino¹, Shun Yamaguchi³, Shigeyoshi Fujisawa², Yuji Ikegaya¹
¹Dept Chemical Pharmacology, Univ of Tokyo, Tokyo ²RIKEN Brain Science Institute, Wako, Japan
³Division of Morphological Neuroscience, Gifu University Graduate School of Medicine
- P1-252 The crucial role of the immediate-early gene *Arc* in remote fear memory formation**
Keiichi Minatohara¹, Masahiro Uehara¹, Ryang Kim², Manabu Abe³, Kenji Sakimura^{3,4}, Haruhiko Bito^{2,4}, Hiroyuki Okuno¹
¹Med Innov. Ctr, Kyoto Univ Grad Sch of Med, Kyoto, Japan ²Dept of Neurochem, Grad Sch of Med, Univ of Tokyo, Tokyo, Japan
³Dept of Cell. Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan ⁴CREST, AMED, Chiyoda-ku, Tokyo, Japan
- P1-253 *Arc* knockout mice exhibit specific impairment during reversal learning phase in a spatial memory task**
Masahiro Uehara¹, Yusuke Suzuki¹, Toshihiro Endo², Masaki Kakeyama³, Manabu Abe⁴, Kenji Sakimura^{4,5}, Itaru Imayoshi¹, Haruhiko Bito^{2,5}, Hiroyuki Okuno¹
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⁴Dept of Cell. Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan ⁵CREST, AMED, Chiyoda-ku, Tokyo, Japan
- P1-254 Learning and Memory Impairments under hypoxia: Understanding the role of potassium channels.**
Neetu Kushwah, Vishal Jain, Aastha Dheer, Rahul Kumar, Dipti Prasad, Shashi Bala Singh, Nilofar Khan
Defence Institute of Physiology and Allied Sciences
- P1-255 Pathway-specific activation of claustrum by novel experience**
Takuma Kitanishi^{1,2,3}, Naoki Matsuo^{1,2}
¹Grad Sch of Med, Osaka Univ, Osaka ²Career-Path Unit Life Sci, Kyoto Univ, Kyoto ³Grad Sch of Med, Osaka City Univ, Osaka
- P1-256 Optogenetic conditioning of paradigms discrimination in the rat whisker-barrel system.**
Kenta Abe¹, Hiromu Yawo^{1,2}
¹Dept Life Sci, Univ of Tohoku, Sendai, Japan ²Tohoku Univ Grad Sch Med, Sendai, Japan

- P1-257** **Simultaneous recordings of brain wave, heart rate, and skeletal muscle activity in a freely moving rodent**
Sakura Okada, Hideyoshi Igata, Yuya Nishimura, Takuya Sasaki, Yuji Ikegaya
Lab. Chem. Pharmacol., Grad. Sch. Pharmaceut. Sci., Univ. Tokyo, Tokyo, Japan
- P1-258** **Quantification of relations between compartmentalized sensory and interneuronal activities to odor stimulus during early adaptation in *C. elegans***
Keita Ashida, Hisashi Shidara, Kohl Hotta, Kotaro Oka
Department of Biosciences and Informatics, Faculty of Science and Technology, Keio University
- P1-259** **Effect of low frequency stimulation on learning and memory impairments induced by kindled seizures in male rat**
TA Khadijeh Esmaeilpour Bezenjani¹, Javad Mirnajafi-Zadeh², Vahid Sheibani¹, Mohammad Shabani¹, Yaser Masoumi³
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²Department of Physiology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran
³Physiology Research Center, Institute of Neuropharmacology, Kerman University of Medical Sciences, Kerman, Iran
- P1-260** **A developmental neurobehavioral study in rats with abnormal neurogenesis in different brain regions induced by prenatal (G15, G17 and G19) methylazoxymethanol (MAM) treatment**
Kozo Sugiyoka¹, Kenkichi Takase²
¹Div Dev Neurobehav Sci & Functional Anat, Dept Child Health & Care, Facul Health Care Sci, Himeji Dokkyo Univ, Himeji, Hyogo, Japan ²Lab Psych, Jichi Med Univ, Shimotsuke, Tochigi, Japan
- P1-261** **A subset of dopaminergic neuron modulates courtship decision-making in *Drosophila*.**
Hiroshi Ishimoto, Yoshiko Kondo, Azusa Kamikouchi
Division of Biological Science, Graduate School of Science, Nagoya University
- P1-262** **NMDA receptors in the retrosplenial cortex contribute to the retrieval of spatial memory in rats**
Shota Shimoda¹, Toshimichi Hata²
¹Graduate School of Psychology, Doshisha University, Kyoto, Japan ²Faculty of Psychology, Doshisha University
- P1-263** **Optogenetic Dissection of Selective Information Routing by a Hypothalamo-hippocampal Circuit**
Yanqiu Tao¹, Yanqiu Tao^{1,2}, Shuo Chen¹, Denis Polygalov¹, Arthur J.Y. Huang¹, Roman Boehringer¹, Jingyi Chen¹, Thomas J. McHugh¹
¹RIKEN BSL, Lab for Circuit and Behavioral Physiology, wako, Japan ²Dept of Life Sci and Med Bio-Sci, Waseda Univ, Tokyo, Japan
- P1-264** **Temporal profiles of epigenetic gene expression in adult mouse hippocampus after cranial irradiation**
Sohi Kang¹, Yeonghoon Son¹, Jinwook Kim¹, Sueun Lee¹, Juhwan Kim¹, Jong-Choon Kim¹, Joong-Sun Kim², Uhee Jung³, Sung-Kee Jo³, Sung-Ho Kim¹, Miyoung Yang⁴, Changjong Moon¹
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³Radiation Research Division for Bio-Technology Institute, Jeongeup Campus of Korea Atomic Energy Research Institute, Jeonbuk 562
⁴Department of Anatomy, School of Medicine, Wonkwang University, Jeonbuk 54538, South Korea
- P1-265** **Temporal changes of GABAergic transmission in the mouse hippocampus following cranial irradiation**
Jinwook Kim¹, Sohi Kang¹, Sueun Lee¹, Yeonghoon Son¹, Juhwan Kim¹, Miyoung Yang², Sung-Ho Kim¹, Sung-Kee Jo³, Uhee Jung³, Changjong Moon¹
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³Radiation Research Division for Bio-Technology Institute, Jeongeup Campus of Korea Atomic Energy Research Institute, Jeonbuk 562

Executive Function

- P1-266** **Pointing Practice Facilitates the Adaptation of Walking with a Prism Glasses**
Hiroyasu Iwatsuki
Graduate School of Aomori University of Health and Welfare, Aomori, Japan
- P1-267** **Temporally specific causal role of the orbitofrontal cortex in reversal learning**
Masaaki Ogawa, Tadashi Isa
Division of Behavioral Development, Department of Developmental Physiology, National Institutes for Physiological Sciences

- P1-268** **Effect of Genetic Variations on Top-Down Signals Distributed to Primary and Higher Visual Areas Revealed by fMRI Using a Standard Task Paradigm in Visual Attention**
Kazuhiro Yamada^{1,2}, Chihiro Kuroki¹, Jotaro Akiyoshi³, Yoshihisa Kawano²
¹Dept Neurophysiol, Oita Univ Fac Med, Oita, Japan ²Kawano Neurosurg Hosp, Oita, Japan
³Dept Psychiat, Oita Univ Fac Med, Oita, Japan
- P1-269** **The amygdala is essential for underestimation of duration induced by the fear-conditioned stimulus in rats**
Taisuke Kamada¹, Toshimichi Hata²
¹Grad Sch Psychol, Doshisha Univ, Kyoto, Japan ²Fac Psychol, Doshisha Univ, Kyoto, Japan
- P1-270** **Interactions of local field potentials between monkey lateral prefrontal and dorsal premotor cortices during a shape-manipulation task**
Kazuhiro Sakamoto¹, Norihiko Kawaguchi², Hajime Mushiaki²
¹Research Institute of Electrical Communication, Tohoku University ²Department of Physiology, Tohoku University School of Medicine
- P1-271** **The functional connectivity of the striatum during focused attention meditation**
Masahiro Fujino¹, Yoshiyuki Ueda², Hiroaki Mizuhara³, Jun Saiki⁴, Michio Nomura¹
¹Grad Sch of Education, Kyoto Univ, Kyoto ²Kokoro Res. Center, Kyoto Univ, Kyoto ³Grad Sch of Info, Kyoto Univ, Kyoto
⁴Grad Sch of Human and Environmental Std, Kyoto Univ, Kyoto
- P1-272** **Creative thinking and personality trait in Parkinson's disease**
Naho Saito¹, Shiho Ubukata¹, Satoshi Saito², Hodaka Yamakado², Nobukatsu Sawamoto³, Ryosuke Takahashi², Toshiya Murai¹, Hidehiko Takahashi¹
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Decision Making

- P1-273** **Behavioral contagion during learning about another agent's risk-preferences acts on the neural representation of decision risk**
Shinsuke Suzuki¹, Emily LS Jensen¹, Peter Bossaerts², John P O'doherty¹
¹California Institute of Technology, Pasadena, USA ²The University of Melbourne, Carlton, Australia
- P1-274** **Withdrawn**
- P1-275** **Involvement of dopamine receptors in the dentate gyrus of the hippocampus in expression, acquisition and extinction of the morphine-induced conditioned place preference in the rats**
Seyedeh Najmeh Katebi
Neuroscience Research Center
- P1-276** **Interrogating neural circuitry underlying neuroeconomic decision-making in mouse models of addiction.**
Brian M Sweis^{1,2}, David Redish², Mark Thomas²
¹School of Medicine, University of Minnesota, Minneapolis, MN, United States
²Department of Neuroscience, University of Minnesota, Minneapolis, MN, United States
- P1-277** **Neuronal responses engaged in temporal classification in the monkey medial premotor areas**
Atsushi Chiba, Ken-Ichi Oshio, Masahiko Inase
Dept Physiol, Facult of Med, Kindai Univ, Osaka-Sayama, Japan
- P1-278** **The Effect of Reward Uncertainty on Reward-directed Behavior in Macaque Monkeys.**
Atsushi Fujimoto, Yukiko Hori, Erika Kikuchi, Tetsuya Suhara, Takafumi Minamimoto
National Institute of Radiological Sciences
- P1-279** **NMDAR antagonist ketamine increases sensitivity to irrelevant information in the parietal cortex**
Takanori Uka^{1,2}, Yuki Suda^{1,2}
¹Dept Neurophysiol, Grad Sch Med, Juntendo Univ, Tokyo, Japan ²Brain Sci Inst, Tamagawa Univ, Tokyo, Japan
- P1-280** **analysis of operation skill acquiring process for unknown system**
Taiki Takayama, Tetsuyou Watanabe
Division of Mechanical Science and Engineering, Univ of Kakuma, Ishikawa, Japan

- P1-281 Functional neural activity in orbitofrontal cortex during proactive inhibition with a novel stop-signal task**
Junichi Yoshida¹, Akiko Saiki¹, Shogo Soma^{1,2}, Ko Yamanaka³, Satoshi Nonomura¹, Masanori Kawabata¹, Yutaka Sakai¹, Yoshikazu Isomura¹
¹Brain Sci Inst, Univ of Tamagawa, Tokyo, Japan ²JSPS Fellows (PD)
³Dept Physiol, Graduate Sch. of Health and Sports Sci, Univ of Juntendo, Chiba, Japan
- P1-282 A Bayesian method of testing discrete neuron categories based on response properties**
Tommy Blanchard¹, Steven T Piantadosi², Benjamin Y Hayden²
¹Harvard University ²University of Rochester
- P1-283 Stimulation of the α 2-adrenergic auto-receptor with clonidine limits the options explored by prospective spatial representations in hippocampal neural ensembles**
Seiichiro Amemiya, David A Redish
Dept Neurosci, Univ of Minnesota, Minneapolis, USA
- P1-284 Neural mechanisms for decision-making with predicting others: human fMRI**
Ning Ma¹, Norihiro Harasawa¹, Kenichi Ueno², Noritaka Ichinohe³, Masahiko Haruno⁴, Kang Cheng^{2,5}, Hiroyuki Nakahara¹
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⁵Lab for Cognitive Brain Mapping, RIKEN BSI, Japan
- P1-285 Neural computation underlying value-based decisions including rewards to others**
Haruaki Fukuda^{1,2}, Ning Ma¹, Shinsuke Suzuki^{1,3,4}, Norihiro Harasawa¹, Kenichi Ueno⁵, Justin L Gardner⁶, Noritaka Ichinohe⁷, Masahiko Haruno⁸, Kang Cheng^{5,9}, Hiroyuki Nakahara¹
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⁷Dept of Ultrastructural Res, Natl Inst of Neurosci, NCNP, Tokyo, Japan ⁸Center for Info and Neural Networks, NICT
⁹Lab for Cognitive Brain Mapping, RIKEN BSI, Saitama, Japan

Social Behavior

- P1-286 Sex differences in the functional brain network at rest**
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²Wakayama-Minami Radiology Clinic, Wakayama, Japan
- P1-287 Functional analysis of oxytocin-like peptide, inotocin in social insect, ants**
Akiko Koto¹, Hiroki Tahara¹, Naoto Motoyama¹, Laurent Keller², Masayuki Miura¹
¹Dept. Genetics, Grad. Sch. Pharm. Sci., The Univ. Tokyo, Japan ²Dept. Ecology & Evolution, UNIL, Switzerland
- P1-288 The Roles of Dopamine D1 Receptor in Rodent Social Hierarchy**
Yukiori Goto¹, Young-A Lee², Yoshie Yamaguchi¹, Akemi Kato¹
¹Primate Res Inst, Kyoto Univ, Inuyama, Japan ²Dept Food Sci Nutr, Catholic Univ Daegu, Gyongsan, Korea
- P1-289 High frequency of social interaction is perceived as social reward represented in the ventral striatum**
Hiroaki Kawamichi^{1,2,3}, Sho K Sugawara², Yuki H Hamano², Norihiro Sadato²
¹Dept Med, Gunma University, Maebashi, Japan ²Div Cereb Integration, NIPS, Okazaki, Japan
³Dept Frontier Health Sci, Tokyo Metropolitan Univ Grad Sch of Human Health Sci, Tokyo
- P1-290 Neural correlates of social buffering in male rats**
Shota Minami, Yasushi Kiyokawa, Yukari Takeuchi
Vet Ethol, Univ. of Tokyo, Tokyo
- P1-291 Deficiency of vomeronasal signals enhances parental behavior in socially isolated male mice**
Chitose Orikasa¹, Yasuhiko Kondo², Harumi Katsumata¹, Misao Terada³, Toshio Akimoto⁴, Yasuo Sakuma⁵, Shiro Minami¹
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³Dokkyo Med Univ, Tochigi, Japan ⁴Nippon Med Sch, Tokyo, Japan ⁵Univ of Tokyo Health Sci, Tokyo
- P1-292 Analysis of function of oxytocin receptor expressing neurons on maternal behavior**
Shizu Hidema¹, Yumi Takahashi¹, Hiroaki Mizukami², Shinji Miyazaki¹, Ayano Otsuka¹, Yuichi Hiraoka¹, Katsuhiko Nishimori¹
¹Dept Molecular and Cell Biology, Univ of Tohoku, Sendai, Japan
²Center for Molecular Medicine, Univ of Jichi Medical, Shimotsuke, Japan

- P1-293 Representation of interpersonal relationship in the human brain**
Masahiro Okamoto¹, Masaki Ikezoe², Satoshi Eifuku¹
¹Dept Sys Neurosci, Fukushima Medical Univ, Fukushima, Japan ²Sch Med, Fukushima Medical Univ, Fukushima, Japan
- P1-294 The cortical neural activity in high empathy group was different from that in low empathy group during the observation of others' empathic and un-empathic behavior**
Masayoshi Hamada¹, Jun Matsubayashi¹, Makiko Furuya¹, Masao Matsuhashi², Tatsuya Mima³, Hidenao Fukuyama², Akira Mitani¹
¹Neurorehabilitation, Dept Human Health Sciences, Graduate School of Medicine, Kyoto University, Kyoto, Japan
²Human Brain Research Center, Graduate School of Medicine, Kyoto University, Kyoto, Japan
³The Graduate School of Core Ethics and Frontier Sciences, Ritsumeikan University, Kyoto, Japan
- P1-295 Lateral asymmetry in eye use and evasive response of medaka fish**
Masaki Yasugi, Eiji Watanabe
National Institute for Basic Biology, Aichi, Japan

Aging

- P1-296 The relationship between working-memory related preceding activation of frontal pole and cognitive performance in the healthy old people**
Yumi Oboshi¹, Mitsuru Kikuchi², Masayoshi Kawai³, Yasuomi Ouchi¹
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- P1-297 Alterations in aggrecan expression in the mouse hippocampus by aging and memantine**
Jun Yamada, Shozo Jinno
Dept Anat & Neurosci, Grad Sch of Med, Kyushu Univ, Fukuoka
- P1-298 Aging of the cholinergic vasodilative response in the cerebral cortex by somatosensory stimulation.**
Sae Uchida, Fusako Kagitani
Dept Auton Neurosci, Tokyo Metropol Inst Gerontol, Tokyo, Japan
- P1-299 Long-Term Intervention Using a Computerized Dance Video Game Has Ameliorated Cognitive and Physical Condition in Community-Dwelling Elderly**
Kosuke Matsubara^{1,2}, Katsunari Sato³, Kota Naito¹, Ryuji Iwasaki¹, Asuka Hoshino⁴, Tatsuya Suzuki⁵, Yumie Ono^{4,5}, Kazuko Watanabe¹
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⁴Sch. Sci & Engi, Meiji Univ, Kanagawa, Japan ⁵Grad Sch. of Sci & Tech, Meiji Univ, Kanagawa, Japan

Neurodegenerative Disorders

- P1-300 MPP⁺ and Mn induced neurotoxicity in dopaminergic neurons: A comparative analysis with implications for neurodegeneration associated with movement disorders**
Mythri R, Raghunath N Reddy, Srinivas MM Bharath
National Institute of Mental Health and NeuroSciences (NIMHANS), Bangalore, Karnataka, India
- P1-301 TDP-43 loss of function increases TFEB activity and blocks autophagosome-lysosome fusion**
Qin Xia¹, Zheng Ying^{1,3}, Hongfeng Wang¹, Zongbing Hao¹, Guanghui Wang^{1,2}
¹College of Pharmaceutical Sciences, Soochow University, Suzhou, China
²Key Laboratory of Brain Function and Disease, School of Life Sciences, University of Science & Technology of China, Chinese Acad
³Jiangsu Key Laboratory of Preventive and Translational Medicine for Geriatric Diseases, College of Pharmaceutical Sciences, Sooc
- P1-302 Prefrontal cortex characterisation in experimental Alzheimer's: Kolaviron therapeutic mechanisms**
Olayemi Joseph Olajide, Bernard Ufuoma Enaibe, Oluwole Busayo Akinola
Neurobiology Unit, Department of Anatomy, University of Ilorin, Ilorin, Nigeria
- P1-303 Treadmill running protected against restrained stress induced oxidative insult; mitochondrial dynamics in four brain areas**
Shima Zare Shahamati, Fariba Khodaghali
Shahid Beheshti University of Medical Sciences
- P1-304 Metformin provoked elevation of mitochondrial complexes and enzymes against restrained stress induced oxidative insult; exploring four brain regions**
Hadi Digaleh, Fariba Khodaghali
Shahid Beheshti University of Medical Sciences

- P1-305** **Parkinsonian pallido-thalamic activity explains benefits of stereotaxic surgery on motor symptoms**
Tomokazu Oshima, Riichiro Narabayashi, Yohsuke Narabayashi
Narabayashi Memorial Lab Neurol, Neurological Clinic
- P1-306** **Characterization of α -synuclein-enriched periglomerular cells in the mouse olfactory bulb**
Katsutoshi Taguchi¹, Yoshihisa Watanabe¹, Atsushi Tsujimura¹, Masaki Tanaka²
¹Dept Basic Geriatrics, Kyoto Pref Univ of Med, Kyoto, Japan
²Dept Anat & Neurobiol, Grad Sch of Med Sci, Kyoto Pref Univ of Med, Kyoto, Japan
- P1-307** **Glial cell abnormality causes hippocampal neurodegeneration induced by Na⁺/K⁺-ATPase inhibition**
Kazuki Noma¹, Yuki Kurauchi¹, Akinori Hisatsune^{2,3}, Takahiro Seki¹, Hiroshi Katsuki¹
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²Priority Org for Innov Excel, Kumamoto Univ, Kumamoto ³Program for Leading Grad Sch "HIGO Program", Kumamoto Univ, Kumamoto
- P1-308** **Use of CRISPR/Cas9 to generate genetically modified monkey models of neurodegenerative disease**
Zhuchi Tu, Weili Yang, Xudong Liu, Sen Yan, Xiaojiang Li
University of Chinese Academic of Sciences
- P1-309** **Generation of CRISPR/Cas9-mediated Huntingtin knock in pigs**
Sen Yan^{1,2,3}, Zhuchi Tu¹, Huaqiang Yang², Renbao Chang¹, Nana Fan², Xiangyu Guo¹, Bentian Zhao², Yu Zhao², Zhaoming Liu², Li Li², Shihua Li³, Liangxue Lai², Xiao-Jiang Li^{1,3}
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²Key Laboratory of Regenerative Biology, South China Institute for Stem Cell Biology and Regenerative Medicine, Guangzhou Institute of Biomedicine and Health
³Department of Human Genetics, Emory University School of Medicine, Atlanta, Georgia, USA
- P1-310** **Possible role of immediate-early genes in trimethyltin-induced hippocampal neurotoxicity in mice**
Sueun Lee¹, Sohi Kang¹, Jinwook Kim¹, Yeonghoon Son¹, Juhwan Kim¹, Miyoung Yang², Taekyun Shin³, Sung-Ho Kim¹, Changjong Moon¹
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Movement Disorders

- P1-311** **Pathological role of GBA2 in GBA1-deficient neuronopathic Gaucher's disease model of medaka**
Etsuro Nakanishi¹, Norihito Uemura¹, Hisako Akiyama², Masato Kinoshita³, Hodaka Yamakado¹, Shunichi Takeda⁴, Yoshio Hirabayashi², Ryosuke Takahashi⁴
¹Department of Neurology, Graduate School of Medicine, Kyoto University
²Laboratory for Molecular Membrane Neuroscience, RIKEN Brain Science Institute
³Division of Applied Biosciences, Graduate School of Agriculture, Kyoto University
⁴Department of radiation Genetics, Graduate School of Medicine, Kyoto University
- P1-312** **Creating mice models for sporadic Parkinson's disease based on its genetic risk factors.**
Masashi Ikuno, Hodaka Yamakado, Ryosuke Takahashi
Department of Neurology, Kyoto University Graduate School of Medicine
- P1-313** **LOTUS protein, an endogenous Nogo receptor antagonist, is involved in induction of experimental autoimmune encephalomyelitis**
Keita Takahashi^{1,2}, Yuji Kurihara¹, Fumiaki Tanaka², Kohtaro Takei¹
¹Molecular Medical Bioscience Laboratory, Department of Medical Life Science, Yokohama City University Graduate School of Medical Science
²Department of Neurology and Stroke Medicine, Yokohama City University Graduate School of Medicine
- P1-314** **Optogenetic manipulation of neuronal firings in the primary motor cortex of a mouse model of Parkinson's disease**
Susumu Takahashi¹, Kenta Kobayashi², Fuyuki Karube¹, Fumino Fujiyama¹
¹Laboratory of Neural Circuitry, Grad Sch Brain Science, Doshisha University ²Sec Viral Vector Development, NIPS, Okazaki, Japan
- P1-315** **Glucocerebrosidase deficiency accelerates the propagation of alpha-synuclein pathology**
Norihito Uemura¹, Masato Hasegawa², Ryosuke Takahashi¹
¹Dept Neurol, Kyoto Univ Grad Sch Med, Kyoto ²Tokyo metropolitan institute of medical science, Tokyo, Japan
- P1-316** **Identification of miRNAs in sporadic amyotrophic lateral sclerosis patients by liquid biopsy as a potential disease biomarker.**
Ikuko Takahashi¹, Yuka Hama¹, Hisashi Uwatoko¹, Shinichi Shirai¹, Masaaki Matsushima¹, Takahiro Kano¹, Ichiro Yabe¹, Tomohiro Onodera², Jun Utsumi^{1,3}, Hidenao Sasaki¹
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²Department of Orthopaedic Surgery, Hokkaido University Graduate School of Medicine, Sapporo, Japan
³Cancer Institute, Japanese Foundation for Cancer Research, Tokyo, Japan

- P1-317 The role of peripheral immune system in amyotrophic lateral sclerosis mice**
Okiru Komine, Syuhei Ohnuma, Saori Ikeda, Koji Yamanaka
Dept Neurosci & pathobiol, Res Inst Environ Med, Nagoya Univ, Nagoya, Japan
- P1-318 Does endogenic alpha-synuclein alleviate parkinsonian phenotypes in human alpha-synuclein transgenic models?**
Masanori Sawamura, Norihito Uemura, Ryosuke Takahashi
Dept Neurology, Kyoto Univ, Kyoto

Alzheimer's Disease and Dementia

- P1-319 GSK-3 β -mediated Phosphorylation of PICK1 Regulates the GluA2-PICK1 Interaction**
Sosuke Yagishita^{1,3}, Miyuki Murayama³, Tomoe Ebihara¹, Kei Maruyama¹, Akihiko Takashima^{2,3}
¹*Dept Pharmacol, Saitama Med. Univ., Saitama, Japan*
²*Dept Aging Neurobiol, Center of Dev Adv Med Dementia, National Center for Geriatrics and Gerontology, Aichi, Japan*
³*Lab for Alzheimer's Disease, RIKEN BSI, Saitama, Japan*
- P1-320 The dark side of high blood glucose on mitochondrial fragmentation: advanced glycation end products and methylglyoxal induce Drp1 phosphorylation through different regulatory pathway.**
Chuen Lin Huang¹, Ching-Yu Weng^{1,3}, Lan-Ya Kang², Nai-Kuei Huang^{4,5,6}, Ying-Chen Yang^{3,7}, Chen-Chen Kang⁸
¹*Medical Research Center, Department of Education and Research, Cardinal Tien Hospital, New Taipei City, Taiwan*
²*Department of Physiology and Biophysics; Graduate Institute of Physiology, National Defense Medical Center*
³*EMA Program in College of Bioresources, National I-Lan University*
⁴*National Research Institute of Chinese Medicine, Ministry of Health and Welfare*
⁵*Institute of Biophotonics, National Yang-Ming University*
⁶*Ph.D. Program for Neural Regenerative Medicine, College of Medical Science and Technology, Taipei Medical University*
⁷*Department of Biotechnology and Animal Science, National I-Lan University* ⁸*Nutrition Counseling Group, Cardinal-Tien Hospital*
- P1-321 Effect of disaccharide on neuronal dendrites in mice**
Kunikazu Tanji, Yasuo Miki, Fumiaki Mori, Koichi Wakabayashi
Dept Neuropath, Hirosaki Univ Sch Med, Aomori
- P1-322 The effect of fibronectin type 3 domain-containing protein 5 (FNDC5) for the pathogenesis of alzheimer's disease.**
Yasuha Noda¹, Akira Kuzuya², Masato Maesako³, Yoshitaka Tashiro¹, Megumi Asada^{1,2}, Masakazu Miyamoto^{1,2}, Hirofumi Yamashita², Kengo Uemura², Ryosuke Takahashi², Ayae Kinoshita¹
¹*Dept Human Health Sciences, Univ of Kyoto, Kyoto* ²*Dept Neurology, Kyoto Univ, Kyoto* ³*Massachusetts General Hospital, USA*
- P1-323 Roles of nitric oxide of hippocampal dentate gyrus in learning and memory in a rat model of Alzheimer's disease**
Qing-Hua Jin, Su-Yang Zhan, Ling Chen, Wei-Yao Wang, Jing Lv, Rui-Jun Huang
Dept Physiol, Yanbian University School of Medicine, Yanji, China
- P1-324 In vivo changes in hippocampal θ activity in amyloid β oligomer-injected mice**
Risa Matsuoka, Tsuyoshi Inoue
Dept of Biophys Chem, Grad Sch of Med Dent and Pharm Sci, Okayama Univ, Okayama, Japan
- P1-325 Loss of PSF/SFPQ, an intra-nuclear counterpart of FUS causes FTLD-like phenotypes**
Yusuke Fujioka¹, Shinsuke Ishigaki¹, Satoshi Yokoi¹, Daiyu Honda¹, Haruo Okado², Hirohisa Watanabe¹, Masahisa Katsuno¹, Gen Sobue³
¹*Department of Neurology, Nagoya University Graduate School of Medicine*
²*Department of Brain Development and Neural Regeneration, Tokyo Metropolitan Institute of Medical Science*
³*Research Division of Dementia and Neurodegenerative Disease, Nagoya University Graduate School of Medicine*
- P1-326 Effect of inhibition of synaptic delivery of APP by loss-of-function of *yata* for the *Drosophila* Alzheimer's disease model.**
Koto Furotani¹, Takaaki Yajima¹, Takuya Tamura², Hitoshi Okazawa², Masaki Sone¹
¹*Faculty of Science, Toho University, Chiba, Japan*
²*Department of Neuropathology, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan*
- P1-327 Tau deposition and cognitive decline in early stage Alzheimer disease**
Tatsuhiro Terada¹, Tomoyasu Bunai¹, Etsuji Yoshikawa³, Masami Futatsubashi³, Yoshio Omote², Takashi Matsudaira², Yasukiyo Araki², Akira Sugiura², Tomokazu Obi², Yasuomi Ouchi¹
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²*Dept of Neurology, Shizuoka Institute of Epilepsy and Neurological Disorders, Shizuoka*
³*Central Research Laboratory, Hamamatsu Photonics K.K., Hamamatsu*

- P1-328 Morphological analysis of the compound eye of the *Drosophila yata* mutant that shows impaired intracellular trafficking of the Amyloid precursor protein.**
Masaki Sone¹, Miduki Tomizawa¹, Eri Arimoto¹, Mami Shiohara¹, Emiko Suzuki^{2,3}
¹Faculty of Science, Toho University, Chiba, Japan ²Structural Biology Center, National Institute of Genetics, Shizuoka, Japan
³Department of Genetics, SOKENDAI, Shizuoka, Japan
- P1-329 Brain distribution and subcellular localization of ILEI/FAM3C and its reduction with aging**
Naoki Watanabe, Lei Liu, Masaki Nishimura
Mol. Neurosci. Res. Ctr., Shiga Univ. of Med. Sci., Shiga, Japan
- P1-330 Tau protein propagation detection by Luciferase-based protein complementation assay**
Naoto Jingami¹, Akira Kuzuya¹, Kengo Uemura^{1,3}, Megumi Asada^{1,2}, Ryosuke Takahashi¹, Ayae Kinoshita²
¹Department of Neurology, Kyoto University Graduate School of Medicine
²Department of Human Health Sciences, Kyoto University Graduate School of Medicine ³Department of Neurology, Ishiki Hospital

Disorders of Neural Systems: Others

- P1-331 Specific depletion of cathepsin D and Atg7 in Purkinje cells causes cell degeneration with accumulation of Atg9A positive membrane compartments in axons**
Masato Koike¹, Masahiro Shibata², Takehiko Sunabori^{1,3}, Junji Yamaguchi³, Yasuo Uchiyama³
¹Dept Cell Biol and Neurosci, Juntendo Univ, Tokyo, Japan ²Dept Morpho Sci, Kagoshima Univ, Kagoshima, Japan
³Dept Cell Molec Neuropathol, Juntendo Univ, Tokyo, Japan
- P1-332 Resting state functional connectivity between insula and large-scale brain networks in gambling disorder patients**
Kosuke Tsurumi¹, Toshihiko Aso², Ryosaku Kawada¹, Masaaki Hazama¹, Genichi Sugihara¹, Jun Miyata¹, Hidenao Fukuyama², Toshiya Murai¹, Hidehiko Takahashi¹
¹Department of Psychiatry, Graduate School of Medicine, Kyoto University
²Human Brain Research Center, Graduate School of Medicine, Kyoto University
- P1-333 Loss of glial glutamate transporters induces motor neuronal death via overactivation of AMPA receptors**
Kaori Sugiyama¹, Tomomi Aida¹, Masatoshi Nomura², Ryoichi Takayanagi², Kohichi Tanaka^{1,3}
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
- P1-334 Arundic acid prevents convulsion and death in mice exposed to severe hypoxia**
Isato Fukushi^{1,2}, Kotaro Takeda^{2,3}, Jouji Horiuchi¹, Yasumasa Okada²
¹Dept Biomed Eng, Grad Sch Sci & Eng, Toyo Univ, Kawagoe, Japan ²NHO Murayama Medical Center, Clin Res Center, Tokyo, Japan
³Fujita Memorial Nanakuri Inst, Fujita Health University, Tsu, Mie, Japan
- P1-335 Exploration of neural network involved in the adequate maternal behavior**
Akari Hagiwara, Naoko Sugiyama, Toshihisa Ohtsuka
Dept Biochem, University of Yamanashi, Yamanashi, Japan
- P1-336 Acupuncture Regulation of Gastrointestinal Motility via Autonomic Nervous System Related to Locations of Points**
Xinyan Gao^{1,2}, Kun Liu¹, Qingguang Qin², Yangshuai Su¹, Yuxue Zhao¹, Xianghong Jing¹
¹Institute of Acupuncture and Moxibustion, China Academy of Chinese Medical Science, Beijing, China
²Department of Acupuncture and Moxibustion, Henan Orthopedics Hospital, Luoyang, Henan Province, China
- P1-337 The Mechanism of Motor Neuron Degeneration in Ubiquitin Proteasome System Dysfunction**
Tomonori Hoshino¹, Hirofumi Yamashita¹, Yoshitaka Tashiro², Hidemi Misawa³, Okiru Komine⁴, Koji Yamanaka⁴, Makoto Urushitani¹, Ryosuke Takahashi¹
¹Dept Neurology, Kyoto Univ, Kyoto ²SK project, MIC, Kyoto Univ, Kyoto ³Dept Pharmacology, Keio Univ
⁴Dept Neuroscience and Pathobiology, Nagoya Univ
- P1-338 Atg9A deficiency causes axon-specific lesions**
Junji Yamaguchi, Chigure Suzuki, Souichirou Kakuta, Yasuo Uchiyama
Dept Cell and Mol Neuro, Univ of Juntendo, Tokyo, Japan
- P1-339 Impairment of muscle creatine uptake in spinal and bulbar muscular atrophy**
Yasuhiro Hijikata¹, Masahisa Katsuno¹, Atsushi Hashizume¹, Shinichiro Yamada¹, Tomonori Inagaki¹, Keisuke Suzuki², Madoka Iida¹, Seiya Noda¹, Hirotaka Nakanishi¹, Haruhiko Banno^{1,3}, Gen Sobue⁴
¹Department of Neurology, Nagoya University Graduate School of Medicine, Aichi, Japan
²Innovation Center for Clinical Research, National Center for Geriatrics and Gerontology, Aichi, Japan
³Institute for Advanced Research, Nagoya University, Aichi, Japan
⁴Research Division of Dementia and Neurodegenerative Disease, Nagoya University Graduate School of Medicine, Aichi, Japan

- P1-340 Application of pentylenetetrazole easily induced the epilepsy in adult early-life-stressed mice**
Kenji Yoshida, Yusuke Takatsuru, Izuki Amano, Noriyuki Koibuchi
Dept Integrative Physiol, Gunma Univ, Gunma, Japan
- P1-341 Memory process-dependent impairment in motor skill learning by dopamine depletion**
Yusuke Hatanaka, Ryosuke Takahashi
Dept Neurol, Grad Sch Med, Kyoto Univ, Kyoto, Japan
- P1-342 Disturbed immune profiles in patients with anti-NMDA receptor encephalitis**
Kate Hsu¹, Hui-Ju Lin¹, Ruu-Fen Tzang²
¹*Mackay Memorial Hospital Department of Medical Research, Tamsui, Taiwan*
²*Mackay Memorial Hospital Department of Psychiatry, Taipei, Taiwan*
- P1-343 Arsenic exposure induces forced S phase entry linked to cell death in mouse cortical astrocytes**
Nang Thinn Thinn Htike¹, Fumihiko Maekawa², Haruka Soutome¹, Kazuhiro Sano², Sho Maejima¹, Kyaw Htet Aung¹, Shinji Tsukahara¹
¹*Division of Life Science, Graduate School of Science and Engineering, Saitama University, Saitama, Japan*
²*Molecular Toxicology Section, Center of Environmental Health Sciences, National Institute for Environmental Studies, Tsukuba, Ja*

Learning Theory

- P1-344 Machine learning of minimizing cardiovascular artifact to extract miniature head movement**
Hiroyuki Fujie¹, Yasuto Tanaka², Satoshi Shimegi³
¹*Dept R&D, Paris Miki Inc., Hyogo, Japan* ²*Neuro Mathematics Lab., Hyogo, Japan* ³*Med Grad School, Osaka Univ., Osaka, Japan*

Neural Network Modeling and Artificial Intelligence

- P1-345 Model neural network exhibiting sustained firing activity in performing tasks**
Takuma Tanaka
Data Science Education and Research Center, Shiga Univ, Shiga, Japan
- P1-346 Bayesian estimation inherent in a Mexican-hat type neural network**
Ken Takiyama
Dept Eng, Tokyo Univ pf Agriculture and Technology, Tokyo, Japan
- P1-347 Neural Mechanism of Information Processing Using Resonance Cascades**
Miki Hirabayashi¹, Hirotsada Ohashi²
¹*Bio ICT, Kobe Advanced ICT Research Center, NICT, Kobe, Japan* ²*Dept Systems Innovation, Univ of Tokyo, Tokyo, Japan*
- P1-348 Periodic polarization of brain-wide functional network revealed by resting-state fMRI**
Yusuke Noro, Kouji Jimura
Keio Univ, Tokyo, Japan
- P1-349 Development of a face robot software with human emotions, PFC and memories to behave like human beings, and about a state and conditions for the robot to have a humanlike mind**
Mitsuo Takase
LINFOPS Inc.
- P1-350 Reconstruction of synaptic connectivity from rhythmic spike data by Bayesian estimation**
Kento Suzuki¹, Takahiro Goto², Toshio Aoyagi², Katsunori Kitano¹
¹*Department of Human and Computer Intelligence, Ritsumeikan University* ²*Kyoto University Graduate School of Informatics*
- P1-351 Computational Models to Select Human Arm Postures during Planar Reaching Movements**
Masazumi Katayama, Keiji Yamauchi
Dept Human and Artificial Intelligent Systems, Graduate School of Engineering, Univ of Fukui, Japan

Poster Session

Day 2 - Thursday, July 21

Neurogenesis and Gliogenesis

Poster Session
Thursday, July 21

- P2-001 Evolutionary diversifications of Pax6 functions in the developing amniote brains**
Wataru Yamashita, Hitoshi Gotoh, Katsuhiko Ono, Tadashi Nomura
Developmental Neurobiology, Kyoto Prefectural University of Medicine
- P2-002 Expression of vesicular glutamate transporter 2 mRNA in the telencephalon and diencephalon of chick embryos**
Sonjoy Sarkar¹, Shouichiro Saito², Yasuro Atoji²
¹UGSVS, Gifu Univ, Gifu, Japan ²Lab Vet Anat, Gifu Univ, Gifu, Japan
- P2-003 Chemical library screening to identify a small compound that promotes motor neurons differentiation from iPSCs/ESCs**
Kazuya Goto^{1,2}, Keiko Imamura², Kohnosuke Mitani³, Kazuhiro Aiba⁴, Norio Nakatsuji⁴
¹Dept Neurol, Kyoto Univ Grad Sch Med, Kyoto ²Dept of Cell Growth and Differentiation, CiRA, Kyoto
³Div Gene Therapy, Res Ctr for Genomic Med, Saitama Med Univ, Saitama ⁴iCeMS, Kyoto University
- P2-004 Lymphocytes promote the oligodendrocyte differentiation in developmental brain**
Shogo Tanabe, Toshihide Yamashita
Dept Mol Neurosci, Osaka Univ, Osaka, Japan
- P2-005 Glycogen metabolism regulates fatal neural stem cell maintenance in a glycogenin-dependent manner**
Hitoshi Gotoh, Tadashi Nomura, Katsuhiko Ono
Dept of Biology, Kyoto Prefl Univ of Med, Kyoto, Japan
- P2-006 Gene expression profiling of migrating excitatory neurons during mouse neocortical development**
Chiaki Maruyama¹, Minoru Ohshima², Kei Yura^{2,3}, Nobuaki Maeda¹
¹Tokyo Metropol Inst Med Sci, Tokyo, JAPAN ²Dept Biol, Ochanomizu University, Tokyo, JAPAN
³SLC-DC, National Institute of Genetics, Mishima, Japan
- P2-007 Mechanisms that balance neuronal subtype production in the cerebral cortex**
Ken-Ichi Toma¹, Carina Hanashima^{1,2}
¹Lab. for Neocortical Development, RIKEN CDB, Kobe, Japan ²Dept of Bio., Grad. Sch. of Sci., Univ. of Kobe
- P2-008 Visualization of parasympathetic nervous system in chicken embryos by newly raised anti-VACHT and anti-ChAT antibodies**
Tadayoshi Watanabe¹, Takahiro Kiyomoto¹, Ryosuke Tadokoro¹, Etsuo A. Susaki^{2,3}, Hiroki R. Ueda^{2,3}, Yuta Takase¹, Yoshiko Takahashi¹
¹Dept Zoology, Kyoto Univ, Kyoto, Japan ²Dept Systems Pharmacology, Univ of Tokyo, Tokyo, Japan
³Lab for Synthetic Biology, RIKEN QBIC, Osaka, Japan
- P2-009 A genetic approach for the understanding of the brain environment that regulates the plasticity of neural stem cells.**
Hiroshi Kanda, Rieko Shimamura, Taro Yamaguchi, Michiko Kitajima, Hideyuki Okano
Dept Physiol, Keio Univ, Tokyo
- P2-010 PET imaging for cellular proliferative activity in brain neurogenic regions of adult rats**
Yasuhisa Tamura^{1,2}, Kumi Takata¹, Asami Eguchi¹, Masanori Yamato^{1,2}, Masayuki Nakano¹, Satoshi Kume^{1,2}, Yosky Kataoka^{1,2}
¹Cellular Function Imaging Team, RIKEN CLST, Hyogo, Japan
²Multi-Modal Microstructure Analysis Unit, RIKEN CLST-JEOL Collaboration Center, Hyogo, Japan
- P2-011 The sirtuin-2 inhibitor AK-7 reduces novel object memory, cell proliferation, and neuroblast differentiation in the dentate gyrus**
Hyo Young Jung^{1,2,3,4}, Dae Young Yoo¹, Jong Whi Kim¹, Dae Won Kim², Jung Hoon Choi³, Jin Young Jung⁴, Yeo Sung Yoon¹, In Koo Hwnag¹
¹Seoul National University
²Department of Biochemistry and Molecular Biology, Research Institute of Oral Sciences, College of Dentistry, Kangneung-Wonju Nat
³Department of Anatomy, College of Veterinary Medicine, Kangwon National University, Chuncheon, South Korea
⁴Department of Veterinary Internal Medicine and Geriatrics, College of Veterinary Medicine, Kangwon National University, Chuncheon

- P2-012 Roles of afadin in the development of the cellular architecture of the hippocampus**
Muneaki Miyata^{1,3}, Tomohiko Maruo^{1,3}, Hideaki Yamamoto¹, Aika Kaito^{2,3}, Shujie Wang^{2,3}, Takeshi Fujiwara^{2,3}, Akira Mizoguchi^{2,3}, Kenji Mandai^{1,3}, Yoshimi Takai^{1,3}
¹Div of Pathogenetic Signal, Dept Biochem Mol Biol, Kobe Univ Grad Sch of Med, Kobe, Japan
²Dept Neural Regen Cell Comm, Mie Univ Grad Sch of Med, Mie, Japan ³JST, CREST, Kobe, Japan
- P2-013 Role of vitronectin and its receptors, integrins, in mouse neuroblastoma Neuro2a cells**
Miyaka Sugahara, Yuki Makari, Ayano Yamaguchi, Yuri Nakaoki, Yasunori Miyamoto
Div of Life Sci, Grad Sch of Humani Sci, Ochanomizu Univ, Tokyo, Japan
- P2-014 Mammalian Dmrt factors maintain progenitor cell identity in the developing cerebral cortex**
Daijiro Konno, Fumio Matsuzaki
RIKEN CDB

Axon/Dendrite Growth and Circuit Formation

- P2-015 Rho guanine nucleotide exchange factor ARHGEF18 promotes axon branching of upper layer cortical neurons**
Kensuke Sasaki, Kei Arimoto, Kento Kankawa, Chikayo Terada, Nobuhiko Yamamoto
Grad Sch Frontier Biosci, Osaka Univ, Suita, Japan
- P2-016 Soluble form of LOTUS suppresses Nogo receptor signaling**
Yutaka Kawakami¹, Yuji Kurihara¹, Yu Saito¹, Ryota Nakagawa², Kohtaro Takei¹
¹Department of Molecular Biology, Graduate School of Medical Science, Yokohama City University, Yokohama 236-0004, Japan
²Department of Medical science, Yokohama City University
- P2-017 Time-lapse in vivo imaging of circuit refinement in the neonatal mouse barrel cortex**
Shingo Nakazawa^{1,2}, Hidenobu Mizuno^{1,2}, Takuji Iwasato^{1,2}
¹Div Neurogenetics, National Institute of Genetics, Shizuoka, Japan ²Dept Genetics, SOKENDAI, Shizuoka, Japan
- P2-018 Olfactory sensory neurons regulate development of mitral cells and interneurons in the olfactory bulb**
Shuhei Aihara^{1,2}, Takeshi Imai^{1,2}
¹RIKEN CDB, Kobe ²Graduate School of Biostudies, Kyoto University
- P2-019 3D reconstruction of the corticospinal tract visualizes the whole image of widespread and markedly complex axon guidance defects in *Sema6A*-deficient mouse brains**
Takuya Okada¹, Kazuko Keino Masu¹, Fumikazu Suto², Kevin J Mitchell³, Masayuki Masu¹
¹Univ of Tsukuba, Dept Mol Neurobiol, Faculty of Med, Ibaraki, Japan
²Dept Ultrastructural Res, Natl Inst Neurosci, Natl Ctr of Neurol and Psychiatry, Tokyo, Japan
³Inst of Neurosci, Smurfit Inst of Genet, Trinity Coll Dublin, Ireland
- P2-020 Dendrite remodeling in the developing olfactory circuits**
Kazuya Togashi, Shunsuke Takeuchi, Hiroyuki Koizumi, Kazuo Emoto
Dept Biol Sci, Graduate schl of sci, Univ of Tokyo
- P2-021 Cytoplasmic polyadenylation elements and AU-rich elements synergistically regulate CPEB1 mRNA and protein expression during differentiation.**
Souichi Oe¹, Yasuko Noda², Hisao Yamada¹
¹Dept Anatomy and Cell Science, Kansai Med Univ, Osaka, Japan
²Div Anat Bio-imaging and Neuro-cell science, Jichi Med Univ, Tochigi, Japan
- P2-022 Molecular mechanisms that establish apical dendrite morphology and distribution of neocortical pyramidal neurons**
Yuko Gonda^{1,2}, Tatsunori Seki¹, Carina Hanashima²
¹Dept. Histol. Neuroanat., Tokyo Med. Univ., Tokyo, Japan ²Lab. Neocort. Dev., RIKEN CDB, Kobe, Japan
- P2-023 DCLK1 phosphorylates the microtubule-associated protein MAP7D1 to promote axon elongation in cortical neurons**
Hiroyuki Koizumi¹, Kazuya Togashi¹, Yasushi Okada², Joseph G Gleeson^{3,4}, Kazuo Emoto¹
¹Dept Biol Sci, Univ of Tokyo, Tokyo, Japan ²Lab for Cell Polarity Regulation, Quantitative Biology Center RIKEN, Suita, Japan
³Neurogenetics Lab, Dept Neurosci and Pediatrics, Univ of California San Diego, California, USA ⁴Howard Hughes Medical Institute, USA
- P2-024 Effects of paradoxical sleep deprivation on adolescent mice**
Li-Heng Tuan¹, Li-Jen Lee^{1,2,3}
¹Grad. Inst. of Anat. and Cell Biol., Natl. Taiwan Univ., Taipei, Taiwan
²Grad. Inst. of Brain and Mind Sci., Natl. Taiwan Univ., Taipei, Taiwan
³Neurobio. and Cognitive Sci. Ctr., Natl. Taiwan Univ., Taipei, Taiwan

- P2-025 Visualizing single-neuron identity specified by Pcdh-b cluster**
Ryosuke Kaneko¹, Manabu Abe², Yusuke Takatsuru¹, 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
- P2-026 Transmembrane protein Dpy19L1 is required for development of the septal nucleus**
Keisuke Watanabe^{1,2}, Li Zhou³, Norihisa Bizen¹, Rie Natsume³, Manabu Abe³, Kenji Sakimura³, Noboru Sato², Hirohide Takebayashi¹
¹Div Neurobiol Anat, Niigata Univ, Niigata, Japan ²Div Gross Anat, Niigata Univ, Niigata, Japan
³Dept Cell Neurobiol, Niigata Univ, Niigata, Japan
- P2-027 The impact of social rank on dendritic morphology of pyramidal neurons in medial prefrontal cortex of mice**
Takaaki Izumi, Takahiro Murakami, Shu Aizawa, Yutaka Yamamuro
Dept Anim Sci, Coll Bioresource Sci, Nihon Univ, Kanagawa, Japan
- P2-028 Involvement of caspase system in the regulation of axon arborization during early developmental stages of chick ciliary ganglion.**
Hidetaka Katow, Toru Ishizuka, Hiromu Yawo
Graduate School of Life Sciences, Tohoku University, Sendai, Japan

Neurotransmitters and Signaling Molecules

- P2-029 IQ Motif and SEC7 Domain-containing Protein 3 (IQSEC3) interacts with gephyrin to promote inhibitory synapse formation**
Jaewon Ko¹, Seungjoon Kim¹, Ji Won Um², Dongseok Park², Hyeyeon Kang², Sangmin Jeon¹
¹College of Life Science and Biotechnology, Yonsei University
²Department of Physiology, Yonsei University College of Medicine, Seoul 120-751, Republic of Korea
- P2-030 A neuron-specific gene in the hydra nervous system, hmp4846, encodes novel neuropeptides stimulating rhythmic tentacle movement**
Shun Hamada, Sumiko Minobe, Kayoko Hamaguchi-Hamada, Mami Kurumata-Shigeto, Youko Yamaguchi, Kazuki Sato, Osamu Koizumi
International College of Arts and Sci, Fukuoka Women's Univ.
- P2-031 Mapping of neurons that send direct synaptic input to histaminergic neurons in the mouse brain**
Takashi Maejima, Yuki Saito, Takeshi Sakurai
Dept Molec Neurosci & Integr Physiol, Kanazawa Univ, Ishikawa, Japan
- P2-032 Dopamine-induced phosphorylation of NPAS4 through MAPK regulates reward-related behavior**
Yasuhiro Funahashi¹, Anthony Ariza¹, Shan Wei², Keisuke Kuroda¹, Tetsuya Takano¹, Yoshimitsu Yura¹, Taku Nagai², Kozo Kaibuchi¹
¹Dept of Cell Pharmacol, Nagoya Univ Grad Sch of Med, Nagoya, Japan
²Dept of Neuropsychopharmacol and Hospital Phar, Nagoya Univ Grad Sch of Med, Nagoya, Japan
- P2-033 Regulation of excitatory synapse development in dentate gyrus granule neurons by leucine-rich repeat transmembrane protein 3 (LRRTM3)**
Sangmin Jeon¹, Jiwon Um², Tae-Yong Choi³, Matti S Airaksinen⁴, Hyeyeon Kang², Jaewon Ko¹
¹College of Life Science and Biotechnology, Yonsei University, Seoul, Korea
²Department of Physiology, Yonsei University College of Medicine, Seoul 120-751, Republic of Korea
³Department of Physiology, Dental Research Institute, Seoul National University School of Dentistry, Seoul 110-749, Korea
⁴Department of Anatomy, Faculty of Medicine, University of Helsinki, Helsinki 14, Finland
- P2-034 Mechanism of induction and expression of α CaMKII in primary cerebellar granule neurons in culture**
Ramya R Prabhu¹, Lakshmi K², Ani V Das², Mayadevi M², Omkumar R V²
¹Government Arts College ²Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram
- P2-035 Visualization of the brain cytoarchitecture of Zebra finch without staining**
Takuyoshi Ikeda, Takayuki Kunii, Kohji Hotta, Kotaro Oka
Department of Biosciences and Informatics, Faculty of Science and Technology, Keio University, Kanagawa
- P2-036 Alteration of neuronal development by Autism-induce drugs and recovery effects with bumetanide in developing rat cerebellum**
Sarii Nakajima¹, Tatsuro Tomida¹, Yukiko Fueta², Susumu Ueno², Yuko Sekino³, Sachiko Yoshida¹
¹Dept Electrical Electronic Info Eng, Toyohashi Univ of Technol, Toyohashi, Japan
²Univ of Occupational and Environmental Health, Kitakyushu, Japan ³National Institute of Health Sciences, Tokyo, Japan

- P2-037 The ON/OFF switching of purinergic chemical transmission *in vivo* by a specific inhibitor of vesicular nucleotide transporter**
 Yuri Kato^{1,2}, Miki Hiasa¹, Atsushi Kadowaki¹, Reiko Ichikawa³, Ken Iwatsuki³, Yoshirou Kitahara³, Tsuyoshi Inoue¹, Hiroshi Omote¹, Yoshinori Moriyama^{1,2}, Takaaki Miyaji²
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Receptors and Transporters

- P2-038 Activation of dopamine D1 receptors modulates the excitability of rat retinal ganglion cells**
 Peng Cui^{1,2,3}, Qian Li^{1,2,3}, Xue-Yan Li^{1,2,3}, Xiong-Li Yang^{1,2,3}, Zhongfeng Wang^{1,2,3}
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- P2-039 Modulatory action of oxytocin on synaptic transmission in rat spinal substantia gelatinosa neurons exhibits a developmental change and sexual difference**
 Eiichi Kumamoto, Chang-Yu Jiang, Chong Wang, Ting Yu, Ryo Hirao, Rika Suzuki, Tsugumi Fujita
 Dept Physiol, Saga Univ, Saga, Japan
- P2-040 Spontaneous excitatory transmission enhancement and inward current produced by orexin B in adult rat spinal substantia gelatinosa neurons**
 Chong Wang, Tsugumi Fujita, Ting Yu, Ryo Hirao, Rika Suzuki, Eiichi Kumamoto
 Dept Physiol, Saga Univ, Saga, Japan
- P2-041 Overexpression of K⁺-Cl⁻ cotransporter (KCC2) promotes morphological change of spines in the mouse motor cortex *in vivo*.**
 Kayo Nakamura¹, Junichi Nabekura^{1,2}
¹National Institute for Physiological Sciences, Okazaki, Japan
²The Graduate University for Advanced Studies(SOKENDAI), Hayama, Japan
- P2-042 Ciliary localization of G protein-coupled receptors in hTERT-RPE1 cells**
 Ko Miyoshi^{1,2}, Sarina Han¹, Genki Amano¹, Hiroki Sato¹, Hironori Takamura^{1,2}, Shinsuke Matsuzaki^{1,2,3}, Taiichi Katayama¹
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³Dept of Anat and Neurosci, Grad Sch of Med, Osaka Univ, Osaka, Japan
- P2-043 Glycinergic neurons/synapses in axotomized rat facial nucleus**
 Kazuyuki Nakajima¹, Misako Hirano¹, Shinichi Kohsaka², Maasa Koshimoto¹
¹Faculty of Science and Engineering, Soka University, Japan ²National Institute of Neuroscience, Tokyo, Japan
- P2-044 Establishment of the quantitative evaluation system for inhibitory activities of the dissociative-analogues involved in law-evading drugs on NMDA-type glutamate receptors-a report about the effect of 3MeO-PCMO**
 Kaoru Sato¹, Yukari Shigemoto-Mogami¹, Kazue Hoshikawa¹, Hideo Shimizu¹, Ruri Kikura-Hanajiri², Takashi Hakamatsuka², Yuko Sekino¹
¹Lab Neuropharmacol, Div Pharmacol, NIHS ²Div Pharmacogn, Phytochem, Narcotic, NIHS
- P2-045 Drebrin regulates expression pattern of NMDA receptor subunits**
 Noriko Koganezawa, Tomoaki Shirao
 DNBB, Gunma Univ Grad Sch of Med, Maebashi, Japan
- P2-046 Modulation of type-1 metabotropic glutamate receptor by adenosine A1 receptor: an analysis with surface plasmon resonance imaging**
 Toshihide Tabata¹, Sho Yoshida¹, Yuji Kamikubo², Hiroaki Shinohara¹, Yuki Shiraishi¹, Takashi Sakurai²
¹Grad Sch Sci Engin, Univ of Toyama, Toyama, Japan ²Dept Pharmacol, Juntendo Univ Sch Med, Tokyo, Japan
- P2-047 Compound 1 is a small molecular enhancer of morphine-induced mu-opioid receptor endocytosis**
 Hsiao-Fu Chang, Hwa Shiu Yeh
 Department of Biotechnology and Pharmaceutical Research, National Health Research Institutes, Miaoli County, Taiwan ROC

Ion Channels and Excitable Membranes

- P2-048** **Enhancement by citral of glutamatergic spontaneous excitatory transmission in adult rat spinal substantia gelatinosa neurons through TRPA1 activation**
Tsumumi Fujita, Lan Zhu, Chong Wang, Ting Yu, Ryo Hirao, Rika Suzuki, Eiichi Kumamoto
Dept Physiol, Saga Univ, Saga, Japan
- P2-049** **Juvenile stress-induced intrinsic membrane plasticity in the mouse amygdaloid pyramidal neurons**
Takayuki Yoshida, Midori Kobie, Yukihiro Fujita, Yu Ohmura, Takeshi Izumi, Mitsuhiro Yoshioka
Dept Neuropharmacol, Hokkaido Univ, Hokkaido, Japan
- P2-050** **Inhibition of frog sciatic nerve compound action potential by various types of antidepressant**
Ryo Hirao, Tsumumi Fujita, Aiko Sakai, Chong Wang, Ting Yu, Rika Suzuki, Eiichi Kumamoto
Dept Physiol, Saga Univ, Saga, Japan
- P2-051** **Maintenance of excitatory-inhibitory balance in brain by AMPA receptor palmitoylation**
Mariko Yamashita¹, Hiroyuki Okuno², Manabu Abe³, Maya Yamazaki³, Rie Natsume³, Kenji Sakimura³, Mikio Hoshino¹, Masayoshi Mishina^{4,5}, Takashi Hayashi^{1,5}
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- P2-052** **Modulation of neuronal activity via ATP in rat prepositus hypoglossi nucleus**
Miho Sugioaka, Yasuhiko Saito
Dept Neurophysiol, Nara Med Univ, Nara, Japan
- P2-053** **Exploring input-output relations of neurons in vivo**
Chris Joel Roome, Bernd Kuhn
Okinawa Institute of Science and Technology Neuro-optical imaging
- P2-054** **Optogenetic silencing of neural activity using a chimeric light-driven Na⁺-transporter rhodopsin**
Mohammad Hoque, Toru Ishizuka, Hiromu Yawo
Graduate School of Life Sciences, Tohoku University
- P2-055** **Phase-dependent effects of synaptic inputs on neural oscillations**
Satoshi Watanabe¹, Moritoshi Hirono²
¹Dept Bioeng Robotics, Tohoku Univ, Sendai, Japan ²Grad Sch Brain Science, Doshisha Univ

Synapse

- P2-056** **Morphological and electrophysiological characteristics of a subgroup of layer 2 neurons in mouse temporal cortex**
Huan Luo^{1,2}, Kayoko Hasegawa¹, Wen-Jie Song^{1,2}
¹Department of Sensory and Cognitive Physiology, Kumamoto University, Kumamoto, Japan
²HIGO program, Kumamoto University, Kumamoto, Japan
- P2-057** **Functional analysis of presynaptic boutons of cerebellar parallel fibers by direct patch-clamp recording**
Shinya Kawaguchi, Takeshi Sakaba
Grad Sch Brain Science, Doshisha Univ, Japan
- P2-058** **Cortical disinhibition-induced echo wave in the EPN of rat**
Hiroshi Yoshimura¹, Yoko Tominaga², Takashi Tominaga²
¹Dept Mol Oral Physiol, Tokushima Univ Grad Sch, Tokushima, Japan
²Lab Neural Circuit System, Inst Neurosci, Tokushima Bunri Univ, Kagawa, Japan
- P2-059** **Taurine depletion reduces postnatal inhibitory synaptic inputs into layer 2/3 pyramidal neurons in the somatosensory cortex**
Yasushi Hosoi^{1,2}, Tenpei Akita¹, Hiroki Mutoh¹, Takashi Ito³, Hiroaki Miyajima², Atsuo Fukuda¹
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³Dept Pharm Sch Pharm, Hyogo Univ of Health Sci, Kobe, Japan
- P2-060** **Intrinsic functional connectivity in the rat granular retrosplenial cortex investigated by optical mapping**
Tohru Kurotani¹, Kazuhisa Sakai², Noritaka Ichinohe^{1,2}
¹RIKEN Brain Science Institute ²NCNP, Tokyo, Japan

- P2-061 Inhibition of GABAergic synapses up-regulate the expression of neurotrophins and NMDA receptor subunits in the motor cortex**
Hiroshi Maejima¹, Kazuma Takahashi², Gaku Ikuta²
¹Dept Rehab Sci, Faculty of Health Sci, Hokkaido Univ, Japan ²Dept Health Sci, School of Medicine, Hokkaido Univ, Japan
- P2-062 Streptozotocin induces neurite outgrowth via regulation of PI3K-Akt-GSK3 β signaling pathway in Neuro2a cells**
Takaaki Nishimoto¹, Ryoichi Kimura², Akira Matsumoto³, Hachiro Sugimoto⁴
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²Arts and Sciences, Faculty of Engineering, Tokyo University of Science, Yamaguchi, Yamaguchi, Japan
³Faculty of Life and Sciences, Doshisha Univ, Kyoto, Japan ⁴Grad School of Brain Science, Doshisha Univ, Kyoto, Japan
- P2-063 PRMT1-dependent arginine methylation on hnRNP K regulates dendritic transport of alpha CaMKII mRNA**
Yasutake Mori¹, Tokuichi Iguchi¹, Shingo Miyata², Masaya Tohyama², Makoto Sato^{1,3}
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³United Grad Sch of Child Develop, Osaka Univ, Kanazawa Univ, Hamamatsu Univ Sch of Med, Osaka, Japan
- P2-064 Myosin II and VI drives distinct firing-dependent and dynamin-mediated synaptic vesicle recycling**
Shota Tanifuji, Michikata Hayashida, Sumiko Mochida
Dept Physiol, Tokyo Med Univ, Tokyo, Japan
- P2-065 The Effect of Ethanol to Inhibitory Synaptic Transmission**
Hiroshi Kojima¹, Chloe Okuno², Ryusuke Mizoguchi¹, Yoshiyuki Takeyama¹, Hiromi Kato¹, Shingo Horiuchi¹
¹Laboratory for Cellular and Molecular Physiology, Tamagawa University, Tokyo, Japan ²Université de Sorbonne, Paris, France
- P2-066 Consecutive analysis of β -secretase activity using hippocampal slice cultures**
Yuji Kamikubo, Hao Jin, Kazue Niisato, Takashi Sakurai
Dept Pharmacol, Juntendo Univ Sch Med, Tokyo, Japan
- P2-067 Corticocortical cell diversity in superficial layers of the rat frontal cortex**
Yoshifumi Ueta^{1,3}, Yasuhiro Hirai^{2,3}, Yasuo Kawaguchi^{3,4}
¹Dept Physiol, Tokyo Women's Med Univ, Tokyo, Japan ²LIMS, Univ of Kyoto, Kyoto, Japan ³Div Cereb Circuitry, NIPS, Aichi, Japan
⁴SOKENDAI, Aichi, Japan

Synaptic Plasticity

- P2-068 Altered Perineuronal net expression in autistic-like behavior in Fc γ RIIB knockout mice**
Hiroshi Ueno^{1,6}, Mihoko Yokouchi², Takeshi Ishihara³, Shunsuke Suemitsu³, Keizo Takao⁴, Tsuyoshi Miyagawa⁵, Motoi Okamoto⁶
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⁴Life Sci. Res. Ctr., Univ. of Toyama, Toyama, Japan ⁵Div Syst Med Sci, Inst Comp Med Sci, Fujita Health Univ, Aichi, Japan
⁶Graduate School of Health Science, Okayama University, Okayama, Japan
- P2-069 Presynaptic NMDAR-regulated BDNF secretion and long-term synaptic plasticity**
Hyungju Park^{1,2}, Mu-Ming Poo^{2,3}
¹Korea Brain Research Institute (KBRI), Daegu, South Korea
²Department of Molecular and Cell Biology, University of California, Berkeley, United States
³Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China
- P2-070 Spatial-temporal characteristics of integration of GABAergic and glutamatergic synaptic inputs in dendrites**
Yulia Dembitskaya¹, Yu-Wei Wu², Alexey Semyanov¹
¹Neuroscience Center, Institute of Biology and Biomedicine, University of Nizhny Novgorod
²Department of Neurosurgery, Stanford University School of Medicine, Palo Alto, CA 94304, USA.
- P2-071 GluN3A colocalizes with KV4.3 at non-synaptic climbing fiber-interneuron junctions in the cerebellum**
Xiaohong Song¹, Masahiro Fukaya¹, Miwako Yamasaki¹, Motokazu Uchigashima¹, Kohtaro Miyazaki¹, Taisuke Konno¹, Keiko Matsuda², Chihiro Nakamoto³, Isabel Pérez-Otaño⁴, Mitsuaki Yuzaki², Kenji Sakimura³, Masahiko Watanabe¹
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³Dept of Cell Neuro, Brain Res Ins, Niigata Univ, Niigata, Japan ⁴Cellu Neuro Lab, CIMA, Pamplona, Spain.
- P2-072 Structural analysis of active zones in mouse NMJ using STED microscopy**
Kazuhiro Shigemoto¹, Yomna Badawi², Shuuichi Mori¹, Hiroshi Nishimune²
¹Tokyo Metropolitan Institute of Gerontology ²School of Med, Univ of Kansas, Kansas, USA

- P2-073** Two distinct NMDA receptor contributions in synaptic tagging of Homer1a proteins
Daisuke Okada
Dept Biochem, Kitasato Univ School of Med
- P2-074** A role of Ryanodine and IP₃ receptors in dendritic calcium signaling underlying spatial association of synaptic plasticity
Daiki Futagi¹, Katsunori Kitano²
¹Graduate School of Information Science & Engineering, Ritsumeikan University, Shiga, Japan
²Department of Human and Computer Intelligence, Ritsumeikan University, Shiga, Japan
- P2-075** Involvement of intracellular Zn²⁺ signaling in LTP at perforant path-CA1 pyramidal cell synapse
Ryusuke Nihsio, Haruna Tamano, Miki Suzuki, Atsushi Takeda
Dep Neurophysiol, Sch Pharm Sci, Univ of Shizuoka, Shizuoka, Japan
- P2-076** The interaction between stargazin and synaptotagmin-7 is controlled by both of phosphorylation and Ca²⁺ concentration
Akiyo Takahashi, Shinji Matsuda
Department of Engineering Science, The University of Electro-Communications, Tokyo, Japan
- P2-077** Excess Zn²⁺ influx via AMPA receptors contributes to vulnerability of maintained long-term potentiation
Taku Murakami¹, Hiroyuki Nakada¹, Marie Hisatsune², Haruna Tamano¹, Atsushi Takeda¹
¹Dep Neurophysiol, Sch Integrated Pharmaceutical and Nutritional Sci, Univ of Shizuoka, Shizuoka, Japan
²Dep Neurophysiol, Sch Integrated Pharmaceutical Sci, Univ of Shizuoka, Shizuoka, Japan

Glial Mechanisms

- P2-078** Oligodendrocytic differentiation in channelrhodopsin-2-expressing OS3, a bipotential glial progenitor cell line by photo-activation
Kenji Ono, Ryusei Yamamoto, Hideki Sahashi, Yuhei Takido, Qi Wu, Hiromi Suzuki, Makoto Sawada
Dept Brain Funct, Res Inst of Env Med, Nagoya Univ, Nagoya, Japan
- P2-079** Direct protein interaction with 14-3-3 γ promotes surface expression of Best1 channel in astrocyte
Soo-Jin Oh^{1,2}, Eunju Kim³, Junsung Woo³, Youngsun Lee^{3,5}, Jae-Yong Park⁵, Eunmi Hwang³, C. Justin Lee^{1,3,4,6}
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³Center for Functional Connectomics, Korea Institute of Science and Technology, Seoul, South Korea
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⁵School of Biosystem and Biomedical Science, College of Health Science, Korea University, Seoul, South Korea
⁶KU-KIST Graduate School of Converging Science of Technology, Korea University, Seoul, South Korea
- P2-080** Keratan sulfate-like immunoreactivity distinguishes a specific population of activated microglia in a mouse model of temporal epilepsy, a potential involvement in abnormal sprouting
Tomohiro Ohgomori, Jun Yamada, Shozo Jinno
Dept Anat & Neurosci, Kyushu Univ., Japan
- P2-081** Influence of another nucleosides on hydrogen peroxide-induced thymidine incorporation into cultured astrocytes
Koh-Ichi Tanaka^{1,2,3}, Nobue Kitanaka², Junichi Kitanaka², Takao Tsukahara³, Tomoaki Sato³, Motohiko Takemura², Nobuyoshi Nishiyama¹
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³Dept Applied Pharmacol, Kagoshima Univ Grad Sch Med & Dent Sci, Kagoshima, Japan
- P2-082** Changes in microglial properties with the depth in organotypic slice cultures.
Yuka Kasahara, Ryuta Koyama, Yuji Ikegaya
Lab. Chem. Pharmacol., Grad. Sch. of Pharmaceut. Sci. Univ. Tokyo
- P2-083** The involvement of astrocyte in the generation of carbachol-induced bursts in rat hippocampus -The computational study-
Itsuki Kageyama, Katsumi Tateno, Kiyohisa Natsume
Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Fukuoka, Japan
- P2-084** Brain glycogen is involved in the increase of lactate level in the brain after convulsive seizure
Tomoyuki Kanamatsu¹, Kouichi Nakao², Takashi Niitsu¹
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- P2-085 Mitogen-activated Protein Kinases in Diphenylarsinic Acid-induced Activation of Cultured Rat Cerebellar Astrocytes**
Takayuki Negishi¹, Mami Matsumoto¹, Ryota Asai¹, Fumika Sakaguchi¹, Kazuaki Takahata¹, Mikiya Kojima¹, Tomoko Kanehira¹, Yohei Aoyama¹, Rina Arakaki¹, Hikari Yoshida¹, Tomoko Tashiro², Seishiro Hirano³, Kenji Yoshida¹, Kazunori Yukawa¹
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²Department of Chemistry and Biological Science, Aoyama Gakuin University, Kanagawa, Japan
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- P2-086 A role for estrogen receptors in morphological changes in oligodendrocyte maturation**
Yukie Wada-Hirahara¹, Taketoshi Wakabayashi¹, Hitoshi Gotoh², Tetsuji Mori³, Taro Koike¹, Katsuhiko Ono², Hisao Yamada¹
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Olfaction and Taste

- P2-087 Supersensitive odor discrimination is controlled in part by initial transient interactions between the most sensitive dorsal olfactory receptors and G-proteins**
Takaaki Sato¹, Reiko Kobayakawa², Ko Kobayakawa², Makoto Emura³, Shigeyoshi Itoharu⁴, Takashi Kawasaki¹, Hiroshi Hamana⁵, Akio Tsuboi⁶, Hiroyoshi Matsumura⁷
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⁶Res. Inst. of Front. Med., Nara Med. Univ. ⁷College of Life Sci., Ritsumeikan Univ.
- P2-088 The expression and function of CCAAT/enhancer-binding protein gamma (C/EBPγ) in mouse vomeronasal sensory neurons**
Haruo Nakano, Yoshitaka Iida, Takahiro Murase, Mariko Umemura, Shigeru Takahashi, Yuji Takahashi
Sch Sci, Tokyo Univ Pharm Life Sci, Tokyo
- P2-089 Parallel detection and processing of predator odor, pyrazine analogs, via the main olfactory and vomeronasal systems in mice**
Sadaharu Miyazono¹, Hitoshi Sasajima¹, Tomohiro Noguchi¹, Kazumi Osada², Makoto Kashiwayanagi¹
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- P2-090 Detection of bitter compounds in mouse fungiform and circumvallate taste cells**
Ryusuke Yoshida^{1,2}, Keiko Yasumatsu³, Noriatsu Shigemura¹, Yuzo Ninomiya^{1,3,4}
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- P2-091 Influence of Color on Recognition Threshold of Four Basic Tastes**
Setsuko Nagahama
Dept Judo Thrapy, Faculty Health and Med, Teikyo Heisei Univ, Tokyo, Japan
- P2-092 Communication between olfactory cortex and orbitofrontal cortex at specific time windows during slow-wave sleep**
Hiroyuki Manabe^{1,2}, Naomi Onisawa¹, Kensaku Mori¹
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- P2-093 Olfactory behavior and neural patterning examinations of forebrain-specific Ctgf knockout mice**
Ho-Ching Chang¹, Li-Jen Lee^{1,2,3}
¹Grad. Inst. of Anat. and Cell Biol., Natl. Taiwan Univ., Taipei, Taiwan ²Grad. Inst. of Brain and Mind Sci.
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- P2-094 Analysis of learning effect on the taste preference in *Aplysia* central nervous system observed by voltage sensitive dye imaging**
Takahito Yanagi¹, Yasuo Yoshimi¹, Tatsumi Nagahama²
¹Dept Applied Chem, Shibaura Inst of Technol, Tokyo, Japan ²Dept Biophysics, Toho Univ, Funabashi, Japan
- P2-095 The compartmentalized cGMP dynamics of the olfactory sensory neuron AWC in *Caenorhabditis elegans*.**
Hisashi Shidara, Keita Ashida, Kohji Hotta, Kotaro Oka
Dept Biosci & Informatics, Fac Sci & Tech, Keio Univ, Yokohama, Japan
- P2-096 Differential expression of axon-sorting molecules in mouse olfactory sensory**
Naoki Ihara, Ai Nakashima, Yuji Ikegaya, Haruki Takeuchi
Dept Pharmacol, Grad Sch of Med, Univ of Tokyo, Tokyo

Audition

- P2-097** **Transcranial flavoprotein-autofluorescence imaging of sound-evoked responses in the mouse auditory cortex under three types of anesthetic**
Yasutaka Yanagawa, Hisayuki Osanai, Takashi Tateno
Grad Sch of Info Sci & Tech, Hokkaido Univ, Sapporo
- P2-098** **Auditory plasticity induced by long-term sound exposure in Drosophila**
Xiaodong Li, Hiroshi Ishimoto, Azusa Kamikouchi
Nagoya University
- P2-099** **In vivo calcium dynamics in avian auditory pathway**
Yasuharu Hirai, Harunori Ohmori
LIMS, Univ of Kyoto, Japan
- P2-100** **Analysis of Neural Activities to Synthetic Acoustic Stimuli in the Avian Higher-order Auditory Region**
Masahiro Inda, Rieko Tabata, Kohji Hotta, Kotaro Oka
Department of Biosciences and Informatics, Faculty of Science and Technology, Keio University
- P2-101** **Patchy organization of thalamocortical axons in layer II of the mouse auditory cortex**
Meng Sun^{1,2}, Makoto Takemoto¹, Wen-Jie Song^{1,2}
¹Department of Sensory and Cognitive Physiology, Kumamoto University, Kumamoto 860-8556, Japan
²HIGO program, Graduate School of Medical Sciences, Kumamoto University, Kumamoto 860-8556, Japan
- P2-102** **Sphingomyelin synthase 1 modulates KCNQ1/KCNE1 channel surface expression**
Meikui Wu^{1,2}, Makoto Takemoto¹, Makoto Taniguchi³, Toru Takumi⁴, Toshiro Okazaki³, Wen-Jie Song^{1,2}
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³Department of Hematology and Immunology, Kanazawa Medical University, Ishikawa, Japan
⁴RIKEN Brain Science Institute, Wako, Japan
- P2-103** **Changes in Temporal Activation Pattern of the Guinea Pig's AI after Interval Discrimination**
Hisayuki Ojima^{1,2}, Koki Hayashi³, Masato Taira^{1,2}, Junsei Horikawa³
¹Cogn Neurobiol, Grad Schl, Tokyo Med and Dent Univ ²Cent for Br Integ Res (CBIR)
³Comput Sci and Engineer, Grad Schl, Toyohashi Univ Technol
- P2-104** **Expression of Calcium sensing receptor in the mature inner ear**
Toshiya Minakata¹, Akira Inagaki¹, Shinji Sekiya¹, Hisao Yamamura², Shingo Murakami¹
¹Department of Otolaryngology, Head and Neck Surgery, Graduate School of Medical Sciences, Nagoya City University, Nagoya, Japan
²Department of Molecular and Cellular Pharmacology, Graduate School of Pharmaceutical Sciences, Nagoya City University, Nagoya, Japan
- P2-105** **Formation of voice-dependent associative memory circuits in primary auditory cortex in mice**
Hiroaki Tsukano, Katsuei Shibuki
Dept Neurophysiol, Brain Res Inst, Niigata Univ, Japan
- P2-106** **Interactions between hyaluronan and proteoglycan binding link proteins and chondroitin sulfate proteoglycans in the perineuronal nets of the medial nucleus of the trapezoid body**
Midori Edamatsu¹, Yoko Bekku², Toshitaka Oohashi¹
¹Dept Mol Biol Biochem, Okayama Univ, Okayama, Japan ²New York Univ, New York, USA

Vision

- P2-107** **A neural mechanism of forming working memory in prefrontal cortex in categorization task**
Yuuki Abe, Yoshiki Kashimori
Dept. of Engineering Science, Univ. of Electro-Communications
- P2-108** **A role of rhythmic oscillations in top-down influence on V1 responses in perceptual learning**
Koya Onodera, Yoshiki Kashimori
Dept. of Engineering Science, Univ. of Electro-Communications, Chofu, Tokyo 182-8585 Japan
- P2-109** **Analysis of the role of neocortical microcolumns in behavior**
Shun Tsuruno, Taisuke Yoneda, Hisato Maruoka, Toshihiko Hosoya
RIKEN BSI, Wako, Japan

- P2-110 Cell Type Specificity in the Organization and Neuronal Activities of Microcolumns in Neocortical Layer 5**
Seiichiro Sakai, Toshihiko Hosoya
RIKEN BSI, Saitama Japan
- P2-111 Organization and function of microcolumn lattice array in neocortex**
Toshihiko Hosoya, Hisato Maruoka, Nao Nakagawa, Shun Tsuruno, Seiichiro Sakai, Taisuke Yoneda
RIKEN Brain Science Institute
- P2-112 Chemoarchitecture of glial fibrillary acidic protein (GFAP) and glutamine synthetase in the rat optic nerve: An immunohistochemical study using quantitative analyses**
June Kawano^{1,2}
¹Dept Morphol Sci, Kagoshima Univ, Kagoshima, Japan ²Lab for Neuroanat, Kagoshima Univ, Kagoshima, Japan
- P2-113 Unexpected Functional Roles of Horizontal Cells in the Retinal Circuit**
Taro Chaya¹, Akihiro Matsumoto², Yuko Sugita¹, Satoshi Watanabe¹, Ryusuke Kuwahara³, Masao Tachibana², Takahisa Furukawa¹
¹Lab for Mol and Dev Biol, Inst for Protein Res, Osaka Univ, Osaka, Japan
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³Res Cent for Ultrahigh Voltage Electron Microscopy, Osaka Univ, Osaka, Japan
- P2-114 Inhibition derived from parietal association area regulates the neural properties of the primary visual cortex in mice**
Ryuichi Hishida¹, Masao Horie², Hiroaki Tsukano¹, Manavu Tohmi¹, Katsuei Shibuki¹
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²Div Neurobiol and Anat, Grad Sch Med and Dent, Niigata Univ, Niigata, Japan
- P2-115 Dynamic reconfiguration of the brain functional network for emotional face perception**
Hiroaki Takagi¹, Katsuki Hasegawa¹, Eiji Kirino^{2,3}, Shoji Tanaka¹
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³Juntendo Shizuoka Hospital, Shizuoka, Japan
- P2-116 Columnar scale representation of faces in the human inferotemporal cortex**
Topi T Tanskanen, Chien-Hui Tancy Kao, Roy Allen Waggoner, Kenichi Ueno, Keiji Tanaka, Kang Cheng
RIKEN Brain Science Institute
- P2-117 Axonal projection map of area FST in the marmoset**
Hiroshi Abe¹, Toshiki Tani¹, Hiromi Mashiko¹, Naohito Kitamura¹, Kazuhisa Sakai², Hiroaki Mizukami³, Akiya Watakabe¹, Tetsuo Yamamori¹, Noritaka Ichinohe^{1,2}
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- P2-118 Functional roles of orientation representation for visual information preservation**
Shinpei Ishikawa¹, Masanobu Miyashita², Junsei Horikawa¹, Shigeru Tanaka³
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³The University of Electro-Communications
- P2-119 Spatial representation and spike timing characteristics in primate prefrontal neurons.**
Kei Mochizuki¹, Shintaro Funahashi^{1,2}
¹Kokoro Res Ctr, Kyoto Univ, Kyoto ²Grad Sch of Human and Environmental Std, Kyoto Univ, Kyoto
- P2-120 Decoding words from human brain activity during mental imagery of natural movies**
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²Center for Information and Neural Networks, National Institute of Information and Communications Technology, Osaka, Japan
³Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan
- P2-121 Population sparseness is lower in V4 than in V1**
Shinjiro Mita¹, Koji Ikezoe^{1,2,3}, Takanori Fukazawa¹, Shinji Nishimoto^{1,3}, Ichiro Fujita^{1,3}
¹Grad Sch Frontier Biosciences, Osaka Univ, Osaka, Japan
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- P2-122 Diversity of spatial frequency tuning dynamics within a local cluster in the cat primary visual cortex**
Hiroki Tanaka¹, Izumi Ohzawa²
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- P2-123 Simulation of coarse depth judgement based on neural population responses in macaque area MT**
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- P2-124** **Increasing serotonin concentration in brain improves visual detectability of freely moving rats**
Akinori Sato¹, Keisuke Tsunoda¹, Ryo Mizuyama¹, Satoshi Shimegi^{1,2}
¹Grad Sch Frontier Biosci, Osaka Univ, Toyonaka, Osaka, Japan ²Grad Sch Med, Osaka Univ, Toyonaka, Osaka, Japan
- P2-125** **Critical factors to determine the performance in a fast consecutive visuomotor transformation task**
Chisa Aoyama¹, Satoshi Shimegi^{1,2}
¹Grad Sch Frontier Biosci, Osaka Univ, Toyonaka, Osaka, Japan ²Grad Sch Med, Osaka Univ, Toyonaka, Osaka, Japan
- P2-126** **Development of Arduino-based device measuring optomotor response to elucidate neural mechanisms underlying complex visual perception in *Drosophila*.**
Kohei Okuri¹, Kentaro Sugimoto², Kenya Innami¹, Toru Aonishi², Hiroyoshi Miyakawa¹, Takako Morimoto¹
¹Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan ²Dept Comp Intelli & Sys Sci, Tokyo Inst of Tech, Yokohama, Japan

Somatosensation

- P2-127** **Neural mechanism of placebo analgesia in neuropathic pain model rats**
Ying Zeng^{1,2}, Li Qun Zeng², Di Hu¹, Wei Yang³, Emi Hayashinaka¹, Yasuhiro Wada¹, Yasuyoshi Watanabe¹, Long Yi Cui¹
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³Department of Neurobiology, Zhejiang University School of Medicine, Hangzhou, China
- P2-128** **Involvement of hyperpolarization-activated cyclic nucleotide-gated channels in the anterior cingulate cortex to the affective component and hypersensitivity of pain**
Koya Suzuki¹, Tetsufumi Ito², Hiroshi Ikeda¹, Kazuyuki Murase¹
¹Dept of Human and Artificial Intelligence Systems, Grad Sch of Engineering, Univ of Fukui, Fukui ²Dept Anat, Univ of Fukui, Fukui
- P2-129** **Study of somatosensory center in the *Drosophila melanogaster* brain: neurons that recognize self-movement**
Tomoko Yano^{1,2}, Takeshi Yokoyama², Asako Tsubouchi², Kei Ito^{1,2}
¹Dept Frontier Science, Univ of Tokyo, Tokyo, Japan ²IMCB, Univ of Tokyo, Tokyo, Japan
- P2-130** **Attenuation of GABA inhibition due to down regulation of K-Cl cotransporter 2 in the primary somatosensory cortex accelerate chronic pain**
Kei Eto¹, Hitoshi Ishibashi^{1,2}, Junichi Nabekura¹
¹Division of Homeostatic Development, National Institute for Physiological Sciences, Okazaki, Japan
²Department of Physiology, School of Allied Health Sciences, Kitasato University, Sagami-hara, Japan
- P2-131** **Identification of morphine-activated VTA neurons and their involvement in morphine-induced analgesia**
Moe Watanabe¹, Michiko Narita¹, Yusuke Hamada¹, Tatsuto Shinzato¹, Akira Yamashita², Viviane L Tawfik³, Hideki Tamura⁴, Naoko Kuzumaki¹, Akihiro Yamanaka², Minoru Narita^{1,4}
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³Dept. Anesthesiol., Perioperative and Pain Med., Stanford Univ. Sch. Med., Palo Alto, USA ⁴L-StaR, Hoshi Univ., Tokyo, Japan
- P2-132** **All-optical approach to study mesoscopic circuitry in the primary somatosensory cortex of mouse**
Kyo Koizumi¹, Masaaki Sato^{2,3}, Junichi Nakai⁴, Masamichi Ohkura⁴, Yasunori Hayashi^{3,5}, Hiromu Yawo¹
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⁴Brain Sci Inst, Saitama Univ, Saitama, Japan ⁵South China Normal Univ, Guangzhou, China
- P2-133** **Cholecystokinin- and/or vasoactive intestinal polypeptide-positive neurons preferentially innervate the somatic compartment of parvalbumin-expressing neurons in the mouse primary somatosensory cortex**
Hiroyuki Hioki¹, Jaerin Sohn¹, Hisashi Nakamura², Shinichiro Okamoto¹, Megumu Takahashi¹, Hiroshi Kameda³
¹Dept Morphol Brain Sci, Gard Med Sch, Kyoto Univ, Kyoto, Japan ²Dept Anat, Kawasaki Med Sch, Kurashiki, Japan
³Dept Physio, Teikyo Univ Sch of Med, Tokyo, Japan
- P2-134** **Behavioral study of weight perception in Japanese macaque monkeys**
Miki Taoka, Sayaka Hihara, Taku Koike, Atsushi Iriki
Lab Symbolic Cognitive Develop, Brain Science Institute, RIKEN, Saitama, Japan
- P2-135** **Inhibitory effect of APGWamide on thermal allodynia in rats with diabetic neuropathy**
Tetsuya Ikeda¹, Rika Kamiya¹, Ryuichiro Takeda², Yasushi Ishida³
¹Div of Neurobiol, Fac of Med, Univ of Miyazaki, Miyazaki, Japan ²Health Care and Security Center, Univ of Miyazaki, Japan
³Dept of Psychiatry, Fac of Med, Univ of Miyazaki, Japan

P2-136 Artificial nociceptive neuron activation aggravates tumor growth associated with angiogenesis and increased proinflammatory cytokines

Takashige Kondo¹, Yusuke Hamada¹, Yukari Suda¹, Kana Morita¹, Tomoya Koike¹, Hiroki Narita¹, Michiko Narita¹, Naoko Kuzumaki¹, Hideki Tamura², Vivianne L Tawfik³, Kohei Yamamizu⁴, Akihiro Yamanaka⁵, Minoru Narita^{1,2}

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P2-137 Identification and characterization of nociceptive interneurons in *Drosophila* larvae

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Department of Biological Sciences, The University of Tokyo, Tokyo, Japan

Viscerosensation

P2-138 Activities of the common hepatic branch of the vagus are localized in distinct brain regions depending on stimulants

Daisuke Yamada^{1,2}, Peter Koppensteiner^{1,2}, Saori Odagiri^{1,2}, Tetsuya Yamada^{2,3}, Hideki Katagiri^{2,3}, Keiji Wada^{1,2}, Masayuki Sekiguchi^{1,2}

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P2-139 Hydrogen sulfide enhances cough reflex to capsaicin: role of pulmonary C neurons

You Shuei Lin¹, Chun-Chun Hsu^{1,2}, Ching Yi Yu¹, Lu-Yuan Lee², Chih-Ching Chen¹

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²Department of Physiology, University of Kentucky, Lexington, USA

Vestibular System

P2-140 Vestibular contributions to egocentric representation

Naotoshi Abekawa^{1,2}, Elisa Ferre³, Maria Gallagher², Hiroaki Gomi¹, Patrick Haggard²

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³Department of Psychology, Royal Holloway, London, UK

P2-141 Cerebellar neural network model for resolving tilt-translation ambiguity

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Sensory System: Others

P2-142 Differences in μ opioid receptor internalization following exposure to various opioids in rats

Ryosuke Ishida¹, Toshiko Tsumori², Yukiko Katsube¹, Yoji Saito¹

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P2-143 Possible alteration of striatal dopamine D2 receptors in neuropathic pain model rats

Takashi Okauchi, Ying Zeng, Ami Igesaka, Di Hu, Emi Hayashinaka, Yasuhiro Wada, Hisashi Doi, Yasuyoshi Watanebe, Yilong Cui

Division of Bio-Function Dynamics Imaging, RIKEN Center for Life Science Technologies

P2-144 Dissection of neural circuitry mediating CO₂-evoked escape behavior in the larval zebrafish

Tetsuya Koide, Yoshihiro Yoshihara

Lab Neurobiology of Synapse, RIKEN BSI, Wako, Japan

P2-145 The exploration of neuropeptides involved in starvation-dependent reduction of heat nociception in *Drosophila*

Hirono Ohashi, Takaomi Sakai

Tokyo Metropolitan University, Department of Biological science. Tokyo, Japan

Spinal Cord, Motoneurons and Muscle

- P2-146** **Direct synaptic input to rat spinal motoneurons at an early stage of development: Corticospinal and Ia afferent axons**
 Satoshi Fukuda¹, Hitoshi Maeda¹, Hiroshi Kameda¹, Naoyuki Murabe¹, Noriko Isoo¹, Hiroaki Mizukami², Keiya Ozawa^{2,3}, Masaki Sakurai¹
¹Dept Physiol, Teikyo Univ Sch of Med, Tokyo, Japan ²Div of Genetic Therapeutics, Jichi Med Univ, Tochigi, Japan
³Res Hospital, Inst of Med Sci, Tokyo Univ, Tokyo, Japan
- P2-147** **Selective involvement of fast-twitch muscle fibers caused by loss of function of mutant androgen receptor in SBMA**
 Shinichiro Yamada¹, Atsushi Hashizume¹, Yasuhiro Hijikata¹, Tomonori Inagaki¹, Naohide Kondo¹, Kaori Kawai¹, Seiya Noda¹, Hirotaka Nakanishi¹, Masahisa Katsuno¹, Gen Sobue²
¹Dept Neurology, Nagoya University Graduate School of Medicine, Nagoya, Japan
²Research Division of Dementia and Neurodegenerative Disease, Nagoya University Graduate School of Medicine, Nagoya, Japan
- P2-148** **Contribution of propriospinal neurons to recovery of hand dexterity after the corticospinal tract lesion in monkeys**
 Takamichi Tohyama^{1,2}, Masaharu Kinoshita³, Kenta Kobayashi^{4,5}, Kaoru Isa¹, Dai Watanabe⁶, Kazuto Kobayashi⁷, Meigen Liu², Tadashi Isa^{1,5,8}
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³Dept Physiol, Hirosaki Univ, Hirosaki, Japan ⁴Sec Viral Vector Dev, NIPS, Okazaki, Japan ⁵Dept Life Sci, SOKENDAI, Hayama, Japan
⁶Dept Mol and Syst Biol, Kyoto Univ, Kyoto, Japan ⁷Dept Mol Genet, Fukushima Med Univ, Fukushima, Japan
⁸Dept Neurosci, Kyoto Univ, Kyoto, Japan
- P2-149** **Serotonergic modulation of NMDA receptor-mediated glutamate responses in the dendrites of rat jaw-closing motoneurons**
 Masanori Dantsuji^{1,2}, Shiro Nakamura¹, Kiyomi Nakayama¹, Ayako Mochizuki¹, Masaaki Kiyomoto¹, Masahiko Ozeki², Tomio Inoue¹
¹Dept Oral Physiol, Showa Univ School of Dent, Tokyo, Japan ²Dept Oral Implant Dent, Showa Univ School of Dent, Tokyo, Japan
- P2-150** **Long-lasting potentiation in indirect cortico-motoneuronal excitation in a relaxed muscle could be induced by motor imagery of muscle contraction.**
 Shun Irie¹, Tsuyoshi Nakajima¹, Shinya Suzuki¹, Ryohei Ariyasu¹, Yohei Masugi^{2,3}, Tomoyoshi Komiyama⁴, Yukari Ohki¹
¹Department of Integrative Physiology, Kyorin University School of Medicine, Tokyo, Japan
²Graduate school of Sciences and Arts, The University of Tokyo, Tokyo, Japan
³Research Institute, National Rehabilitation Center for Persons with Disabilities, Saitama, Japan
⁴Faculty of Education, Chiba University, Chiba, Japan
- P2-151** **Does diabetes target corticospinal tract neurons?**
 Ken Muramatsu¹, Toru Tamaki¹, Masako Ikutomo¹, Hiroshi Takamura¹, Satoshi Shimo², Masatoshi Niwa³, Dei-Ichi Sasaki⁴
¹Dept Physical therapy, Health Science Univ, Yamanashi, Japan ²Dept Occupational therapy, Health Science Univ, Yamanashi, Japan
³Dept Occupational therapy, Kyorin Univ, Tokyo, Japan ⁴Center for Medical Sciences, Ibaraki Prefectural University of Health Sciences
- P2-152** **Neural adaptation in response to change in the musculoskeletal system: A new primate model.**
 Roland Philipp, Joachim Confais, Tomomichi Oya, Kazuhiko Seki
 National Institute of Neuroscience, National Center of Neurology and Psychiatry (NCNP), Tokyo, Japan
- P2-153** **Comparison of muscle synergies calculated in different motor contexts.**
 Joachim Confais¹, Tomomichi Oya¹, Kazuhiko Seki^{1,2}
¹National Center of Neurology and Psychiatry ²PRESTO, JST, Tokyo, Japan
- P2-154** **Analysis for the muscle control strategy of a wrist with the EMG-driven musculoskeletal model**
 Kyuengbo Min, Jongho Lee, Shinji Kakei
 Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
- P2-155** **Somatosensory afferents contribute to muscle activity during voluntary upper limb movement of a monkey**
 Yoko Nishihara^{1,2}, Tatsuya Umeda³, Tadashi Isa^{4,5}, Yukio Nishimura^{2,5}
¹Department of Cerebral Integration, National Institute for Physiological Sciences, Aichi, Japan
²Department of Physiological Sciences, The Graduate University for Advanced Studies, School of Life Science, Kanagawa, Japan
³Department of Neurophysiology, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo, Japan
⁴Department of Neuroscience, Graduate School of Medicine and Faculty of Medicine, Kyoto University, Kyoto, Japan
⁵Division of Developmental Physiology, National Institute for Physiological Sciences, Aichi, Japan

- P2-156 Functional and pathological analysis of PABPN1, a responsible gene for oculopharyngeal muscular dystrophy (OPMD), that is introduced into mouse skeletal muscles by in vivo electroporation.**
Keiko Nakao¹, Megumi Matsumoto¹, Megumi Kumagai¹, Masaaki Ikeda¹, Takao Imai²
¹Dept Physiol, Fac Med, Saitama Med Univ, Saitama, Japan ²Dept Physiol, Keio Univ Sch Med, Tokyo, Japan
- P2-157 Activity-dependent plasticity of indirect cortico-motoneuronal excitation in humans**
Tsuyoshi Nakajima¹, Shinya Suzuki¹, Shun Irie¹, Ryouhei Ariyasu¹, Tomoyoshi Komiyama², Yukari Ohki¹
¹Dept Integrative Physiol, Kyorin Univ Sch of Med, Tokyo, Japan ²Facul Edu, Chiba Univ, Chiba, Japan
- P2-158 Galvanic vestibular stimulation facilitates cervical interneuronal systems in humans**
Shinya Suzuki¹, Tsuyoshi Nakajima¹, Shun Irie¹, Ryohei Ariyasu¹, Tomoyoshi Komiyama², Yukari Ohki¹
¹Dept Integrative Physiol, Kyorin Univ Sch of Med, Tokyo, Japan ²Facul Edu, Chiba Univ, Chiba, Japan

Basal Ganglia

- P2-159 Deficiency in dopaminergic system due to absence of endosomal SNAREs vti1a and vti1b**
Ajaya Jang Kunwar^{1,2}, Michele Rickmann², Gabriele Fischer Von Mollard³, Kerstin Kriegelstein^{2,4}
¹Dept. of Anatomy, Nepalese Army Institute of Health Sciences - College of Medicine, Sanobharyng, Kathmandu, Nepal
²Dept. of Anatomy, Uni. Goettingen 37075 Goettingen, Germany
³Dept. of Biochemistry III, Uni. Bielefeld 33615 Bielefeld, Germany.
⁴Dept. of Molecular Embryology, Uni. Freiburg 79104 Freiburg, Germany.
- P2-160 Beta oscillations between the subthalamic nucleus and substantia nigra pars reticulata during automatic and voluntary movement**
Jay J Jantz, Masayuki Watanabe, Ron Levy, Douglas P Munoz
Centre for Neuroscience Studies, Queen's Univ, Kingston, Canada
- P2-161 Nicotinic acetylcholine receptor-mediated GABAergic inputs are more prominent in the matrix cholinergic neurons than in the striosomes of mouse striatum**
Ritsuko Inoue¹, Takeo Suzuki^{1,2,3}, Kinya Nishimura^{1,2}, Masami Miura¹
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²Dept of Anesthesiology and Pain Managem, Juntendo Univ Sch of Med, Tokyo, Japan
³Dept of Anesthesia, Tokyo Met Bokutoh Hosp, Tokyo, Japan.
- P2-162 Concurrent activation of striatonigral and striatopallidal neurons facilitates movements**
Hiromi Sano¹, Kenji F Tanaka², Atsushi Nambu¹
¹Division of System Neurophysiology, NIPS, Okazaki, Japan ²Dept Neuropsychiatry, School of Med, Keio Univ, Tokyo, Japan
- P2-163 Quantitative analyses of the projection of individual neurons from the Midline thalamic nuclei to the striosome and matrix compartments of the rat striatum**
Tomo Unzai, Fumino Fujiyama
Lab Neural Circuitry, Grad Sch Brain Sci, Doshisha Univ, Kyoto, Japan
- P2-164 Mechanism of L-dopa induced dyskinesia: increased movement facilitation and decreased movement termination by the basal ganglia**
Indriani Dwi Wahyu^{1,2}, Hiromi Sano¹, Satomi Chiken^{1,2}, Atsushi Nambu^{1,2}
¹Division of System Neurophysiology, National Institute for Physiological Sciences, Okazaki, Japan
²Department of Physiological Sciences, The Graduate University for Advanced Studies, Okazaki, Japan
- P2-165 Morphological and electrophysiological properties of neurokinin-1 receptor positive pallidal neurons in mice.**
Kazuko Mizutani¹, Fuyuki Karube¹, Susumu Takahashi¹, Kenta Kobayashi², Fumino Fujiyama¹
¹Laboratory of Neural Circuitry, Grad Sch Brain Science, Doshisha University, Kyoto, Japan
²Sec Viral Vector Development, NIPS, Okazaki, Japan
- P2-166 Neuronal correlates of temporal prediction in the primate striatum**
Masashi Kameda, Masaki Tanaka
Dept physiol, Hokkaido Univ, Hokkaido, Japan
- P2-167 Further characterization of GPR155 in mouse brain**
Yuji Yamashita, Stefan Trifonov, Masahiko Kase, Masato Maruyama, Yousuke Nakano, Takuya Nishimura, Tetsuo Sugimoto
Dept Anat Brain Science, Kansai Med Univ, Hirakata, Osaka, Japan
- P2-168 Subtype-selective Gene Expression System for Corticostriatal Neurons: Approach from Double Viral Vector Infection.**
Nozomu Yoshioka, Shigeki Kato, Masateru Sugawara, Nagisa Kato, Kazuto Kobayashi
Depart of Mol Genet, Fukushima Medical University School of Medicine, Fukushima, Japan

- P2-169** **Neostriatal targets of subthalamic nucleus neurons are chiefly interneurons in the rat**
Yoshinori Koshimizu, Takahiro Furuta, Takeshi Kaneko, Kouichi C Nakamura
Dept Morphol Brain Sci, Grad Sch Med, Kyoto Univ, Kyoto, Japan

Voluntary Movement

- P2-170** **Motivation Center in the Ventral Midbrain Directly Activates the Descending Motor Pathways via the Primary Motor Cortex**
Michiaki Suzuki^{1,2}, Ken-Ichi Inoue³, Hiroshi Nakagawa³, Masahiko Takada³, Tadashi Isa^{1,2,4}, Yukio Nishimura^{1,2}
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³Sys Neurosci, Primate Res Inst, Kyoto Univ, Aichi, Japan ⁴Dept Neurosci, Grad Sch Med, Kyoto Univ, Kyoto, Japan
- P2-171** **The relationship between behavioral change-induced brain activity and personality traits.**
Kei Omata¹, Shigeru Ito², Yasuomi Ouchi¹
¹Dept Biofunc Imag, Pree Med Photo Edu & Res Center, Hamamatsu University School of Medicine, Hamamatsu, Japan
²Hamamatsu PET Imaging Center, Hamamatsu Medical Photonics Foundation, Hamamatsu, Japan.
- P2-172** **Distinct thalamocortical inputs mediate learning and execution of self-initiated movement**
Yasuyo H Tanaka^{1,2}, Yasuhiro R Tanaka^{1,2}, Riichiro Hira², Masashi Kondo^{1,2}, Shin-Ichiro Terada^{1,2,3}, Yasuo Kawaguchi⁴
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⁴Division of Cerebral Circuitry, National Institute for Physiological Sciences, Okazaki, Japan
- P2-173** **The Bereitschaftspotential paradigm for rise to Stand-Up**
Balbir Singh Awana¹, Hiroaki Wagatsuma^{1,2}, Kiyohisa Natsume¹
¹Grad. School Life Sci. and Sys Eng., Kyushu Institute of Technology, Kitakyushu, Japan ²RIKEN BSI
- P2-174** **Cortical spike ensembles of two distinct types of pyramidal neurons and fast-spiking interneurons**
Akiko Saiki^{1,2,3}, Yutaka Sakai^{1,3}, Ryoji Fukabori⁴, Shogo Soma¹, Junichi Yoshida¹, Hiromu Yawo⁵, Kazuto Kobayashi⁴, Minoru Kimura^{1,3}, Yoshikazu Isomura^{1,2,3}
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³Brain/MINDS, Tokyo ⁴Dept Molecular Genetics, Inst of Biomedical Sciences, Fukushima Medical Univ, Fukushima
⁵Dept Developmental Biol and Neurosci, Grad Sch Life Sciences, Tohoku Univ, Sendai
- P2-175** **A novel behavioral task to search for neuronal basis of bimanual coordination**
Shogo Soma^{1,2}, Akiko Saiki^{1,3}, Junichi Yoshida¹, Masanori Kawabata¹, Yutaka Sakai^{1,3}, Yoshikazu Isomura^{1,3}
¹Brain Sci Inst, Tamagawa Univ, Tokyo ²JSPS Research Fellow (PD) ³Brain/MINDS
- P2-176** **Response properties of primary motor cortical neurons influenced by the the deep cerebellar nuclei stimulation**
Nobuya Sano^{1,2}, Yoshihisa Nakayama¹, Satomi Chiken³, Atsushi Nambu³, Eiji Hoshi¹
¹Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
²Graduate School of Medical and Dental Sciences, Niigata University, Niigata, Japan
³Division of System Neurophysiology, National Institute for Physiological Sciences, Okazaki, Japan

Emotion

- P2-177** **The physiological analysis of emotion-cognition interaction in reversal learning in macaque monkey**
Masaharu Yasuda, Kae Nakamura
Department of Physiology, Kansai Medical University, Osaka
- P2-178** **Neural networks between a newly identified perifornical area of the anterior hypothalamus and lateral septum: Pharmacogenetic investigations for physiological roles of urocortin3/enkephalin co-expressing neurons.**
Noriko Horii, Takayo Sasagawa, Tomohiro Namikawa, Mayumi Nishi
Dept Anat & Cell Biol, Nara Med Univ, Nara
- P2-179** **Origin of multisynaptic projections from the amygdala to the forelimb region of the ventral premotor cortex in macaque monkeys**
Hiroaki Ishida¹, Ken-Ichi Inoue², Masahiko Takada², Eiji Hoshi¹
¹Frontal Lobe Function Project, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan
²Systems Neuroscience Section, Primate Research Institute, Kyoto Univ., Aichi, Japan

- P2-180** **Comparison of inhibitory neural response predicting visual information between neurons in monkey amygdala and ventral striatum**
Koji Kuraoka, Masahiko Inase
Dept Physiol, Kinki Univ Schl Med, Osaka-Sayama, Japan
- P2-181** **The suppressive effect of attention and emotion on pupillary light reflex**
Keiyu Niikuni¹, Syoichi Iwasaki¹, Ryo Tachibana^{2,3}, Toshiaki Muramoto^{1,4}
¹GSIS, Tohoku Univ, Miyagi, Japan ²Dept Psychol, Tohoku Univ, Miyagi, Japan ³JSPS, Tokyo, Japan ⁴IRIDeS, Tohoku Univ, Miyagi, Japan
- P2-182** **An fMRI study of emotional activity aroused by long music phrases**
Haruka Maeda¹, Li-Qun Wang², Atsushi Aoyama³
¹Grad Sch of Media and Governance, Keio Univ, Kanagawa, Japan ²Res Inst for Sci and Tech, Tokyo Denki Univ, Chiba, Japan ³Fac of Env and Info Studies, Keio Univ, Kanagawa, Japan
- P2-183** **Zebrafish cerebellar neural circuitry is involved in the classical Fear conditioning**
Koji Matsuda¹, Masayuki Yoshida², Koichi Kawakami³, Masahiko Hibi^{1,4}, Takashi Shimizu^{1,4}
¹Division of Biological Science, Graduate School of Science, Nagoya University, Japan
²Graduate School of Biosphere Science, Hiroshima University, Higashihiroshima, Japan
³Division of Molecular and Developmental Biology, National Institute of Genetics, Mishima, Japan
⁴Laboratory of Organogenesis and Organ Function, Bioscience and Biotechnology Center, Nagoya University, Japan
- P2-184** **The comparison of behavioral pattern toward pups and synaptic transmission in the rhomboid nucleus of the bed nucleus of the stria terminalis between mice before after weaning.**
Taiju Amano^{1,2}, Sayaka Shindo², Chihiro Yoshihara², Yousuke Tsuneoka³, Masabumi Minami¹, Kumi O Kuroda²
¹Dept Pharmacol, Grad Sch Pharm Sci, Hokkaido Univ, Sapporo ²Lab Affiliative Social Behavior, RIKEN Brain Research Institute
³Dept Anatomy, Toho Univ Sch Med
- P2-185** **Neural Correlates of Positive and Negative Emotions during Human Sound Processing**
Naohiro Okamoto, Masahiko Haruno
NICT

Mood and Anxiety

- P2-186** **Effect of mother-infant interaction on the relationships between prefrontal dopamine release and open-field behaviors in rats**
Masatoshi Takita^{1,2}, Takefumi Kikusui³
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²Brain Sci Inspired Life Support RC, The Univ of Electro-Communications, Tokyo, Japan
³Companion Animal Res, Sch of Vet Med, Azabu Univ, Tokyo, Japan
- P2-187** **Epigenome-wide association study to focus on the development of PTSD in traumatized ED patients**
Shota Nishitani^{1,2}, Vasiliki Michopoulos¹, Tanja Jovanovic¹, Felicia Gould³, Charles B. Nemeroff³, Amanda J. Meyers³, Barbara O. Rothbaum¹, Kerry J. Ressler¹, Alicia K. Smith¹
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²Dept Neurobiol Behav, Nagasaki University Grad Sch Biomed Sci, Nagasaki, Japan ³Dept Psychiat Behav Sci, Univ Miami, Miami, US
- P2-188** **Effects of maternal separation on the corticosterone level and fear-related behavior in the adult mice**
Kenny Anak Daun, Keita Nakaji, Natsu Koyama, Takahiro Fuchigami, Seiji Hitoshi
Dept Physiol, Shiga Univ Med Sci, Otsu, Japan
- P2-189** **Influence of 5-HT_{2c}R RNA editing on accumbal NPY expression and behavioral despair.**
Miku Aoki^{1,2}, Yoshihisa Watanabe¹, Kanji Yoshimoto³, Masaki Tanaka¹
¹Dept of Basic Geriatrics, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan
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³Dept of Food Science and Biotechnology, Hiroshima Institute of Technology, Hiroshima
- P2-190** **Stress-associated changes in acetylcholine in the hippocampus of awake mice**
Yuka Yasunaga¹, Nagisa Sada¹, Sakiko Fujii¹, Takashi Katsu^{1,2}, Tsuyoshi Inoue¹
¹Dept of Biophys Chem, Grad Sch of Med, Dent and Pharm Sci, Okayama Univ, Okayama, Japan
²Dept of Pharm, Grad Sch of Pharm, Yasuda Women's Univ, Hiroshima, Japan
- P2-191** **Antianxiety-like effect of sildenafil via oxytocin signaling pathway**
Hein M (Min) Latt, Hiroaki Matsushita, Taiki Omatsu, Mitsuhiro Matsuzaki, Hiroyuki Michiue, Teiichi Nishiki, Hideki Matsui
Dept Physiol, Okayama Univ, Okayama, Japan

- P2-192** **Restricted high-fat diet is enough to improve social avoidance induced by social-defeat stress**
Airi Otsuka¹, Tetsuya Shiuchi^{1,2}, Sachiko Chikahisa¹, Hiroyoshi Sei¹
¹Dept Integ Physiol, Inst Biomedical Sci, Tokushima Univ Grad Sch, Tokushima, Japan ²PRESTO, JST, Kawaguchi, Japan
- P2-193** **Na⁺, K⁺-ATPase dysfunction in mPFC-Amygdala circuit causes anxiety-like behavior**
Yuki Kurauchi¹, Akinori Hisatsune^{2,3}, Takahiro Seki¹, Hiroshi Katsuki¹
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- P2-194** **MARCKS-like 1 protein is associated with the pathogenesis of anxiety and depressive disorders**
Takashi Tanaka^{1,2}, Shingo Miyata¹, Shoko Shimizu¹, Masaya Tohyama^{1,2}
¹Inst Trad Asia Med, Kinki Univ, Osaka, Japan ²Osaka Pref Hosp Organ, Osaka, Japan
- P2-195** **Effects of exercise duration and intensity on activities of serotonin and corticotropin-releasing factor neurons, and depressive-like behavior in rats**
Ryouko Morikawa, Tatsuki Shiiba, Takeshi Nishijima, Ichiro Kita
Dept Human Health Sci, Tokyo Metropolitan Univ, Tokyo, Japan
- P2-196** **Reduction of spontaneous physical activity and sociability induced by low-frequency repetitive transcranial stimulation (rTMS) to the lower part of the medial frontal cortex in monkeys.**
Shinya Nakamura, Kentaro Ogawa, Yusuke Goto, Takayuki Hosokawa, Toshio Iijima, Ken-Ichiro Tsutsui
Division of Systems Neuroscience, Tohoku University Graduate School of Life Sciences

Learning, Memory and Plasticity

- P2-197** **Long-term administration of cilostazol, a phosphodiesterase 3 inhibitor, enhances memory functions and cerebral glucose metabolism in aged mice.**
Syuichi Yanai¹, Jun Toyohara², Kiichi Ishiwata^{2,3,4}, Tomoko Arasaki¹, Shogo Endo¹
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²Research Team for Neuroimaging, Tokyo Metropolitan Institute of Gerontology
³Institute of Cyclotron and Drug Discovery Research, Southern TOHOKU Research Institute for Neuroscience
⁴Department of Biofunctional Imaging, Fukushima Medical University
- P2-198** **Neural mechanisms of relearning in rat hippocampus and prefrontal cortex**
Yuri Machino, Susumu Takahashi, Yoshio Sakurai
Graduate School of Brain Science, Doshisha Univ, Kyoto, Japan
- P2-199** **Comparison of regional brain activity between successful and unsuccessful short-term memory formation using source localization of alpha-band EEG**
Shohei Teramoto, Tsubasa Inaoka, Yumie Ono
Department of Electronics and Bioinformatics, School of Science and Technology, Meiji University, Kanagawa, Japan
- P2-200** **Enhancing memory destabilization through protein degradation induction**
Kareem Mahmoud Abdou^{1,2}, Mohammad Shehata^{1,2}, Zhao Qi^{1,2}, Reiko Okubo-Suzuki^{1,2}, Yoshito Saitoh^{1,2}, Takashi Kitamura³, Hirofumi Nishizono^{2,4}, Mina Matsuo⁴, Sakurako Ushijima^{1,2}, Noriaki Ohkawa^{1,2}, Kaoru Inokuchi^{1,2}
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⁴Division of Animal Experimental Laboratory, Life Science Research Center, University of Toyama, Toyama, Japan
- P2-201** **Withdrawn**
- P2-202** **Adult neurogenesis conserves the hippocampal learning capacity**
Md Jahangir Alam^{1,2}, Takashi Kitamura³, Yoshito Saitoh^{1,2}, Noriaki Ohkawa^{1,2}, Takashi Kondo⁴, Kaoru Inokuchi^{1,2}
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⁴Dept Radiol Sci, Univ Toyama 2630 Sugitani, Toyama, Japan
- P2-203** **The functional role of neuronal ensemble activated in intersection of two distinct memories**
Jun Yokose^{1,2}, Masanori Nomoto^{1,2}, Reiko Okubo-Suzuki^{1,2}, Yukari Takahashi³, Masashi Nagase³, Akinobu Suzuki^{1,2}, Noriaki Ohkawa^{1,2}, Hirofumi Nishizono^{2,4}, Mina Matsuo⁴, Ayako M Watabe³, Fusao Kato³, Kaoru Inokuchi^{1,2}
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³Dept Neurosci., Jikei Univ Sch Med, Tokyo, Japan ⁴Dept Animal Exp Lab, Life Sci Res Cen., Univ of Toyama, Toyama, Japan

- P2-204 MCH neurons regulate sleep and memory in mice**
Shuntaro Izawa¹, Ryo Inoue¹, Yasutaka Mukai¹, Akira Terao^{2,3}, Yu Ohmura⁴, Mitsuhiro Yoshioka⁴, Kazuhiro Kimura², Akihiro Yamanaka¹
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⁴Lab Neuropharmacol, Grad Sch Med, Hokkaido Univ, Sapporo, Japan
- P2-205 Artificial regulation of contextual fear memory by manipulating the parietal association cortex**
Akinobu Suzuki^{1,2}, Sakurako Kosugi-Ushijima^{1,2}, Noriaki Ohkawa^{1,2}, Mina Matsuo³, Hirofumi Nishizono^{2,3}, Kaoru Inokuchi^{1,2}
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- P2-206 Trajectory-dependent hippocampal neuronal activity revealed by a multiunit recording method**
Yuki Aoki, Hideyoshi Igata, Takuya Sasaki, Yuji Ikegaya
Lab Chem Pharmacol, Grad Sch Pharm Sci, Univ of Tokyo, Tokyo
- P2-207 Acute sleep deprivation declines the performance of contextual fear learning in rats**
Miki Hashizume¹, Rina Shinozaki¹, Rie Suge², Yasushi Hojo¹, Hideo Mukai³, Takayuki Murakoshi¹
¹Dept Biochem, Saitama Medical Univ, Saitama, Japan ²Dept Physiol, Saitama Medical Univ, Saitama, Japan
³Dept Comp Sci, Meiji Univ, Kanagawa, Japan
- P2-208 The vesicular glutamate release from glia cell is necessary for learning memory.**
Kanako Murakami^{1,2}, Tomoyuki Miyashita², Emi Kikuchi², Takaaki Miyaji³, Yoshinori Moriyama^{3,4}, Minoru Saito²
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³Advanced Science Research Center Okayama University ⁴Okayama University
- P2-209 Involvement of intracellular Zn²⁺ signaling in the basolateral amygdala in object recognition memory**
Mitsuyasu Kubota, Yuki Fujise, Miki Suzuki, Haruna Tamano, Atsushi Takeda
Dep Neurophysiol, Sch Pharm Sci, Univ of Shizuoka, Shizuoka, Japan
- P2-210 Neural circuits underlying flight-or-freeze behavior triggered by an environmental threat.**
Mariko Ito^{1,2,3}, Masashi Nagase^{1,3}, Yae Sugimura^{1,3}, Yukari Takahashi^{1,3}, Ayako Watabe^{1,3,4,5}, Fusao Kato^{1,3,4}
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³Center for neurosci. Pain, Jikei Univ Sch Med, Tokyo, Japan ⁴Nagoya University Graduate School of Medicine
⁵PRESTO, JST, Kawaguchi, Japan
- P2-211 Rescue of glucocorticoid-induced CA1 LTP attenuation by the extracellular Zn²⁺ chelator**
Miki Suzuki, Suzuka Haga, Hiroyuki Nakada, Haruna Tamano, Atsushi Takeda
Dept Neurophysiol, Univ of Shizuoka, Shizuoka, Japan
- P2-212 Differential role of lateral amygdala glucocorticoid receptors in auditory fear conditioning under basal and stress conditions**
Ran Inoue, Ayumi Tanaka-Hayashi, Hisashi Mori
Dept Mol Neurosci, Grad Sch of Med and Pharm sci, Univ of Toyama, Toyama, Japan
- P2-213 Parvalbumin cells are activated by juvenile learning and contribute to the long-term modification of neural pathway.**
Tomoharu Nakamori^{1,2}, Erika Tashiro¹, Tomomi Kato¹, Hiroyuki Sakagami², Kohichi Tanaka³, Hiroko Ohki-Hamazaki¹
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³Laboratory of Molecular Neuroscience, Tokyo Medical and Dental University, Tokyo, Japan
⁴The Center for Brain Integration Research, Tokyo Medical and Dental University, Tokyo, Japan
- P2-214 Calorie restriction improves memory performance and affects neuronal structure in mice**
Pei-Yu Wang, Tai-En Hsueh, Yi-Ching Huang, Ling-Ling Teng
Graduate Institute of Brain and Mind Sciences, National Taiwan University
- P2-215 Gene expression profiling of microglia in contextual fear memory formation**
Zhiqian Yu¹, Hotaka Fukushima², Chiaki Ono¹, Mai Sakai¹, Yoshiyuki Kasahara¹, Yuta Takahashi¹, Satoshi Kida², Hiroaki Tomita¹
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- P2-216 Distinct roles of cholinergic neuronal groups in basal forebrain on the spatial/object recognition memory**
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²Dept Mol Genetics, Fukushima Med Univ, Fukushima, Japan
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- P2-217 Activity patterns of cortical neuronal network against hypoperfusion in the mouse**
Yuya Nishimura, Reimi Abe, Takuya Sasaki, Yuji Ikegaya
Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo
- P2-218 Effects of a T-588 Analog TK-4 on Motor Learning**
Hirono Suzuki¹, Misako Ota¹, Koji Usui¹, Takuya Kohno², Takuya Okada², Daisuke Minehira³, Naoki Toyooka², Shigenori Kawahara¹
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²Lab. Bio-functional Molecular Eng., Grad. Sch. Sci. Eng., Univ. Toyama, Toyama, Japan
³Dep. Hospital Pharmacy, Univ. Toyama, Toyama, Japan
- P2-219 Directional influences through theta band activity between macaque inferior temporal and prefrontal cortices during memory retrieval**
Hiromu Sasaki¹, Hisashi Tanigawa², Keisuke Kawasaki³, Atsuhiko Iijima¹, Takahumi Suzuki⁴, Isao Hasegawa^{2,3}
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³Dept Physiol, Niigata Univ Grad Sch of Med, Niigata ⁴Cent for Info & Neural Net, Natl Inst of Info & Comm Tech, Osaka
- P2-220 Impairment of extinction of auditory fear memory in Syntenin-1 knockout mice**
Gourango Talukdar, Ran Inoue, Tomoyuki Yoshida, Hisashi Mori
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- P2-221 Contribution of lateral habenula and hippocampus in task related actions**
Nasrin Shafeghat¹, Hidenori Aizawa², Hitoshi Okamoto¹, Tomoki Fukai¹
¹Riken, Neural circuit theory lab ²Department of neurobiology, Hiroshima University, Japan
- P2-222 Visual input pathways signal reward prediction error in midbrain dopamine neurons in blindsight monkeys**
Norihiro Takakuwa^{1,2}, Rikako Kato¹, Peter Redgrave³, Tadashi Isa^{1,2,4}
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³Dept Psychol, Univ of Sheffield, Sheffield, United Kingdom ⁴Dept Neuroscience, Grad Sch Med, Kyoto Univ, Kyoto, Japan
- P2-223 *Drosophila* LIM homeodomain transcription factor Apterous regulates acquisition and maintenance of long-term memory.**
Sho Inami, Naoto Shimada, Tsunaki Asano, Takaomi Sakai
Tokyo Metropolitan University, Department of Biological Sciences, Tokyo, Japan
- P2-224 Discrimination and Comparisons of Fear and Extinction Neurons in Amygdala**
Rie Ishikawa¹, Satoshi Kida^{1,2}
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- P2-225 Temporal and rate coding during multimodal integration in hippocampus**
Satoshi Terada^{1,2}, Yoshio Sakurai¹, Hiroyuki Nakahara², Shigeyoshi Fujisawa²
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- P2-226 The circadian clock gene, *period*, in the dorsal lateral neurons is required for *Drosophila* long-term memory**
Ikumi Mabuchi, Kahori Ienaga, Show Inami, Hirono Ohashi, Takaomi Sakai
Department of Biological Sciences, Tokyo Metropolitan Univ, Tokyo, Japan

Executive Function

- P2-227 An Effect of Positive Emotion on Working Memory Depends on Stimulus Type and Task Difficulty: An fMRI Study**
Takehiro Minamoto^{1,2}, Ken Yaoi³, Mariko Osaka¹, Naoyuki Osaka³
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- P2-228 Inactivation of rat dorsomedial prefrontal cortex or posterior parietal cortex, but not ventromedial prefrontal cortex, impairs the performance of the visuospatial delayed response task**
Kei Oyama, Cheuk Wa Christopher Lo, Yukina Tateyama, Toshio Iijima, Ken-Ichiro Tsutsui
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- P2-229 Sustained delay activity in mPFC and PPC of head-fixed rats performing delayed pro-/anti-response task**
Yukina Tateyama, Kei Oyama, Cheuk Wa Christopher Lo, Toshio Iijima, Ken-Ichiro Tsutsui
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- P2-230 Neural correlates of abstract thought process in monkey prefrontal cortex**
Takayuki Hosokawa, Shinya Nakamura, Munekazu Yamada, Toshio Iijima, Ken-Ichiro Tsutsui
Division of Systems Neuroscience, Tohoku University Graduate School of Life Sciences
- P2-231 Analysis of hippocampal theta oscillation during serial feature-negative discrimination task in rat eyeblink conditioning**
Satsuki Shimasaki, Hikari Tsunooka, Kazuki Murata, Koji Usui, Shigenori Kawahara
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- P2-232 Synchronous beta oscillations in the fronto-striatal loop for behavioral rule switching in macaque monkeys.**
Florian Gerard-Mercier, Keiji Tanaka
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- P2-233 EEG or NIRS recordings during Japanese archery shooting and darts game**
Tetsu Okumura, Takeru Otsuka, Misako Nagura, Naoya Ikegaya, Ryota Suzuki
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Language and Communication

- P2-234 The study on English rhythm learning by playing the music game**
Asami Takahashi, Kiyohisa Natsume
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- P2-235 Neurophysiological activities for processing same words assisted by the same grammatical marker change with varying cognitive requirements.**
Takahiro Soshi¹, Heizo Nakajima³, Hiroko Hagiwara²
¹Dept Forensic Psychiatry, National Institute of Mental Health, National Center of Neurology and Psychiatry
²Department of Language Sciences, Graduate School of Humanities, Tokyo Metropolitan University
³Department of English Language and Cultures, Faculty of Letters, Gakushuin University
- P2-236 Dynamic Neural Mechanisms Associated with Emergence of Creative Metaphor Interpretations**
Asuka Terai¹, Masanori Nakagawa¹, Takashi Kusumi², Masamichi Sakagami³, Koji Jimura⁴
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³Brain Science Institute, Tamagawa Univ, Machida, Japan ⁴Dept of Biosciences and Informatics, Keio Univ, Yokohama, Japan
- P2-237 Learning to signify objects by construction of visual double-articulated signs from elements in macaque monkeys (*Macaca fuscata*)**
Kento Ohashi¹, Atsuhiko Iijima¹, Tomoaki Miyajima¹, Yutaka Iwata¹, Isao Hasegawa^{2,3}
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- P2-238 EEG representations of mental time shift in past, present, and future**
Shingo Tokimoto¹, Naoko Tokimoto²
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- P2-239 Contribution of the right hemisphere in processing categorical information: an event-related potential study**
Masahiro Hata
Dept Lang Sci, Tokyo Metropolitan University, Tokyo, Japan
- P2-240 Effects on neonates' breathing and neural activity while they listen to their mothers' voice**
Mariko O Uchida-Ota^{1,2}, Takeshi Arimitsu³, Kiyomi Yatabe⁴, Naoki Tanaka⁵, Kazushige Ikeda³, Takao Takahashi³, Yasuyo Minagawa⁶
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⁵Dept Biomedical Engineering, Toyo Univ, Saitama, Japan ⁶Dept Psy, Keio University, Yokohama, Japan

Social Behavior

- P2-241 Disturbance of the maintenance of pair bond by traumatic stresses in monogamous prairie voles.**
Yu Hirota¹, Moeka Yoshizawa², Mii Ishizawa², Aoi Sato², Yuri Minbu², Kazunari Yuri³, Shinichi Mitsui^{1,2}
¹Dept. Rehabil. Gunma Univ. Grad. Health Sci, Gunma, Japan ²Dept. Occup. Ther., Gunma Univ, Gunma, Japan
³Dept. Neurobiol. & Anat., Kochi Med. Shc., Kochi Univ, Kochi, Japan
- P2-242 Pointing and gaze communication based on joint attention between a human and a monkey**
Mari Kumashiro, Kazuyuki Samejima
Brain Sci Inst, Tamagawa Univ, Tokyo
- P2-243 Effects of traumatic stresses on brain region for pair bonding in prairie voles, a monogamous rodent.**
Aki Arai, Yu Hirota, Shinichi Mitsui
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- P2-244 *Atp1a3* regulates the hierarchy formation through altered behavioral characteristics**
Hiroki Sugimoto, Kiyoshi Kawakami
Div Biol, Cent Mol Med, Jichi Med Univ, Tochigi, Japan
- P2-245 Recognition of context-dependent goal-directed action depicted by inanimate agents in monkeys**
Takeshi Atsumi^{1,2}, Hiroki Koda¹, Nobuo Masataka¹
¹Primate Research Institute, Kyoto University, Inuyama, Japan ²Japan Society for the Promotion of Science
- P2-246 Brain mechanism of group aggression: a network analysis**
Kyosuke Takami^{1,2}, Masahiko Haruno²
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- P2-247 Neural mechanism of self-consistency in social behavior**
Juri Fujiwara¹, Ken-Ichiro Tsutsui², Masato Taira³, Yoshikazu Ugawa⁴, Satoshi Eifuku¹
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³Dept Cogn Neurobiol, Tokyo Med Dent Univ Grad Sch, Tokyo, Japan ⁴Dept Neurol, Fukushima Med Univ, Fukushima, Japan
- P2-248 Neural representations of others' place-related information**
Teruko Danjo, Shigeyoshi Fujisawa
Dept Systems Neurophysiol, Brain Sci Inst, RIKEN, Wako, Japan
- P2-249 Effects of nicotine exposure and maternal-like behavior during juvenile on maternal behavior and spatial learning of adult female rats**
Miyako Furuta, Atsushi Fukusima, Tatsuo Akema, Toshiya Funabashi
Department of Physiology, St. Marianna University School of Medicine, Kawasaki, Japan
- P2-250 Animate or inanimate symbolized categorization in macaques**
Takumi Hongo, Keisuke Kawasaki, Isao Hasegawa
Department of Neurophysiology, Niigata University Graduate School of Medical and Dental Sciences

Learning and Cognition: Others

- P2-251 Validation of the Repeatable Battery for the Assessment of Neuropsychological Status for individuals diagnosed with Dementia**
Chrishara Paranawithana¹, Chamara Senaratna², Arjuna Fernando³, Samudra Kathriarachchi², Jayan Mendis⁴, Ramani Rathnweera⁵
¹University of Colombo, Colombo, Sri Lanka ²University of Jayawardanapura ³Kalutara General Hospital, Sri Lanka
⁴National Institute of Mental Health, Sri Lanka ⁵Karapitiya Teaching Hospital, Sri Lanka
- P2-252 Neural basis of anti-fatigue effect of newly-developed odor: a magnetoencephalography study**
Emi Yamano¹, Akira Ishii¹, Masaaki Tanaka¹, Naoko Saito², Junji Nakamura², Yasuyoshi Watanabe³
¹Dept Physiol, Osaka City University Graduate School of Medicine, Japan ²Kao Corporation Kansei Science Research
³RIKEN Center for Life Science Technologies
- P2-253 The neural mechanisms of estimating future level of fatigue: a magnetoencephalography study**
Akira Ishii¹, Masaaki Tanaka¹, Emi Yamano¹, Yasuyoshi Watanabe^{1,2}
¹Dept Physiology, Osaka City University Graduate School of Medicine, Osaka, Japan ²RIKEN Center for Life Science Technologies
- P2-254 Region-specific roles of the prelimbic cortex, the dorsal CA1, the ventral DG and ventral CA1 of the hippocampus in the fear return evoked by a sub-conditioning procedure in rats**
Juan Fu, Xiaoli Xing, Xigeng Zheng
Institute of Psychology, Chinese Academy of Sciences

- P2-255 The ongoing property of mouse mPFC-hippocampal synchrony**
Reimi Abe, Yuji Ikegaya
Laboratory of Chemical Pharmacology, Graduate School of Pharmaceutical Sciences, Univ of Tokyo
- P2-256 Animal model of spatial neglect in macaque monkeys**
Kengo Tsujimoto^{1,2}, Masahiro Sawada¹, Masaki Fukunaga^{1,2}, Masatoshi Yoshida^{1,2}
¹National Institute for Physiological Sciences, Okazaki, Japan ²The Graduate University for Advanced Studies, Hayama, Japan
- P2-257 Effect of transcranial direct current stimulation on insight problem solving**
Takatsugu Aihara¹, Takeshi Ogawa², Takeaki Shimokawa¹, Okito Yamashita¹
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Neurodegenerative Disorders

- P2-258 New insights in the mechanisms of neuroprotective effects of ceftriaxone**
Maria A Tikhonova¹, Alexander B Pupyshchev¹, Ying-Jui Ho², Tamara G Amstislavskaya¹
¹FSBSI Scientific Research Institute of Physiology and Basic Medicine, Novosibirsk, Russia
²Department of Psychology, Chung Shan Medical University, Taichung, Taiwan, R.O.C.
- P2-259 Ceftriaxone and erythropoietin produce synergistic neuroprotective effects in an MPTP-induced animal model of Parkinson's disease**
Tamara G Amstislavskaya¹, Maria A Tikhonova¹, Ying-Jui Ho²
¹FSBSI Scientific Research Institute of Physiology and Basic Medicine, Novosibirsk, Russia
²Department of Psychology, Chung Shan Medical University, Taichung, Taiwan, R.O.C.
- P2-260 ESCRT-0 dysfunction compromises autophagic degradation of protein aggregates and facilitates ER stress-mediated neurodegeneration via apoptotic and necroptotic pathways**
Takafumi Hasegawa¹, Ryuji Oshima^{1,2}, Naoto Sugeno¹, Shun Yoshida¹, Junpei Kobayashi¹, Atsushi Takeda³, Nobuyuki Tanaka², Masashi Aoki¹
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- P2-261 Dysregulation of TGF-beta signaling facilitates motor neurodegeneration of ALS mice**
Fumito Endo, Koji Yamanaka
Department of Neuroscience and Pathobiology, Research Institute of Environmental Medicine, Nagoya University
- P2-262 Gender differences in mouse models of oxaliplatin-induced neuropathy**
Li-Hsien Chen, Shen Meng-Ru
National Cheng Kung University, Tainan, Taiwan
- P2-263 Role of Lafora disease proteins in stress granule formation and stress-mediated translational arrest**
Rashmi Parihar, Ganesh Subramaniam
Indian Institute of Technology Kanpur
- P2-264 Effects of the overexpression of TFEB in cellular models of neurodegenerative diseases**
Hiroaki Adachi, Zhe Huang, Kazumasa Okada, Keiko Ohnari, Tomoyo Hashimoto, Tomoko Toyota, Yukio Iwanaka
Univ of Occupational and Environmental Health Sch of Med
- P2-265 Roles of progranulin in adult neurogenesis and neuroinflammatory responses in the hippocampus under immune stress**
Yanbo Ma, Takashi Matsuwaki, Keitaro Yamanouchi, Masugi Nishihara
Dept Vet. Physiol., Grad. Sch. Agr. Life Sci., Univ of Tokyo, Tokyo, Japan
- P2-266 Investigations of spontaneously naturally emerging parkinsonism-cerebellar syndrome in an aged Japanese macaque (*Macaca fuscata yakui*): a potential analogue of multiplesystem atrophy**
Kevin William McCairn¹, Taihei Ninomiya¹, Yuji Nagai^{2,3}, Yasuhiro Go³, Ken-Ichi Inoue¹, Katsuo Kimura¹, Masayuki Matsumoto⁵, Takafumi Minamimoto², Masaki Isoda⁴, Masahiko Takada¹
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⁴Department of Physiology, Kansai Medical University, Osaka ⁵Tsukuba Univ, Tsukuba
- P2-267 Pathophysiological role of TRPM2 in a mouse model of multiple sclerosis**
Hisashi Shirakawa¹, Masato Tsutsui¹, Ryo Hirase¹, Takayuki Nakagawa², Shuji Kaneko¹
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P2-268 Exercise increases cell proliferation in hippocampal dentate gyrus and alleviates motor and cognitive impairments in Parkinsonian ratsChung-Che Wu¹, John C Wu¹, Shih-Chang Hsueh^{2,3}, Tsung-Hsun Hsieh^{2,3,4}, Jing-Huei Lai^{2,3}, Kai-Yun Chen^{2,3}, Yu-Wen Yu^{2,3}, Yung-Chieh Chan^{2,3}, Chia-Hui Li^{2,3}, Yung-Hsiao Chiang^{1,2,3}¹Department of Neurosurgery, Department of Medicine, Taipei Medical University Hospital, Taipei Medical University, Taipei, Taiwan²Graduate Institute of Neural Regenerative Medicine, College of Medical Science and Technology, Taipei Medical University, Taipei, Taiwan³Center for Neurotrauma and Neuroregeneration, Taipei Medical University, Taipei, Taiwan⁴Department of Physical Therapy and Graduate Institute of Rehabilitation Science, College of Medicine, Chang Gung University, Tao**Neurodevelopmental Disorders****P2-269****The neurobiology of young male violent offenders with Conduct Disorder**Jiansong Zhou¹, Xiaoping Wang¹, Fengmei Lu², Xia Cao³, Yingdong Zhang¹¹The 2nd Xiangya hospital, Central South University ²Faculty of Health Sciences, Taipa, Macau SAR, China³The 3rd Xiangya hospital, Central South University**P2-270****Motopsin/PRSS12 and seizure related gene (sez) -6 individually enhance neurite development in PC12 cells**

Miho Mohara, Shinichi Mistui

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P2-271**Neurodegeneration in the Submedial Thalamic Nucleus of *Slc19a3*-Deficient Mice**Kaoru Suzuki¹, Kenichiro Yamada¹, Ai Tsuji², Katsumi Shibata², Nobuaki Wakamatsu¹¹Dept Genetics, Inst Dev Res, Aichi Human Service Center, Aichi, Japan ²Dept Nutr, Sch Human Cult, Univ of Shiga Pref, Shiga, Japan**P2-272****Protective effects of MiADMSA and Nutrient Metal Mixture supplementation against Lead-Induced Developmental Neurotoxicity**

Chand Davuljigari Basha, Rajarami Reddy Gottipolu

Division of Neuroscience, Dept. of Zoology, Sri Venkateswara University, Tirupati, India-517502

P2-273**Prenatal stress causes loss of GABAergic interneurons and perineuronal nets in the cerebral cortex of GAD67-GFP knock-in mouse offspring**Atsuo Fukuda¹, Tianying Wang¹, Yuchio Yanagawa², Tomoko Kawai³, Kenichiro Hata³¹Dept Neurophysiol, Hamamatsu Univ Sch Med, Hamamatsu, Japan²Dept Genet Behav Neurosci, Gunma University Grad Sch Med, Maebashi, Japan³Dept Maternal-Fetal Biol, Natl Res Inst Child Health Dev, Tokyo, Japan**P2-274****The effects of *Ecklonia Stolonifera* Okamura in a rodent model of ADHD with neonatal habenula lesion**Young-A Lee¹, So-Yeon Jeon¹, Yu-Jeong Kim¹, Jae-Sue Choi³, Yukiori Goto²¹Catholic University of Daegu ²Kyoto University, Primate Research Institute, Aichi, Japan³Department of Food and Life Science, Pukyong National University, Busan, South Korea**P2-275****The effects of *Astragalus membranaceus* Bunge leaves in a rodent model of ADHD with neonatal habenula lesion**Yu-Jeong Kim¹, Yukiori Goto², Sang-Hyun Lee³, Young-A Lee¹¹Catholic University of Daegu Department of Food Science and Nutrition ²Kyoto University, Primate Research Institute, Aichi, Japan³Chung-Ang University, Department of Integrative Plant Science, Anseong, South Korea**P2-276****Generation and analysis of MECP2 mutant marmoset**Noriyuki Kishi^{1,2}, Kenya Sato³, Misako Okuno^{1,2}, Taeko Itou^{1,2}, Hirotaka James Okano^{1,4}, Erika Sasaki^{1,3}, Hideyuki Okano^{1,2}¹Lab for Marmoset Neural Architecture, RIKEN BSI, Saitama, Japan ²Dept Physiol, Keio Univ Sch Med, Tokyo, Japan³CIEA, Kanagawa, Japan ⁴Div Regenerative Med, Jikei Univ Sch Med, Tokyo, Japan**P2-277****A novel rat model of prenatal brain injury with intrauterine hypoperfusion**Masahiro Tsuji¹, Jacques-Olivier Coq², Kentaro Otani¹, Yorito Hattori³, Yuko Ogawa¹, Masafumi Ihara³, Mariko Harada-Shiba¹, Makiko Ohshima¹¹Dept Regen Med Tissue Eng, Natl Cerebral & Cardiovascular Ctr, Osaka, Japan²Timone Neurosci Inst, UMR7289, CNRS, Aix Marseille Univ, Marseille, France³Dept Stroke Cerebrovascular Dis, Natl Cerebral & Cardiovascular Ctr, Osaka, Japan**P2-278****Lactational exposure to benzo[a]pyrene (BaP) on neuroimmune biomarkers in hippocampus of an allergic asthmatic mouse model**Win-Shwe Tin-Tin¹, Nan Thin Thin Htike², Shinji Tsukahara², Eiko Koike¹, Rie Yanagisawa¹¹National Institute for Environmental Studies²Division of Life Science, Graduate School of Science and Engineering, Saitama University 255 Shimo-Okubo, Sakura-ku, Saitama Ci

Movement Disorders

- P2-279** **Withdrawn**
- P2-280** **Correlation between the neuronal activity and the severity of Parkinson's disease in mouse model**
 Satomi Kikuta^{1,2}, Yukiyo Nakamura³, Yukio Yamamura³, Noriyasu Homma^{1,5}, Yuchio Yanagawa⁴, Hajime Tamura¹, Jiro Kasahara³, Makoto Osanai^{1,5}
¹Tohoku Univ. Grad. Sch. Med., Sendai, Japan ²JSPS Research Fellow
³Grad. Sch. Fac. Pharm. Sci. Tokushima University, Tokushima, Japan ⁴Gunma Univ. Grad. Sch. Med., Maebashi, Japan
⁵Grad. Sch. Biomed. Eng., Tohoku Univ., Sendai, Japan
- P2-281** **Aberrant calcium release from IP₃ receptor by α -synuclein oligomers: involvement of the calcium-binding protein**
 Kenji Yamamoto^{1,2}, Hideyuki Sawada^{1,2}
¹Dept Neurol, Utano National Hospital, Kyoto, Japan ²Clinical Research Center, Utano National Hospital, Kyoto, Japan
- P2-282** **Effects of non-selective AMPA receptor antagonist perampanel on ALS pathology in sporadic ALS model mice.**
 Megumi Akamatsu¹, Takenari Yamashita¹, Takashi Hosaka¹, Naoki Hirose¹, Sayaka Teramoto¹, Shin Kwak^{1,2}
¹Div. Clin. Biotechnol., Cent. Dis. Biol. Integr. Med., Univ. Tokyo, Japan ²Clin. Res. Cent. Med., Internatl. Univ. Health Welfare
- P2-283** **Perceived timing of sensory events triggering actions in Parkinson's disease**
 Yoshiko Yabe, Penny A Macdonald, Melvyn A Goodale
 BMI, Western Univ, London, Canada
- P2-284** **Alterations in contractile property of hindlimb muscles in diabetic rat**
 Toru Tamaki^{1,2}, Masako Ikutomo², Ken Muramatsu², Masatoshi Niwa¹
¹Graduate School of Health Sciences, Kyorin University, Tokyo, Japan
²Dept Physical Therapy, Health Science University, Yamanashi, Japan
- P2-285** **Involvement of exosomes in degeneration of dopaminergic neurons in drug-induced Parkinson's disease model**
 Reiho Tsutsumi¹, Takahiro Seki¹, Mutsumi Oshima¹, Yuki Kurauchi¹, Akinori Hisatsune^{2,3}, Hiroshi Katsuki¹
¹Dept. Chemico-Pharmacol. Sci., Grad. Sch. Pharm. Sci., Kumamoto Univ., Kumamoto
²Priority Organization for Innovation and Excellence, Kumamoto Univ. ³Program for Leading Grad. Sch. HIGO Program, Kumamoto Univ.
- P2-286** **fNIRS system for monitoring functional hemodynamics in monkey brain toward neurorehabilitation studies**
 Toru Yamada¹, Hiroshi Kawaguchi¹, Junpei Kato^{1,2}, Meiji Matsuda¹, Noriyuki Higo¹
¹Human Informatics Research Institute, National Institute of Advanced Industrial Science and Technology(AIST), Tsukuba, Japan
²Graduate School of Comprehensive Human Sciences, University of Tsukuba, Tsukuba, Japan
- P2-287** **Disease-associated mutant proteins of APTX are dislocated from the granular component in the nucleolus**
 Akihide Koyama¹, Tatsuya Sato², Masayoshi Tada², Atsushi Shiga¹, Akio Yokoseki³, Shuichi Igarashi⁴, Masatoyo Nishizawa², Osamu Onodera³
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³Department of Molecular Neuroscience, Brain Research Institute, Niigata University, Niigata, Japan
⁴Department of Neurology, Niigata City General Hospital, Niigata, Japan

Cerebrovascular Disease and Ischemia

- P2-288** **Modulation of the neurological and vascular complications by grape seed extract in a rat model of spinal cord ischemia reperfusion injury**
 Ismaeel Bin-Jaliah¹, Hussein F Sakr^{1,2}, Amr M Abbas²
¹Department of Physiology, College of Medicine, King Khalid University, Abha, Saudi Arabia
²Department of Medical Physiology, Faculty of Medicine, Mansoura University, Mansoura, Egypt
- P2-289** **Differential effects of prenatal hypoxia on behaviors in male and female mice offspring**
 Reiko Nagano¹, Masatoshi Nagano², Akihito Nakai¹, Toshiyuki Takeshita¹, Hidenori Suzuki²
¹Dept Obstet & Gynecol, Nippon Medical School, Tokyo, Japan ²Dept Pharmacol, Nippon Medical School, Tokyo, Japan

- P2-290** **Changes of hand movements and neural structures in macaques after focal internal capsule infarcts**
Yumi Murata, Noriyuki Higo
Human Informatics Res.Inst., AIST, Ibaraki, Japan
- P2-291** **Lycopene inhibits activation of astrocytes and microglia after cerebral ischemia/reperfusion in gerbils**
Kimikazu Fujita¹, Nobuko Yoshimoto², Hideki Imada³, Hiroyuki Suganuma⁴, Mahito Ohkuma¹, Eiichi Miyachi¹
¹*Dept Physiol, Sch Med, Fujita Health Univ, Toyoake, Aichi, Japan*
²*Dept Nutrition and Food Sciences, Nagoya Bunri Univ. Col, Nagoya, Japan* ³*Aichi Business Col, Nagoya, Japan*
⁴*Research Institute KAGOME Co.Ltd. Tohigi, Japan*
- P2-292** **Efficacy of rat umbilical cord blood cells for treatment of hypoxic-ischemic brain injury in neonatal rats**
Keiko Nakanishi¹, Miharuru Ito², Yoshiaki Sato², Akihiro Hirakawa³, Yujiro Higashi¹
¹*Dept Perinatol, Inst Dev Res, Aichi Human Service Ctr, Aichi, Japan*
²*Div Neonatol, Ctr Maternal-Neonatal Care, Nagoya Univ Hosp, Aichi, Japan* ³*Ctr Adv Med Clin Res, Nagoya Univ Hosp, Aichi, Japan*
- P2-293** **VGF induced in stroke brain enhances neurite extension and confers protection against ischemia**
Atsushi Yamaguchi, Muneki Sakamoto, Yuta Miyazaki, Keiko Kitajo
Dept Neurobiology, Graduate School of Med., Chiba University, Chiba, Japan
- P2-294** **Increased expression of Kir7.1 in oligodendrocyte progenitor cells of the developmental white matter injury model rat**
Sachiyo Misumi, Shino Ogawa, Mina Suzuki, Yoshitomo Ueda, Akimasa Ishida, Cha-Gyun Jung, Hideki Hida
Dept of Neurophysiol & Brain Sci, Nagoya City Univ Grad Sch Med Sci, Nagoya, Japan
- P2-295** **Axonal remodeling underlying motor map reorganization induced by rehabilitative therapy after stroke**
Naohiko Okabe¹, Takashi Shiromoto^{1,2}, Naoyuki Himi¹, Feng Lu¹, Emi Maruyama Nakamura¹, Kazuhiko Narita¹, Osamu Miyamoto¹
¹*Dept physiol 2, Kawasaki Med Sch* ²*Dept Stroke Med, Kawasaki Med Sch*
- P2-296** **MicroRNAs associated with hyperglycemia in ischemic stroke patients**
Yi-Chen Hsieh¹, Nai-Fang Chi^{2,3}, Hung-Yi Chiou⁴
¹*Taipei Medical University* ²*Department of Neurology, Shuang Ho Hospital, Taipei Medical University, New Taipei City, Taiwan*
³*Department of Neurology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan*
⁴*School of Public Health, College of Public Health and Nutrition, Taipei Medical University, Taipei, Taiwan*
- P2-297** **Expression of oxytocin receptors in the peri-infarct tissue of rat brain: protection of oxytocin for injured neurons**
Kana Sugimoto¹, Yuki Mori², Hidekazu Tanaka³, Yuichiro Hirata¹, Yu Kamakura¹, Ryuichi Katada¹, Hiroshi Matsumoto¹
¹*Dept Legal Med, Osaka Univ, Suita, Japan* ²*WPI IFRec, Osaka Univ, Suita, Japan* ³*Dept Biomed Sci, Ritsumeikan Univ, Kusatsu, Japan*
- P2-298** **Neuroprotective effect of molecular hydrogen on ischemic injury in diabetic model mice**
Mami Noda, Chieri Higashi, Ayaka Fukuo, Jiadai Liu
Laboratory of Pathophysiology, Pharmaceutical Science, Univ of Kyushu, Fukuoka
- P2-299** **The effect of protein disulfide isomerase-A3 on the neuronal damage of the rabbit spinal cord after transient ischemia/reperfusion**
Kyuri Hahn¹, Dae Won Kim², Hyo Young Jung¹, Jong Whi Kim¹, Jung Hoon Choi³, Yeo Sung Yoon¹, In Koo Hwang¹, Dae Young Yoo¹
¹*Department of Anatomy and Cell Biology, College of Veterinary Medicine, and BK21PLUS Program for Creative Veterinary Science, Se*
²*Department of Biochemistry and Molecular Biology, Research Institute of Oral Sciences, College of Dentistry, Kangneung-Wonju Nat*
³*Department of Anatomy, College of Veterinary Medicine, Kangwon National University, Chuncheon, South Korea*

Schizophrenia

- P2-300** **Vitamin B6 (Pyridoxamine) deficiency induces carbonyl stress and schizophrenia-like phenotypes in *Drosophila***
Kasumi Kori, Kohei Ueno, Minoru Saitoe
Tokyo Metropolitan Institute of Medical Science

- P2-301 Association of V249I and T280M polymorphisms in the chemokine receptor CX3CR1 and brain function**
Mai Sakai¹, Hikaru Takeuchi⁴, Yoshie Kikuchi², Chiaki Ono², Zhiqian Yu^{1,2,3}, Yasuyuki Taki^{3,4,5}, Ryuta Kawashima^{4,6,7}, Hiroaki Tomita^{1,2,3}
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³Tohoku Medical Megabank Organization, Tohoku University, Japan
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⁵Dept Nuclear Medicine and Radiology, Institute of Development, Aging and Cancer, Tohoku University
⁶Smart Ageing International Research Center, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan
⁷Dept Functional Brain Imaging, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan
- P2-302 Altered resting-state functional connectivity contributes to dysfunctions in auditory processing and verbal working memory in schizophrenia**
Rieko Okada¹, Takashi Itahashi¹, Sayaka Hasegawa², Masayuki Tani², Akira Iwanami², Nobumasa Kato¹, Ryu-Ichiro Hashimoto^{1,3}
¹Medical Institute of Developmental Disabilities Research, Showa University, Tokyo, Japan
²Department of Psychiatry, Showa University School of Medicine
³Department of Language Sciences, Graduate school of Humanities, Tokyo Metropolitan University
- P2-303 Relationship between mismatch negativity deficit and cerebral white matter tract integrity in schizophrenia**
Hsiehyuan Lien¹, Chih-Min Liu¹, Yi-Ting Lin¹, Wen-Yih Isaac Tseng^{2,3,5}, Ming H. Hsieh^{1,4}, Jing-Ying Huang⁵
¹Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan
²National Taiwan University Molecular Imaging Center, Taipei, Taiwan
³Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan
⁴Institute of Biomedical Engineering, College of Medicine, National Taiwan University
⁵Institute of Medical device and imaging, National Taiwan University College of Medicine, Taipei, Taiwan
- P2-304 Amphetamine-induced hyperlocomotor activity in heterozygous Disc1 mutant mice**
Chuan-Ching Lai¹, Li-Jen Lee^{1,2,3}
¹Graduate Institute of Anatomy and Cell Biology, National Taiwan University, Taipei, Taiwan
²Graduate Institute of Brain and Mind Sciences, National Taiwan University, Taipei, Taiwan
³Neurobiology and Cognitive Science Center, National Taiwan University, Taipei, Taiwan
- P2-305 White matter connectivity disruption of schizophrenia revealed by DTI fiber tracking with subcortical seed ROIs**
Shiho Okuhata¹, Satoki Yoda¹, Naohiro Okada³, Noriaki Yahata², Kiyoto Kasai³, Tetsuo Kobayashi¹
¹Graduate School of Engineering, Kyoto University, Kyoto, Japan
²National Institute of Radiological Sciences, Chiba, Japan
³Department of Neuropsychiatry, The University of Tokyo Hospital, Tokyo, Japan
- P2-306 Disturbance in autophagic processes in *Ptpra*-KO mice that correlate with behavioral alteration**
Shuhei Ueda¹, Akiko Sumitomo¹, Kazuko Hirai¹, Akira Sawa², Toshifumi Tomoda¹, Takeshi Sakurai¹
¹MIC, Grad Sch of Med, Kyoto Univ, Kyoto, Japan
²Dept of Psychiatry, Johns Hopkins Univ Sch of Med, Baltimore, MD, USA
- P2-307 No reduction of callosal size on mid-sagittal plane in first-episode schizophrenia: a cross-sectional MRI study**
Michio Takahashi¹, Mie Matsui¹, Mitsuhiro Nakashima¹, Tsutomu Takahashi², Michio Suzuki²
¹Department of Psychology, Graduate School of Medicine and Pharmaceutical Science, University of Toyama, Toyama, Japan
²Department of Neuropsychiatry, Graduate School of Medicine and Pharmaceutical Science, University of Toyama, Toyama, Japan
- P2-308 Identification of rare single nucleotide variants in RTN4R and their contributions to SCZ Susceptibility.**
Hiroki Kimura¹, Yuki Fujita², Chenyao Wang¹, Kanako Ishizuka¹, Itaru Kushima¹, Daisuke Mori¹, Aleksic Branko¹, Toshihide Yamashita², Norio Ozaki¹
¹Department of Psychiatry, Nagoya University Graduate School of Medicine, Aichi, Japan
²Dept of Molecular Neuroscience, Osaka University Graduate School of Medicine, Osaka, Japan

Autism

- P2-309 The synchronization of smiles with face-to-face behaviors of children with autism spectrum disorder during animal-assisted activities**
Atsushi Funahashi¹, Masakazu Hirokawa², Takeshi Aoki³, Yasushi Itoh⁴, Kenji Suzuki^{5,6}
¹Dept Educ and Social Service, Institute Devel Res, Aichi Human Service Center, Aichi, Japan
²Faculty of Engineering, Information and Systems, Univ of Tsukuba, Ibaraki, Japan
³Chubu Animal-assisted Therapy Association, Aichi, Japan
⁴Institute for Developmental Research, Aichi Human Service Center, Aichi, Japan
⁵Center for Cybernetics Res, Univ Tsukuba, Ibaraki, Japan
⁶Japan Science and Technology Agency, Tokyo, Japan

- P2-310 Tactile temporal resolution associates with hypersensitivity in persons with autism-spectrum disorders**
Ayako Yaguchi^{1,2}, Masakazu Ide^{1,3}, Makoto Wada¹
¹Dev Disorder Sect, Dept Rehab Brain Func, Res Inst of NRCD, Saitama, Japan ²Dept Psychol, Univ of Rikkyo, Saitama, Japan
³Japan Society for the Promotion of Science, Tokyo, Japan
- P2-311 Gaze behavior in movies of Japanese and arithmetic class scenes: an eye-tracking study for early diagnosis of children with ASD**
Takahiro Higuchi¹, Yuko Ishizaki^{1,2}, Atsushi Noritake³, Yoshitoki Yanagimoto¹, Hodaka Kobayashi^{1,2}, Kae Nakamura³, Kazunari Kaneko^{1,2}
¹Dept Pediatr, Univ of Kansai Medical, Osaka, Japan
²Dept of Developmental Pediatrics Donated by Nabari City, Univ of Kansai Medical ³Dept Physiol, Univ of Kansai Medical, Osaka, Japan
- P2-312 Dosage-dependent cognitive dysfunctions in a genetic mouse model of 2q13 (Nphp1) duplication**
Keiko Kishimoto¹, Jun Nomura^{1,2}, Kota Tamada¹, Thomas Bourgeron³, Moreno De Luca Daniel⁴, Toru Takumi^{1,2}
¹RIKEN Brain Science Institute, Saitama, Japan ²Graduate School of Biomedical Sciences, Hiroshima University, Hiroshima, Japan
³Institut Pasteur, Paris, France ⁴Department of Psychiatry, Yale University, New Haven, CT, U.S.A.
- P2-313 Seizure severity is not aggravated in the poly (I:C) mouse model**
Megumi Andoh, Ryuta Koyama, Yuji Ikegaya
Lab Chem Pharmacol, Grad Sch Pharm Sci, Univ of Tokyo, Tokyo
- P2-314 Atypical spontaneous functional brain dynamics in adults with high-functioning autism spectrum disorder**
Takashi Itahashi¹, Rieko Okada¹, Haruhisa Ohta¹, Chieko Kanai¹, Motoaki Nakamura^{1,2}, Nobumasa Kato¹, Ryu-Ichiro Hashimoto^{1,3}
¹Medical Institute of Developmental Disabilities Research, Showa University, Tokyo, Japan
²Kanagawa Psychiatric Center, Kanagawa, Japan
³Department of Language Sciences, Graduate School of Humanities, Tokyo Metropolitan University, Tokyo, Japan
- P2-315 HPC-1/syntaxin1A is one of causing gene for autistic spectrum disorder.**
Tomonori Fujiwara¹, Takefumi Kofuji^{1,2}, Tatsuya Mishima¹, Yuko Hayashi³, Masao Tamaru⁴, Kimio Akagawa¹
¹Dept Cell Physiol, Kyorin Univ Sch of Med, Tokyo, Japan
²RI Lab, Kyorin Univ Sch of Med ³Dept Pedit, Univ Med Cent, Faculty of Health and Welfare, Prefect Univ of Hiroshima
⁴Dept Occupational Therapy, Faculty of Health and Welfare, Prefect Univ of Hiroshima
- P2-316 Viral infection during pregnancy causes long term effects on the gene expression in the rat brain**
Takeshi Ohkawara, Michiru Ida-Eto, Masaaki Narita
Dep Dev and Regenerative Med, Mie Univ, Mie, Japan
- P2-317 Atypical Neonatal White Matter Structures of a Non-human Primate Model of Autism Spectrum Disorders**
Koki Mimura^{1,2,3}, Chika Sato², Keiko Nakagaki¹, Ichio Aoki², Takahumi Minamimoto², Noritaka Ichinohe^{1,2}
¹Dept. of Ultrastruct. Res., Nation. Inst. of Neurosci., NCNP, Kodaira, JAPAN
²NIRS, Japan Agency for Quantum and Radiological Science and Technology (QST) ³JSPS Research Fellow (PD)
- P2-318 Possible role of endocannabinoid signaling in autism-like behavior in mice**
Kazuto Sakoori¹, Maya Yamazaki², Kenji Sakimura², Masanobu Kano¹
¹Dept Neurophysiol, Grad Sch Med, Univ of Tokyo, Tokyo, Japan ²Dept of Cellular Neurobiol, BRI, Niigata Univ, Niigata, Japan

Alzheimer's Disease and Dementia

- P2-319 Involvement of extracellular Zn²⁺ in long-term potentiation impairment induced with low nanomolar amyloid β in the dentate gyrus**
Haruna Tamano, Miku Sasaki, Shoko Satoh, Atsushi Takeda
Dep Neurophysiol, Sch Pharm Sci, Univ of Shizuoka, Shizuoka, Japan
- P2-320 Influx of amyloid- β into dentate granule cells via extracellular Zn²⁺ impairs long-term potentiation**
Shuhei Kobuchi, Munekazu Tempaku, Wakana Hashimoto, Haruna Tamano, Atsushi Takeda
Dep Neurophysiol, Sch Pharm Sci, Univ of Shizuoka, Shizuoka Japan
- P2-321 Up-regulation of NSP3 by oligomeric A β accelerates neuronal death through Cas-independent Rap1A activation**
Fujiya Gomi, Shogo Endo, Yoko Uchida
Research Team for Aging Neuroscience, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan

- P2-322 Influx of Extracellular Zn²⁺ into Dentate Granule Cells via Amyloid- β Impairs Long-term Potentiation**
Wakana Hashimoto, Munekazu Tempaku, Shuhei Kobuchi, Haruna Tamano, Atushi Takeda
Dep Neuropsychiol, Sch Univ of Shizuoka, Shizuoka, Japan
- P2-323 In vivo microglial activation and tau deposition in dementia with Lewy bodies**
Tomoyasu Bunai¹, Tatsuihiro Terada¹, Satoshi Kono², Ryo Kuroda², Yasushi Hosoi², Makiko Sakao², Kazuki Watanabe², Hiroaki Miyajima², Etsuji Yoshikawa³, Masami Futatsubashi³, Yasuomi Ouchi¹
¹Department of Biofunctional Imaging, Hamamatsu University School of Medicine, Hamamatsu, Japan
²Internal Medicine 1, Hamamatsu University School of Medicine, Hamamatsu, Japan ³Hamamatsu Photonics KK, Hamamatsu, Japan
- P2-324 A search for novel interacting proteins to modulate synaptic BACE1 activity**
Masakazu Miyamoto^{1,2}, Akira Kuzuya², Yasuha Noda¹, Shinji Ito³, Megumi Uemura², Kengo Asada-Utsugi^{1,2}, Ryoussuke Takahashi², Ayae Kinoshita¹
¹Dept. Human Health Sci. Grad. Sch. Med. Kyoto Univ. Kyoto, Japan ²Dept. Neuro. Kyoto Univ. Grad. Sch. Med. Kyoto, Japan
³Medical Research Support Center. Grad. Sch. Med. Kyoto Univ
- P2-325 Impact of pharmacists in reducing anticholinergic cognitive burden in the elderly**
Sam Kosari
Discipline of Pharmacy, University of Canberra
- P2-326 Fasting activates macroautophagy in neurons of Alzheimer's disease mice but is insufficient to degrade amyloid-beta**
Xigui Chen¹, Kanoh Kondo¹, Kazumi Motoki¹, Hidenori Homma¹, Hitoshi Okazawa^{1,2}
¹Department of Neuropathology, Medical Research Institute, Tokyo Medical and Dental University
²Center for Brain Integration Research, Tokyo Medical and Dental University
- P2-327 Glial responses to amyloid β accumulation in aquaporin-4-deficient Alzheimer's disease model mice**
Yoichiro Abe^{1,2}, Simon Chau¹, Harmony Wada³, Masato Yasui^{1,2}, Takako Niikura³
¹Dept Pharmacol, Keio Univ Sch Med, Tokyo, Japan
²Keio Advanced Research Center for Water Biology and Medicine, Keio Univ, Tokyo, Japan
³Dept info Commun Sci, Fac Sci Tech, Sophia Univ, Tokyo, Japan
- P2-328 Quantitative volume analysis of white matter hyperintensity in dementia**
Kenichi Tabei^{1,2}, Hirotaka Kida¹, Tetsuo Hosoya³, Masayuki Satoh¹, Hidekazu Tomimoto^{1,2}
¹Dept Dementia Prev Therap, Mie Univ, Mie, Japan ²Dept Neurology, Mie Univ, Mie, Japan ³FUJIFILM RI Pharma Co.,Ltd.
- P2-329 Liraglutide ameliorates intracerebral insulin resistance in "Brain Diabetes" rats**
Akiko S. S Shingo¹, Shozo Kito², Toshio Murase¹
¹Okinaka Memorial Institute for Medical Research, Tokyo JPN ²Shonan-Fujisawa Tokushu-kai Hospital, Kanagawa, JPN
- P2-330 Behavioral and electrophysiological analyses of the Alzheimer's disease model mouse that expresses amyloid β oligomer intraneuronally**
Tomoyo Ochiishi¹, Kazuyuki Kiyosue¹, Masami Kaku², Motomichi Doi¹, Tatsuhiko Ebihara¹
¹Biomedical Res Inst, Natl Inst of Advanced Industrial Sci and Technol (AIST), Ibaraki, Japan
²Center for Med Sci, Ibaraki Pref Univ of Health Sci, Ibaraki, Japan
- P2-331 Progranulin overexpression decrease levels of the matured form of cathepsin D due to enhancement of lysosomal acidification**
Yoshinori Tanaka¹, Genjiro Suzuki¹, Masato Hosokawa¹, Fuyuki Kametani¹, Masato Hasegawa¹, Masugi Nishihara²
¹Dementia Research Project, Tokyo Metropolitan Institute of Medical Science ²Veterinary physiology, Univ of Tokyo

Disorders of Neural Systems: Others

- P2-332 Recovery from chronic vomiting through feeding interventions in common marmosets**
Yumiko Yamazaki^{1,2}, Shimpei Kawai³, Hidetoshi Morita⁴, Takefumi Kikusui⁵, Masakado Saiki², Masayuki Inada², Taku Koike², Reiko Nakatomi², Arisa Ishikawa², Atsushi Iriki²
¹Advanced Research Centers, Keio University ²Lab Symb Cogn Develop, RIKEN BSI, Wako, Saitama, Japan
³Lab Small Animal Clinics, Azabu Univ, Kanagawa, Japan
⁴Graduate School of Environmental and Life Science, Okayama University, Okayama, Japan
⁵Companion Animal Res, Sch Veterinary Med, Azabu Univ, Kanagawa, Japan.
- P2-333 Parkinson's disease-linked mutation in DNAJC13 causes specific trafficking defect in endosomal pathway**
Shun Yoshida¹, Takafumi Hasegawa¹, Ryuji Oshima¹, Junpei Kobayashi¹, Naoto Sugeno¹, Akio Kikuchi¹, Atsushi Takeda², Masashi Aoki¹
¹Division of Neurology, Department of Neuroscience & Sensory Organs, Tohoku University Graduate School of Medicine, Sendai, Japan
²Department of Neurology, Sendai-Nishitaga Hospital, Sendai, Japan

- P2-334 Visualization of microautophagy and chaperone-mediated autophagy in primary cultured neurons**
Masahiro Sato¹, Takahiro Seki¹, Ayumu Konno², Yuki Kurauchi¹, Akinori Hisatsune^{3,4}, Hirokazu Hirai², Hiroshi Katsuki¹
¹Dept. Chemico-Pharmacol. Sci., Grd. Sch. Pharm. Sci., Kumamoto Univ. ²Dept. Neurophysiol., Gunma Univ. Grad. Sch. Med.
³Priority Organization for Innovation and Excellence, Kumamoto Univ. ⁴Program for Leading Grad. Sch. HIGO Program, Kumamoto Univ.
- P2-335 Serum Amyloid A1 (SAA1), a new glioblastoma serum biomarker and its significance in clinical diagnosis**
Szu-Yi Chou^{1,2,3}, Shun-Tai Yang^{4,5,6,7}, Khandsuren Baatar^{1,2}, Shing-Chuan Shen⁸, Yu-Kai Su⁴, Wei-Lun Lo⁴, Yi-Shian Yeh⁴, Yudha Nur Patria⁹, Hsiu-Ming Shih¹⁰, Che-Chang Chang⁹, Ching-Yu Lin¹¹
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- P2-336 Dysregulated Akt signaling pathway in spinal and bulbar muscular atrophy (SBMA)**
Madoka Iida¹, Masahisa Katsuno¹, Kentaro Sahashi¹, Hideaki Nakatsuji¹, Naohide Kondo¹, Genki Tohnai¹, Gen Sobue²
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²Research Div of Dementia and Neurodegenerative Disease, Nagoya Univ Grad School of Med, Aichi, Japan
- P2-337 The type IV phosphodiesterase inhibitor rolipram improves facilitation of contextual fear extinction in MPTP-induced mouse model of Parkinson's disease.**
Ken-Ichi Kinoshita¹, Yoshikage Muroi^{1,2}, Toshiaki Ishii^{1,2}
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- P2-338 Znf179 induces growth arrest and forced differentiation of human primary glioblastoma multiforme in a p53-dependant cell cycle regulation mechanism**
Chi-Chen Huang¹, Chi-Long Chen², Kuen-Haur Lee³, Yi-Chao Lee¹, Chi-Yu Fang², Cheng-Fu Chang⁴
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⁴Department of Neurosurgery, Taipei Medical University Hospital, the PhD Program for Neural Regenerative Medicine, Graduate Inst
- P2-339 Phenotypic analysis of wild-type progeny which recipient mother carries mutation in one-carbon-metabolism related gene**
Tamio Furuse¹, Takashi Kohda², Kunio Miyake³, Tomoko Kushida¹, Ikuko Yamada¹, Misho Kashimura¹, Ikuo Miura¹, Hideki Kaneda¹, Kimio Kobayashi¹, Fumitoshi Ishino², Shigeharu Wakana¹
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- P2-340 Gene expression profiling of medium spiny neurons in Huntington disease model mice**
Haruko Miyazaki^{1,2,3,4}, Fumitaka Oyama^{2,5}, Yoshihiro Kino^{2,3,4,6}, Masaru Kurosawa^{2,3,4}, Mizuki Kurosawa², Kenji Ohtawa⁷, Nobutaka Hattori⁴, Tomomi Shimogori³, Nobuyuki Nukina^{1,2,3,4}
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- P2-341 Developmental changes in cerebral activity during the resting state and tactile stimulation task in an infant with congenital hydrocephalus**
Yutaka Fuchino¹, Ikuko Kato², Yukihiko Konishi², Yuji Takano³, Htun Yinmon², Takashi Kusaka², Yukuo Konishi³
¹Department of Language Sciences, Graduate School of Humanities, Tokyo Metropolitan University
²Department of Pediatrics, Faculty of Medicine, Kagawa University ³Center for Baby Science, Doshisha University

- P2-342 Bi-directional brain machine interface using flexible ECoG electrode and optogenetic neuromodulation**
 Fumiaki Yoshida¹, Teppei Araki², Shusuke Yoshimoto², Takafumi Uemura², Taro Kaijyu³, Takafumi Suzuki³, Tsuyoshi Sekitani², Masayuki Hirata¹
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³Center for Information and Neural Networks, Center for Information and Neural Networks, National Institute of Information and Co
- P2-343 Hepatocyte Growth Factor protects demyelination and axonal damage in Experimental Autoimmune Encephalomyelitis.**
 Yoshio Bando¹, Takuma Tanano¹, Chie Sasaki¹, Hiroki Bochimoto², Taichi Nomura¹, Hisaaki Takahashi³, Tsuyoshi Watanabe², Hiroshi Funakoshi³, Shigetaka Yoshida¹
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³Center for Advanced Research and Education (CARE), Asahikawa Medical Univ
- P2-344 Positive allosteric modulators of the $\alpha 7$ nicotinic acetylcholine receptor suppress microglial activation**
 Yasuhiko Izumi¹, Kenta Niwa¹, Akinori Akaike^{1,2}, Toshiaki Kume¹
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²Dept Cell Pharmacol, Grad Sch Pharm Sci, Nagoya Univ, Nagoya, Japan

Molecular, Biochemical and Genetic Techniques

- P2-345 Two-color, two-photon imaging of spiking and subthreshold synaptic potentials *in vivo***
 Masayuki Sakamoto¹, Yuki Bando¹, Vincent Pieribone², Rafael Yuste¹
¹Department of Biological Sciences and Neuroscience, Columbia University, United States
²School of Medicine, Yale University, United States
- P2-346 Visualization of change in BDNF expression in living mice using bioluminescence imaging**
 Mamoru Fukuchi¹, Hironori Izumi², Ayumi Tanaka², Ran Inoue², Hisashi Mori², Shojiro Maki³, Masahiro Kiyama³, Satoshi Otsuka³, Yosuke Maehata¹, Masaaki Tsuda¹
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²Dept Mol Neurosci, Grad Sch of Med & Pharm Sci, Univ of Toyama, Toyama
³Dept Eng Sci, Grad Sch of Inform & Eng, The Univ of Electro-Communications, Tokyo
- P2-347 Functional analysis of Rho GTPase signaling in corticostriatal neurons using a dual viral vector system**
 Kenta Kobayashi¹, Hiromi Sano², Shigeki Kato³, Keisuke Kuroda⁴, Shinichi Nakamuta⁴, Tadashi Isa⁵, Atsushi Nambu², Kozo Kaibuchi⁴, Kazuto Kobayashi³
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⁴Dept of Cell Pharmacol, Nagoya Univ Grad School of Med, Nagoya, Japan ⁵Dep of Dev Physiol, NIPS, Okazaki, Japan
- P2-348 Tetbow: an easy and bright multicolor labeling system for *in utero* electroporation.**
 Richi Sakaguchi^{1,2}, Takeshi Imai^{1,2}
¹Graduate School of Biostudies, Kyoto University, Japan
²Laboratory for Sensory Circuit Formation, RIKEN Center for Developmental Biology
- P2-349 Cell-type specific gene expression imaging in the brain slice**
 Takashi Sugiyama
 Adv Anal Tech Dept, Olympus Corporation, Tokyo, Japan
- P2-350 Optimization of the neuron-specific enolase promoter for AAV vectors**
 Ayumu Konno, Yoichiro Shinohara, Toshinori Ohtani, Hirokazu Hirai
 Dept Neurophysiol & Neural Repair, Gunma Univ, Gunma, Japan
- P2-351 Development of *ex vivo* micro MEMRI**
 Chiika Sato¹, Kazuhiko Sawada², Ichio Aoki¹
¹Molecular Imaging Center, National Institute of Radiological Sciences, Chiba, Japan
²Dept Nutr, Fac Med Health Sci, Tsukuba Int Univ, Tsuchiura, Japan

Disorders of Neural Systems: Others

- P2-352 Memantine induces stereotyped sniffing which is blocked by haloperidol and betahistine in mice**
 Nobue Kitanaka¹, Junichi Kitanaka¹, Sayaka Ogura¹, Yukiya Okada¹, Yumi Mimura¹, Yoshiro Kubota¹, Koh-Ichi Tanaka², Nobuyoshi Nishiyama², Motohiko Takemura¹
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P2-353 **Effects of VMAT inhibitors on methamphetamine-induced hyperlocomotion and stereotyped behaviors in mice**

Junichi Kitanaka¹, Nobue Kitanaka¹, Ayaka Murakami¹, Kazuki Muratani¹, Takashi Kandori¹,
Tae Nakano¹, Koh-Ichi Tanaka², Nobuyoshi Nishiyama², Motohiko Takemura¹

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Neurogenesis and Gliogenesis

- P3-001** **Population dynamics of neural progenitor cells during aging in the cerebral cortex**
Koji Ohira, Yuka Okada
Lab Nutr Brain Sci, Mukogawa Women's Univ, Nishinomiya, Japan
- P3-002** **Transcriptional Basis of Neuronal Diversity in the Mammalian Brain**
Ken Sugino¹, Sacha Nelson², Yasuyuki Shima², David Hunt¹, Lihua Wang¹, Adam Hantman¹, Nelson Spruston¹, Andrew Lemire¹, Serge Picard¹
¹Janelia Research Campus, Ashburn, USA ²Brandeis University, Waltham, USA
- P3-003** **Microglia in the developing mouse neocortical wall: Their distribution, migration, and potential roles**
Yuki Hattori, Yu Naito, Takaki Miyata
Dept Anatomy and Cell Biology, Nagoya University
- P3-004** **Rab11-FIP3 and FIP4, dual effectors for Rab11 and Arf6, regulate distinct steps of cortical neuronal migration.**
Yoshinobu Hara, Hiroyuki Sakagami
Dept. Anatomy, Kitasato Univ. Sch. Med. Kanagawa, Japan
- P3-005** **Expression patterns of QKI during the development of the mouse retina**
Takahiko Suiko^{1,2}, Kensuke Kobayashi^{2,3}, Togo Kawashima^{2,3}, Kentaro Aono^{1,2}, Shinichiro Suzuki^{2,4}, Chieko Koike^{1,2,3,5,6}
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⁴College of Life Sciences, Ritsumeikan University, Kusatsu, Shiga, Japan.
⁵Center for Systems Vision science (CSVS), Ritsumeikan University, Kusatsu, Shiga, Japan.
⁶Precursory Research for Embryonic Science and Technology (PRESTO), JST, Chiyoda-ku, Tokyo, Japan.
- P3-006** **Various Cell Types Construct The Dentate Gyrus During Development**
Hiroshi Shinohara, Yuka Yamamoto, Tatsunori Seki
Dept Histol. Neuroanat., Tokyo Medical University, Tokyo, Japan
- P3-007** **Alteration of cerebellar lobules in Valproate-induced autistic model rat**
Tatsuro Tomida¹, Saki Iwamoto¹, Yukiko Fueta³, Susumu Ueno³, Yuko Sekino⁴, Roman Maev⁵, Naohiro Hozumi², Sachiko Yoshida¹
¹Dept Environ Life Sci, Toyohashi Univ of Technol, Toyohashi, Japan
²Dept Electrical Electronic Info Eng, Toyohashi Univ of Technol, Toyohashi, Japan
³Univ of Occupational and Environmental Health, Kitakyushu, Japan ⁴National Institute of Health Sciences, Tokyo, Japan
⁵University of Windsor, Windsor, Ontario, Canada
- P3-008** **Mechanisms of BMP signaling regulation in the developing hippocampus**
Taichi Kashiwagi¹, Seiji Sioda², Saki Ishihara¹, Kenta Matsue¹, Tatsunori Seki¹
¹Dept Histol and Neuroanat, Tokyo Med Univ, Tokyo, Japan ²Dept Anat, Showa Univ Sch of Med, Tokyo, Japan
- P3-009** **Interaction between neurosphere and cultured glial cell**
Chihiro Nishikawa¹, Nobuto Takahashi¹, Tatsuro Tomida¹, Yukari Mogami(Shigemoto)², Kaoru Sato², Yuko Sekino², Hikaru Mabuchi³, Naohiro Hozumi³, Sachiko Yoshida¹
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²Division of Pharmacology, National Institute of Health Sciences, Tokyo, Japan
³Dept Electrical Electric Info Eng, Toyohashi Univ Technol, Toyohashi, Japan
- P3-010** **FOXO Specifies the Temporal Fate of Drosophila Ventral Olfactory Projection Neurons**
Jia-Yi Wei, Pei-Chi Chung, Hung-Chang Shen, Sao-Yu Chu, Hung-Hsiang Yu
Academia Sinica
- P3-011** **Brain lipid binding protein (BLBP) regulates proliferation but not migration or invasion of C6 glioma cells in vitro**
Han Xiao, Haoming Li, Jianbing Qin, Xiang Cheng, Xinhua Zhang, Guohua Jin
Nantong University

P3-012 Presynaptic protein Synaptotagmin1 regulates the neuronal polarity and axon differentiation in cultured hippocampal neuronsYuriko Inoue¹, Yuji Kamikubo², Hiromitsu Ezure¹, Tomohito Yamana², Chika Sawa³, Jyunji Ito⁴, Yu Kato⁵, Hiroshi Moriyama¹, Naruhito Otsuka¹¹Dep Anat, Showa Univ Sch Med ²Dept. Pharmacol., Juntendo Univ. Sch. Med.³Dep Anat, Showa Univ Sch Med ⁴School of Nursing and Rehabilitation Sciences, Showa University Department of Nursing⁵Department of Neurosurgery, Showa University School of Medicine**P3-013 Analysis of brain structure of Pax6 deficient mice induced hGFAP-Cre**Shinya Yamanaka¹, Yoshihiko Morisue¹, Yutaka Ishida¹, Hitoshi Inada², Noriko Osumi²¹Dept Dev Neurosci, Sch of Med, Tohoku Univ ²Dept Dev Neurosci, Grad Sch of Med, Tohoku Univ**Axon/Dendrite Growth and Circuit Formation****P3-014 Role of Kit ligand as a negative regulator in activity-dependent thalamocortical axon branching**Yumi Miyasaka¹, Yasufumi Hayano², Takeshi Araki¹, Nobuhiko Yamamoto¹¹Osaka Univ, Grad Sch. Front. Biosci., Osaka, Japan ²Osaka University Graduate School of Medicine, Osaka, Japan**P3-015 Selective dendrite removal/maintenance is controlled by activity dependent BTBD3 protein status**

Asuka Matsui, Timothy R Young, Mami U, Aya C Yoshida, Tomomi Shimogori

RIKEN BSI, Saitama, Japan

P3-016 Long-Range Inhibitory Signaling Regulates Robust Neuronal PolarizationTetsuya Takano¹, Mengya Wu¹, Shinichi Nakamuta¹, Naruki Ishizawa¹, Naoki Honda², Takashi Namba¹, Takashi Watanabe², Chundi Xu¹, Tomonari Hamaguchi¹, Yoshimitsu Yura¹, Mutsuki Amano¹, Klaus M Hahn², Kozo Kaibuchi¹

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P3-017 A proteoglycan gradient induce autophagy disruption and axon regeneration failure

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

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P3-018 Dendritic Development of Commissural Neurons Generated from Atoh1-Positive Progenitors in the Developing Mouse Cerebellum

Ryosuke Otake, Takeshi Kaneyama, Ryuichi Shirasaki

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P3-019 Early development of the longitudinal striped compartments in the prenatal mouse cerebellum studied with three-dimensional mapping of Protocadherin 10 expressionSuteera Viboonayasek¹, Gideon Sarpong¹, Hirofumi Fujita^{1,2}, Shinji Hirano³, Izumi Sugihara¹¹Department of Systems Neurophysiology, Tokyo Medical and Dental University, Tokyo, Japan²Department of Otolaryngology-Head and Neck Surgery, Johns Hopkins University School of Medicine, Maryland, U.S.A.³Department of Cell Biology, Kansai Medical University, Osaka, Japan.**P3-020 Slitrk1 is required for proper adrenergic fiber development of prefrontal cortex and activities in novel environment at adolescence stage**Minoru Hatayama^{1,2}, Kei-Ichi Katayama², Noriko Takashima², Jun Aruga^{1,2}¹Department of Pharmacology, Nagasaki University Graduate School of Biomedical Sciences ²RIKEN BSI**P3-021 Identification of Otx2-eIF4E targetome in cortical plasticity with RNA immunoprecipitation-sequencing (RIP-seq)**Xubin Hou¹, Yiwei Ling², Akiko Sakai¹, Shujiro Okuda², Sayaka Sugiyama¹¹Lab. of Neuronal Development, Grad Sch of Med and Dent Sci, Niigata Univ, Niigata, Japan²Bioinformatics Lab., Grad Sch of Med and Dent Sci., Niigata Univ, Niigata, Japan**P3-022 Intrinsic and Extrinsic Control of Layer IV Neuron Identity in the Cerebral Cortex**

Tien-Cheng Wang, Kenichi Toma, Carina Hanashima

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P3-023 Function of the Reelin-Nck signaling pathway during mouse neocortical development

Kanehiro Hayashi, Seika Inoue, Ken-Ichiro Kubo, Kazunori Nakajima

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P3-024 Determination of spiny stellate neuronal fate in barrel cortex by thalamocortical inputs

Timothy R Young, Asuka Matsui, Satomi Kikuchi, Tomomi Shimogori

RIKEN BSI

- P3-025 Axonal regeneration after nerve injury induces phosphorylation of GAP-43**
 Masayasu Okada^{1,2,3}, Sami Kawasaki^{2,3}, Kosei Takeuchi^{3,4}, Michihiro Igarashi^{2,3}
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³Division of Molecular and Cellular biology, Niigata University, Graduate School of Medicine and dental sciences, Niigata, Japan
⁴biology, Aichi Med Univ, Aichi, Japan
- P3-026 Pheromone-sensing circuit is specified by Eph/Ephrin-mediated dendrodendritic segregation in *Drosophila***
 Takahiro Chihara^{1,2,3}, Marie Anzo¹, Sayaka Sekine¹, Shirin Makihara¹, Kinhon Chao¹, Masayuki Miura^{1,2}
¹Dept Genetics, Grad Sch Pharm Sci, Univ of Tokyo ²AMED-CREST ³Dept Biol Sci, Grad Sch Sci, Hiroshima Univ

Ion Channels and Excitable Membranes

- P3-027 Spatial dynamics of action potentials estimated by dendritic Ca²⁺ signals in mechanosensory projection neurons of insect**
 Hiroto Ogawa¹, Mitani Ruriko²
¹Dept Bio Sci, Fac Sci, Hokkaido Univ, Sapporo, Japan ²Biosystem Sci, Grad Sch Life Sci, Hokkaido Univ, Hokkaido, Japan
- P3-028 Excitatory roles of WNK3 in layer V pyramidal neurons in the prefrontal cortex**
 Adya Saran Sinha¹, Yasushi Hosoi¹, Eisei Sohara², Hiroki Mutoh¹, Tenpei Akita¹, Shinichi Uchida², Atsuo Fukuda¹
¹Dept Neurophysiol, Hamamatsu Univ Sch Med, Hamamatsu, Japan ²Dept Nephrol, Tokyo Medical and Dental Univ, Tokyo, Japan
- P3-029 Automated whole cell patch clamp recordings from human iPSC derived neurons**
 Kazuya Tsurudome¹, Keita Takeuchi¹, Yuka Shibano¹, Shunsuke Yoshida², Makoto Honda², Yuji Tsurubuchi¹
¹Biolin Scientific K.K. ²ReproCELL, Inc.
- P3-030 Characteristic-frequency-dependent expression of low-voltage-activated Ca²⁺ channels in avian nucleus laminaris**
 Ryota Fukaya, Rei Yamada, Hiroshi Kuba
 Dept Cell Physiol, Nagoya Univ, Aichi, Japan
- P3-031 Synaptic integration at local dendrite of auditory coincidence detector neurons.**
 Rei Yamada¹, Hiroshi Kuba^{1,2}
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- P3-032 Bidirectional regulation of ROS production by voltage-gated proton channels in microglia**
 Takafumi Kawai¹, Yoshifumi Okochi¹, Tomohiko Ozaki², Yoshio Imura³, Kenji Sakimura⁴, Schuichi Koizumi³, Toshihide Yamashita², Yasushi Okamura¹
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⁴Dept. Cellular Neurobiology, Brain Research Institute, Niigata, Japan
- P3-033 Modelling analysis on activity-dependent modulation of axonal spikes of the hippocampal mossy fibers**
 Haruyuki Kamiya
 Dept Neurobiol, Grad Sch Med, Hokkaido Univ, Hokkaido
- P3-034 Calcium binding proteins interact with TRPM4 ion channel**
 Kristyna Bousova^{1,2}, Petr Herman³, Lucie Bednarova¹, Jiri Vondrasek¹, Jan Teisinger²
¹Bioinformatics group, Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague, Czech Republic
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Synapse

- P3-035 GluD1 and Cbln1 interaction plays an important role in synapse formation between particular neurochemical neurons in the parabigeminal nucleus and dorsolateral geniculate nucleus.**
 Kohtarou Konno¹, Koji Nishikawa¹, Shinji Yamada¹, Michisuke Yuzaki², Kenji Sakimura³, Masahiko Watanabe¹
¹Dept Anat, Hokkaido Univ, Grad Sch of Med, Sapporo, Japan ²Dept Physiology Sch Med Keio Univ Tokyo, Tokyo, Japan
³Dept Cell Neurobiol, Brain Res Inst, Niigata Univ, Niigata, Japan

- P3-036** **Effects of missense mutations associated with autism spectrum disorder on the processing and function of synaptic adhesion molecule Neuroligin 4X**
Misaki Kimura, Takafumi Yumoto, Yosuke Nao, Taisuke Tomita
Laboratory of Neuropathology and Neuroscience, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan
- P3-037** **Visualization of neurotransmitter release in the developing neurosphere cells using the enzyme-linked photo-assay**
Nobuto Takahashi¹, Hikaru Mabuchi², Yukari Shigemoto-Mogami³, Kaoru Sato³, Naohiro Hozumi², Sachiko Yoshida¹
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²Dept Electrical Electronic Info Eng, Toyohashi Univ Technol, Toyohashi, Japan
³Division of Pharmacology, National Institute of Health Sciences, Tokyo, Japan
- P3-038** **Different roles of two splicing variants of afadin in mossy fiber synapse differentiation**
Tomohiko Maruo^{1,5}, Kenji Mandai^{1,5}, Shotaro Sakakibara¹, Yu Itoh¹, Takeshi Fujiwara^{2,5}, Shujie Wang^{2,5}, Kousyoku Sai², Aika Kaito², Xiaoqi Geng^{3,4,5}, Masahiro Mori^{3,4,5}, Akira Mizoguchi^{2,5}, Yoshimi Takai^{1,5}
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³Dept Cell Physiol, Kobe Univ, Hyogo, Japan ⁴Fac Health Sci, Kobe Univ, Hyogo, Japan ⁵CREST
- P3-039** **Serotonergic regulation of the excitatory synaptic transmission in the dentate granule cells are not uniform along the dorsoventral axis of the hippocampus**
Kanako Nozaki, Yasuo Furukawa
Integrated Arts and Sci., Hiroshima Univ., Hiroshima, Japan
- P3-040** **Dendritic integration of excitatory inputs of distinct origins to distinct dendrite compartments in the central amygdala**
Masashi Nagase^{1,2}, Ayako M Watabe^{1,2}, Fusao Kato^{1,2}
¹Dept Neurosci, Jikei Univ Sch Med, Tokyo, Japan ²Center for Neurosci Pain, Jikei Univ Sch Med, Tokyo, Japan
- P3-041** **The entrainment of spontaneous Ca transients in CA1 pyramidal neurons of rat hippocampal slices depends on the field intensities**
Ichiro Kato¹, Masashi Inoue², Hiroyoshi Miyakawa², Toru Aonishi¹
¹Department of Computational Intelligence and Systems Science, Tokyo Institute of Technology, Kanagawa, Japan
²Laboratory of Cellular Neurobiology, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan
- P3-042** **Fast glutamate release detection in normal and valproate- administrated rat cerebellum**
Tetsuri Mikami¹, Kazunori Watanabe¹, Yukiko Hueta⁴, Susumu Ueno⁴, Yuuko Sekino³, Naohiro Hozumi², Sachiko Yoshida¹
¹Dept Environ Life Sci, Toyohashi Univ Technol, Toyohashi, Japan
²Department of Electrical Electronic Information Engineering, Toyohashi University of Technology, Toyohashi, Japan
³Division of Pharmacology, National Institute of Health Sciences, Tokyo, Japan
⁴Univ of Occupational and Environmental Health, Kitakyushu
- P3-043** **Nectin-2α in the mouse medial habenula**
Hajime Shiotani^{1,2}, Kenji Mandai^{1,4}, Muneaki Miyata^{1,4}, Tomohiko Maruo^{1,4}, Aika Kaito^{3,4}, Shujie Wang^{3,4}, Takeshi Fujiwara^{3,4}, Akira Mizoguchi^{3,4}, Hideki Mochizuki², Yoshimi Takai^{1,4}
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²Dept Neurol, Osaka Univ Grad Sch Med, Osaka, Japan ³Dept Neural Regen Cell Commu, Mie Univ Grad Sch Med, Mie, Japan
⁴JST, CREST, Kobe, Japan
- P3-044** **Quantitative Morphological Analysis of Presynaptic Fine Structures in the Mouse Hippocampus by Focused Ion Beam-Scanning Electron Microscopy**
Yugo Fukazawa¹, Ruwaida Elhanbaly^{1,2}, Tatsuya Ishikawa¹
¹Div Brain Str Func, Univ of Fukui, Fukui, Japan ²Dept Anat Hist, Fac Vet Med, Assiut Univ, Assiut, Egypt
- P3-045** **Quantitative analysis of vesicle recycling at the calyx of Held synapse**
Qianwen Zhu
Institute of Biophysics, Chinese Academy of Sciences



Synaptic Pasticity

- P3-046** **RBFOX3/NeuN Controls Brain Development, Postnatal Neurogenesis and Synaptic Function**
Yi-Sian Lin¹, Han-Ying Wang¹, De-Fong Huang¹, Pei-Fen Hsieh¹, Susan Shur-Fen Gau², Hsien-Sung Huang¹
¹Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, Taipei, Taiwan
²Department of Psychiatry, College of Medicine, National Taiwan University, Taipei, Taiwan
- P3-047** **Possible Mechanism of Cholinergic Modulation on Glutamatergic Neural Activity in Hippocampus**
Toyohiro Sato¹, Yoshiaki Ohi², Daisuke Kato¹, Akira Haji², Noriyuki Matsukawa¹
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- P3-048 N-glycosylation of AMPA receptor play a key role in synaptic plasticity**
Yoshihiko Wakazono¹, Ryosuke Midorikawa¹, Munal B Kandel¹, Shogo Oka², Kogo Takamiya¹
¹Dept Neurosci, Integr physiol, Univ of Miyazaki, Miyazaki, Japan ²Dept Biol Chem, Grad Sch of Med, Kyoto Univ, Kyoto
- P3-049 Visualization of spontaneous brain activity during pain chronification process with manganese-enhanced magnetic resonance imaging (MEMRI)**
Kei Shinohara^{1,2,3}, Yukari Takahashi^{1,2}, Tomokazu Tsurugizawa⁴, Ryo Ikeda^{2,3}, Keishi Marumo^{2,3}, Fusao Kato^{1,2}
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- P3-050 FRET-FLIM measurement with a *trans*-SNARE-probe detecting the mechanical force from dendritic spine to pre-synaptic bouton**
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- P3-051 The genes required for synaptic plasticity in the *Drosophila* visual system**
Tomohiro Araki¹, Hinata Kawamura¹, Mai Shimozono¹, Atsushi Sugie², Satoko Hakeda-Suzuki¹, Takashi Suzuki¹
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- P3-052 GluA1 N-glycosylation regulates channel properties of AMPA receptors**
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- P3-053 cAMP production induced by AL-MB synaptic transmission reduces Ca²⁺ responses in *Drosophila* MB**
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- P3-054 Roles of the endocannabinoid 2-arachidonoylglycerol in neuronal circuit development of the mouse barrel cortex**
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- P3-055 Impact of molecular interactions of metabotropic glutamate receptor and drebrin on synaptic structural plasticity in hippocampal neurons**
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Glial Mechanisms

- P3-056 Decreased glial GABA and tonic inhibition in cerebellum of mouse model for ADHD**
Bo-Eun Yoon¹, Junsung Woo², O-Gyeong Gwon¹, C. Justin Lee²
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- P3-057 Functional analysis of DISC1 binding protein DBZ in oligodendrocyte differentiation**
Shoko Shimizu, Shingo Miyata, Takashi Tanaka, Masaya Tohyama
Division of Molecular Brain Science, Research Institute of Traditional Asian Medicine, Kinki Univ., Osaka
- P3-058 Interactive Effect of Temperature and Pressure on Cell Death and Cell Cycle of Astrocytes**
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- P3-059 Molecular basis of microglial activation regulated by hypoxanthine**
Tomomi Okajima, Fuminori Tsuruta, Tomoki Chiba
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- P3-060 Dibutyl-cAMP induced PAD expressions via PKA pathway in human astrocytoma U-251MG cells**
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- P3-061** **Immunohistochemical visualization of glycogen reveals age-dependent astrocytic distribution**
Yuki Oe¹, Otto Baba², Takakazu Mitani³, Hitoshi Ashida³, Kouichi C Nakamura⁴, Hajime Hirase^{1,5}
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³Graduate School of Agricultural Science, Kobe University, Hyogo, Japan ⁴Graduate School of Medicine, Kyoto University, Kyoto, Japan
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- P3-062** **The pathological impact of oligodendrocyte lineage cells on multiple system atrophy**
Seiji Kaji, Takakuni Maki, Norihito Uemura, Yasuhiro Kawamoto, Makoto Urushitani, Ryosuke Takahashi
Dept Neurology, Kyoto Univ, Kyoto
- P3-063** **Effect of pressure and temperature on the viability, cell death and cell cycle of human-derived glioblastoma cell line A-172**
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²Department of Science and Engineering for Sustainable Innovation, Faculty of Science and Engineering, Soka University
- P3-064** **Longterm Glio-vascular Interactions Characterized with in vivo Two-photon Microscopy in Anesthetized Mouse Cortex**
Masahiro Nitta¹, Tomomi Nakahara², Ryo Hoshikawa¹, Hiroya Yuki¹, Hiroyuki Takuwa³, Yutaka Tomita⁴, Norihiro Suzuki⁴, Iwao Kanno³, Kazuto Masamoto^{3,5}
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Olfaction and Taste

- P3-065** **Abdominal gland-derived steroids in the newt, *Cynops pyrrhogaster* may act as pheromones**
Fumiyo Toyoda¹, Tomoaki Nakada², Shogo Haraguchi³, Kazutoshi Yamamoto³, Kazuyoshi Tsutsui³, Sakae Kikuyama³
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³Department of Biology, Waseda University, and Center for Medical Life Science of Waseda University, Tokyo 162-8480, Japan
- P3-066** **Neural mechanisms underlying odor preference choice in *Drosophila* larva**
Yusuke Dairyo, Kazuo Emoto
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- P3-067** **Effects of D/L Valine on the development of taste circuit from late fetal to neonatal stage**
Akiko Arata¹, Kurita Nakayama¹, Chiaki Yoshida¹, Seiichi Morokuma²
¹Div. of Physiome, Dept. of Physiology, Hyogo College of Medicine
²Research Center for Environmental Developmental Medical Science, Kyushu Univ. Fukuoka, Japan
- P3-068** **Oxytocin is involved in the pheromonal memory formation in the accessory olfactory bulb in mice**
Hajime Suyama¹, Saori Tsuchiya¹, Tatsuya Hattori¹, Kana Murata¹, Megumi Naito¹, Miho Nagasawa¹, Katsuhiko Nishimori², Kazutaka Mogi¹, Takefumi Kikusui¹
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²Lab Mol Biol, Grad Sch Agric Sci, Tohoku Univ, Sendai, Japan
- P3-069** **Sampling mode- and concentration-invariant temporal odor coding by airflow-driven neuronal oscillations**
Ryo Iwata^{1,2}, Takeshi Imai^{1,3}
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- P3-070** **Changes in the odor responses of olfactory neural activities of the land slug induced by in vitro odor-aversion conditioning**
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³Grad Sch of Engineering, Tohoku Univ, Miyagi, Japan ⁴College of Science and Technology, Nihon Univ, Tokyo, Japan
- P3-071** **Dissection of Neural Circuit Mediating Olfactory Alarm Reaction in Zebrafish**
Miwa Masuda^{1,2}, Sayoko Ihara^{2,3}, Tetsuya Koide¹, Nobuhiko Miyasaka¹, Noriko Wakisaka¹, Keiichi Yoshikawa³, Kazushige Touhara^{2,3}, Yoshihiro Yoshihara^{1,2}
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P3-072 Two different distributions of the NaCl responses in the parabrachial nucleus in rats

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P3-073 Detection of functional connectivity from the olfactory cortex

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Audition

P3-074 Optical imaging-based parcellation of the marmoset auditory cortex

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P3-075 Neural activity is increased during pair song over non-pair song in female zebra finch.

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P3-076 Characteristics of EEG oscillations specific to chords

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P3-077 Dose cochlear stimulation with pulsed infrared laser create the intelligible perception of speech sounds?



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P3-078 Response properties of a secondary auditory neuron in the fly brain

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P3-079 Species comparison of auditory response behavior and auditory systems in *Drosophila*

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P3-080 Integration of visual and auditory signals in fruit flies

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P3-081 The establishment of behavioral analysis for auditory response of single fruit flies.

Yuki Ishikawa, Natsuki Okamoto, Azusa Kamikouchi
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P3-082 Vagus nerve stimulation modulates the stimulus-specific adaptation in rat auditory cortex

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P3-083 The effect of illusionary perception of sounds on mismatch negativity (MMN):a magnetoencephalography (MEG) study

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Vision

P3-084 Chronic two-photon calcium imaging of layer 5 microcolumns in mouse visual cortex

Taisuke Yoneda, Hisato Maruoka, Seiichiro Sakai, Nao Nakagawa, Toshihiko Hosoya
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P3-085 A hypothesis for a mechanism of the proximity role in visual search

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- P3-086 A retinal neuron network model to reproduce spatio-temporal properties of magnocellular ganglion cells**
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²Faculty of Biology-Oriented Science and Technology, Kinki University, Wakayama, Japan
- P3-087 Spatial relation between ocular dominance map and orientation map in layer II of macaque V1 at cellular level resolution.**
Ryosuke F Takeuchi¹, Koji Ikezoe^{1,2,3}, Mikio Inagaki^{1,2}, Kazuhito Hakumoto¹, Ichiro Fujita^{1,2}
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- P3-088 Color representation in the first layer of a convolutional neural network**
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- P3-089 Noradrenaline improves visual detectability via β -adrenergic receptor in a stimulus spatial frequency dependent manner**
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- P3-090 Experience-dependent spatial expectations in mouse visual cortex**
Fiser Aris, David Mahringer, Hassana Oyibo, Anders Petersen, Marcus Leinweber, Georg Keller
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- P3-091 Gain modulation and neuronal noise in V1 simple cells**
Koichiro Nishi¹, Kota S Sasaki^{1,2}, Izumi Ohzawa^{1,2}
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- P3-092 Experience dependent maturation of spatial frequency tunings in excitatory and inhibitory neurons in mouse primary visual cortex**
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- P3-093 Correspondence between the representations of convolutional neural networks and the activities in inferior temporal cortex measured by electrocorticography**
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²Dept of Physiol, Niigata Univ Grad Sch Med Dent Sci, Niigata, Japan
- P3-094 Studying perceptual representations in mice with a fully-automated training system for voluntary head-fixation**
Ryo Aoki, Dmitry Lyamzin, Andrea Benucci
RIKEN BSI
- P3-095 BRAG2c, a GDP/GTP exchange factor for Arf6, localizes at mouse photoreceptor synapses possibly through the interaction with β -dystrophin and dystroglycan.**
Hiroyuki Sakagami, Masahiro Fukaya
Department of Anatomy, Kitasato University School of Medicine
- P3-096 Reversal of preferred direction of neurons in macaque areas MT and MST during saccades**
Hironori Kumano, Shigeru Kitazawa
Dynamic Brain Network Lab, Grad Sch Frontier Biosci, Osaka Univ, Osaka, Japan
- P3-097 Light stimuli alter the activity status of CREB and TORC1 in the primary visual cortex of adult marmosets**
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- P3-098 Visual change detection process facilitates perceptual alternation**
Tomokazu Urakawa, Mao Bunya, Osamu Araki
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- P3-099 Columnar organization of face orientation processing in human occipital face area**
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- P3-100 Visual Motion Processing in Mouse Higher Visual Areas**
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- P3-101 Modulation of response properties of retinal ganglion cells by the global jitter motion**
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- P3-102 Suppressive subunits for macaque V1 and MT cells**
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- P3-103 Temporal analysis of GABAergic effect on shaping the spatial frequency tuning of relay cells in the dorsal lateral geniculate nucleus of the cat**
Akihiro Kimura, Satoshi Shimegi, Fuyuki Ueda, Akinori Sato, Hiromichi Sato
Grad. Sch. of Medicine, Osaka Univ.
- P3-104 Varieties of perceptual instability and their neural correlates**
Tomohiro Ishizu, Semir Zeki
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Somatosensation

- P3-105 Systemic administration of resveratrol suppress the neuronal activity of nociceptive spinal trigeminal nucleus caudalis in rats**
 Shiori Takehana¹, Kenta Sekiguchi¹, Maki Inoue², Yoshiko Kubota³, Yoshihiko Ito³, Kei Yui³, Yoshihito Shimazu¹, Mamoru Takeda¹
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²Lab. of Physiol 2, Dep of Vet Sci, Sch of Vet Med, Azabu Univ ³Health Sci Res Cent, FANCL Res Inst
- P3-106 An immunocytochemical study for the local glutamatergic system in rat trigeminal ganglion..**
Hana Hayasaki¹, Atsuo Fukuda², Yoshiro Sohma³
¹Dept Health science, Kansai Univ Welfare sciences, Japan ²Dept Physiol, Hamamatsu Univ Sch Med, Hamamatsu, Japan
³Dept Pharmacol, Keio Univ Sch Med, Japan
- P3-107 Functional mapping of rat barrel cortex for spatiotemporal optogenetic patterns to whiskers**
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- P3-108 Neural and mechanical contributions to primary afferent responses in the rat vibrissal system: a window into tactile encoding in the somatosensory periphery**
Takahiro Furuta¹, Anne Et Yang², Satomi Ebara³, Naoyuki Miyazaki⁴, Kazuyoshi Murata⁴, Daichi Hirai¹, Ken-Ichi Shibata¹, Takeshi Kaneko¹, Mitra JZ Hartmann²
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- P3-109 The activation of paralemniscal pathway following the whisker sensory nerve injury**
Hironobu Osaki, Yoshifumi Ueta, Mariko Miyata
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- P3-110 In vivo electrophysiological evaluation of Channelrhodopsin-2-expressed dorsal root ganglion neurons in adult rats**
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- P3-111 Phase angle has information on temporal relationship of signals in functional connectivity study in human brain magnetoencephalography analysis**
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- P3-112** Differential adeno-associated virus mediated gene transfer to dorsal root ganglion neurons with different size in common marmosets
Moeko Kudo¹, Sidikejiang Wupuer¹, Ken-Ichi Inoue², Masahiko Takada², Kazuhiko Seki¹
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- P3-113** Brain regions involved in thermal perception
Kei Nagashima¹, Yuka Aizawa¹, Mizuki Tsunakawa¹, Hiroki Nakata², Tokiko Harada³, Norihiro Sadato³
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- P3-114** Expression of gastrin-releasing peptide in the trigeminal sensory system in the musk shrew, *Suncus murinus*
Keiko Takanami^{1,2}, Hirotaka Sakamoto¹
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- P3-115** Expression of PGE2 synthase and EP receptors in the rat spinal cord following peripheral nerve injury
Kimiko Kobayashi, Hirosato Kanda, Hiroki Yamanaka, Masamichi Okubo, Koichi Noguchi
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Multisensory Integration

- P3-116** Neural circuit basis for the behavioral switch or decision-making in *C. elegans* chemotaxis to alkaline pH
Takashi Murayama, Ichiro Maruyama
OIST, Okinawa, Japan
- P3-117** Multisensory integration in early stage of sensory processing of cricket
Makoto Someya¹, Hiroto Ogawa²
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- P3-118** Lateral prefrontal activity during the recognition of congruent action category between execution and observation : a near-infrared spectroscopy study
Hiroshi Shibata¹, Takuya Onuma², Yasuhiro Takeshima³, Yuwadee Penwannakul², Nobuyuki Sakai²
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²Graduate School of Arts and Letters, Tohoku University, Miyagi, Japan
³Faculty of Human Studies, Bunkyo Gakuin University, Saitama, Japan
- P3-119** Interactions between Posterior Parietal and Primary Motor Cortices relates to Rubber Hand Illusion
Reina Isayama^{1,2}, Michael Vesia², Gaayathiri Jegatheeswaran^{1,2}, Lucilla Cardinali^{3,4}, Alessandro Farné³, Robert Chen^{1,2}
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³Lyon Neuroscience Research Center, Lyon, France ⁴University of Western Ontario, The Brain and Mind Institute, London, ON, Canada
- P3-120** Neurocognitive networks underlying multisensory perception
Arpan Banerjee
National Brain Research centre
- P3-121** Parallel encoding of spatial memory and self-motion in navigating *Drosophila*
Hiroshi M. Shiozaki, Hokto Kazama
RIKEN BSI, Wako, Japan
- P3-122** Higher cortical functions required for sound-shape associative learning in mice
Manabu Ogi^{1,2}, Tatsuya Yamagishi^{1,2}, Hiroaki Tsukano¹, Daiki Kamatani¹, Ryuichi Hishida¹, Arata Horii², Takeshi Yagi^{3,4}, Katsuei Shibuki^{1,4}
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- P3-123** Impaired prediction error responses in the posterior parietal cortex of mice with reduced diversity of protocadherin- α
Kohei Yoshitake¹, Hiroaki Tsukano¹, Ryuichi Hisida¹, Takeshi Yagi^{2,3}, Katsuei Shibuki^{1,3}
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- P3-124** Visualization of HCN4-expressing neurons with GFP using *Tet*-expression system in the mouse central nervous system
Noriyuki Nakashima, Makoto Takano
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- P3-125 Multisensory inputs induce phase locking of cortical slow oscillation in a cell-type selective manner**
Satoshi Kuroki^{1,2}, Takamasa Yoshida¹, Hidekazu Tsutsui^{3,4}, Takayuki Michikawa⁴, Mizuho Iwama¹, Atsushi Miyawaki⁴, Shigeyoshi Itohara¹
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- P3-126 Calcium imaging of insular cortex during social interaction in freely moving mice**
Nobuo Kunori¹, Hiromu Monai², Youichi Iwai², Hajime Hirase², Toru Takumi¹
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- P3-127 Cross-modal modulation of wind-elicited walking behavior and descending neuronal activities requires preceding auditory stimulus in the cricket**
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- P3-128 Double flash illusion in Mongolian Gerbil : The ethological approach using novel object recognition procedure**
Ryo Sato, Yuta Tamai, Takashi Noguchi, Shizuko Hiryu, Kohta I. Kobayashi
Graduate School of Life and Medical Sciences, Doshisha University

Posture and Gait

- P3-129 The Effect of Repetitive Ankle Dorsiflexion on Functional Stretch Reflex and Postural Sway while Standing**
Hiroshi Saito¹, Tomoya Kinota², Yuki Suzumori³, Satoshi Kasahara¹, Masanori Yamanaka¹
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- P3-130 Improvements in motor performance and changes in postural control during a repetitive reaching task in elderly people**
Yuki Suzumori¹, Hiroshi Saito², Mina Samukawa², Masanori Yamanaka², Harukazu Tohyama²
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- P3-131 Comparison of neuronal activity in supplementary motor area between bipedal and quadrupedal locomotion of unrestrained monkeys**
Katsumi Nakajima, Yasuo Higurashi, Akira Murata, Masahiko Inase
Dept Physiol, Facult Med, Kindai Univ, Osaka, Japan
- P3-132 Kinematics and muscle activity during bipedal and quadrupedal locomotion in Japanese monkeys**
Yasuo Higurashi, Katsumi Nakajima, Akira Murata, Masahiko Inase
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Rhythmic Motor Pattern Control

- P3-133 Analysis of Rhythmic Jaw Movements Induced by Repetitive Electrical Stimulation of the Amygdaloid Nucleus in the Rat**
Yoshihide Satoh, Ken'ichi Ishizuka, Mutsumi Takahashi, Shin-Ichi Iwasaki
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- P3-134 Effects of aging on the food intake and the synaptic function in the feeding behavior of *Aplysia kurodai***
Tatsumi Nagahama, Risa Abe, Motohiro Muramatsu, Atsuhiro Kashima
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- P3-135 Tyraminerbic regulation of motor neuron activity in *C. elegans***
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- P3-136 Localization of the pattern generating circuits responsible for hopping gait in the α -chimaerin mouse spinal cord**
Hiroshi Nishimaru¹, Kenta Inoue², Ryota Kobayashi³, Sergio Vidiella⁶, Jumpei Matsumoto¹, Shigeyoshi Itohara⁴, Takuji Iwasato⁵, Hisao Nishijo¹
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- P3-137 Neural circuits that mediate backward escape responses to specific sensory stimuli in *Drosophila* larvae**
Suguru Takagi¹, Sawako Niki², Dohjin Miyamoto¹, Hiroshi Kohsaka², Richard Fetter³, Albert Cardona³, Akinao Nose^{1,2}
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- P3-138 Effects of stimulus intensities on the induced jaw movement patterns in guinea pigs**
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- P3-139 Identification of excitatory segmental interneurons that coordinate muscle contractions at the beginning of larval locomotion in *Drosophila***
Eri Hasegawa¹, Yumi Sakamaki¹, Maarten Zwart², Richard Fetter², Albert Cardona², James Truman², Akinao Nose¹
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- P3-140 Developmental defect of respiratory center in the medulla of Pax6 mutant rats**
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³Dept Dev Neurosci, Tohoku Univ, Sendai, Japan
- P3-141 Optogenetics therapy for restoring locomotion after severe spinal cord injury**
Kenta Takashima¹, Naoji Matsuhisa¹, Akira Shimada¹, Peter Zalar¹, Tomoyuki Yokota¹, Masaki Sekino¹, Hiromu Yawo², Takao Someya¹, Hiroshi Onodera¹
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- P3-142 An optogenetic analysis of forward and backward locomotion in *C. elegans***
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- P3-143 Neuronal circuits that control rhythmic pectoral fin movements in larval zebrafish**
Yuto Uemura¹, Shin-Ichi Higashijima², Yoichi Oda¹, Yukiko Kimura²
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- P3-144 Identification of interneurons that induce backward escape behavior in *Drosophila* larvae**
Atsuki Hiramoto¹, Sawako Niki¹, Dohjin Miyamoto², Akinao Nose^{1,2}
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- P3-145 Statistical analysis of the activity of whole central neurons in a standard nerve cord of *Drosophila* larvae**
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Cerebellum

- P3-146 Mechanisms of facial stimulation evoked long-term synaptic plasticity in the cerebellar granule cell layer in vivo in mice**
Yan-Hua Bing¹, Chun-Ping Chu¹, De-Lai Qiu^{1,2}
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²Department of Physiology and Pathophysiology, College of medicine, Yanbian University
- P3-147 The distribution of complex spike response patterns of Purkinje cells in the cerebellar uvula during optokinetic stimulation**
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²Dept Physical Therapy, Health Science Univ, Yamanashi, Japan
- P3-148 Purkinje cells provide temporally-specific sensory signals to the primate cerebellar nucleus**
Akiko Uematsu, Masaki Tanaka
Laboratory of Systems neuroscience Hokkaido University Graduate School of Medicine
- P3-149 Differences in prediction-based motor control assessed in loading task between children and adults**
Yui Kikuchi^{1,2}, Sayuri Nakagawa¹, Mitsugu Yoneda¹, Yasuharu Koike², Takako Ohno-Shosaku¹
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- P3-150 air-puff stimulation evoked responses in mouse cerebellum**
Chun-Ping Chu^{1,2}, Bing-Xue Li^{1,2}, Ying-Ji Hong^{1,2}, Bin-Bin Zhang^{1,2}, De-Lai Qiu^{1,2}
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²Department of Physiology and Pathophysiology, College of Medicine, Yanbian University, Yanji, Jilin Province, China
- P3-151 Identification of the cerebellar lobules that are homologous to human crus I/II in macaque, marmoset, rat and mouse**
Yuanjun Luo¹, Hirofumi Fujita³, Hermina Nedelescu¹, Chika Sato⁵, Sarah Ying⁴, Mayu Takahashi¹, Biswas Shahangir Mohammad¹, Keiichi Akita⁶, Ichio Aoki⁵, Izumi Sugihara^{1,2}
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⁵Molecular Imaging Center, National Institute of Radiological Sciences (NIRS)
⁶Department of Clinical Anatomy, Graduate School of Medical and Dental Sciences
- P3-152 Ethanol affects complex spike**
De-Lai Qiu^{1,2}, Xin-Yuan Zhang^{1,2}, Mao-Cheng Wu³, Wen Pan^{1,2}, Wen-Zhe Jin⁴
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⁴Department of Pain, Affiliated Hospital of Yanbian University, Yanji City, Jilin Province, China
- P3-153 Comparison of Expression Patterns of Different Marker Molecules of the Cerebellar Longitudinal Striped Compartments in the Mouse**
Gideon Anokye Sarpong¹, Hirofumi Fujita^{1,3}, Suteera Vibulyaseck¹, Teiichi Furuichi⁵, Shinji Hirano⁴, Izumi Sugihara^{1,2}
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⁵Dept of Applied Biological Science, Tokyo University of Science, Noda, Chiba 278-8510, Japan
- P3-154 Role of Contactin1 in neural network formation for motor coordination in medaka and zebrafish.**
Miki Takeuchi¹, Akiko Goshima², Chikako Inoue¹, Koichi Shimizu², Atsuo Kawahara³, Masayuki Yoshida⁴, Masahiko Hibi^{1,2}
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- P3-155 Function of the cerebrotocerebellum in motor control and mechanism of its dysfunction**
Takahiro Ishikawa¹, Shinji Kakei¹, Hiroshi Mitoma²
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- P3-156 The role of cerebellar projections to the centrolateral thalamic nucleus in motor and cognitive functions**
Nobuyuki Sakayori, Shigeki Kato, Kazuto Kobayashi
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- P3-157 Progressive impairment of cerebellar synaptic plasticity in spinocerebellar ataxia type 1 (SCA1) model mice**
Nobutake Hosoi¹, Anton N. Shuvaev², Hirokazu Hirai¹
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²Res Inst Mol Med Pathobiochem, Krasnoyarsk State Medical University, Krasnoyarsk, Russia

Voluntary Movement

- P3-158 Role of the globus pallidus of monkeys in ipsilateral and contralateral hand movements**
Yoshihisa Nakayama¹, Osamu Yokoyama¹, Eiji Hoshi^{1,2}
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- P3-159 Population dynamics of output layer neurons in motor cortex during motor skill learning**
Wing Ho Yung, Qian Li, Ya Ke
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- P3-160 Low and High theta bands occurrence patterns at the onset of a voluntary movement in humans**
Satoshi Kawashima¹, Akio Mori², Masaru Kuboki³, Nahoko Minakawa⁴
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- P3-161** **The occurrence patterns in the beta band on the prefrontal region by the voluntary movement**
Akio Mori¹, Satoshi Kawashima², Masaru Kuboki³, Nahoko Minakawa⁴
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- P3-162** **Neural network model with divisive normalization predicts the dependence of visuomotor adaptation on visuomotor map**
Takuji Hayashi¹, Ken Takiyama², Daichi Nozaki¹
¹Grad Sch Edu, Univ of Tokyo ²Dept Eng, TUAT
- P3-163** **Divergent spatial projections of rubrospinal neurons converge to synchronized temporal activity for a coordinated reach-to-grasp movement**
Tomomichi Oya¹, Tomohiko Takei², Kazuhiko Seki¹
¹Department of Neurophysiology, National Institute of Neuroscience, National Center of Neurology and Psychiatry
²Centre for Neuroscience Studies, Queens University, Kingston, Canada
- P3-164** **Functional Roles of Two Types of Saccades on a Hand Movement**
Eizo Miyashita
Dept Comput Intel, Tokyo Tech, Kanagawa, Japan
- P3-165** **Increase of end-point errors in reaching induced by microstimulation to parital area 5**
Masato Inoue¹, Shigeru Kitazawa^{1,2,3}
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³Department of Brain Physiology, Graduate School of Medicine, Osaka University, Osaka, Japan

Sensori-Motor Integration

- P3-166** **Four is better than one: both complementary and synchronous strategies facilitate interpersonal coordination**
Nobuyuki Inui
Grad. Sch. Edu. Naruto Univ. Edu., Naruto, Japan
- P3-167** **Vergence eye movements elicited by a new real 3-D display system for presenting visual stimuli of both near/far distances**
Keiji Matsuda¹, Aya Takemura¹, Kenichiro Miura², Kenji Kawano²
¹Human Information Res. Inst., AIST, Tsukuba, Japan ²Dept. Integ Brain Sci. Grad. Sch. Med. Kyoto Univ, Kyoto, Japan
- P3-168** **Effect of M1 repetitive transcranial magnetic stimulation on neuronal activity in monkey pedunculopontine tegmental nucleus.**
Yasushi Kobayashi^{1,2,3}, Ken-Ichi Okada^{1,3}
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²Osaka University Research Center for Behavioral Economics, Suita, Japan
³Center for Information and Neural Networks (CiNet), National Institute of Information and Communications Technology, and Osaka University, Japan
- P3-169** **Coordinate transformation from the extrinsic to muscle-like frame in human sensorimotor cortex during wrist movements**
Yusuke Fujiwara¹, Wataru Yasuda¹, Jongho Lee², Takahiro Ishikawa², Shinji Kakei², Jun Izawa³
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- P3-170** **Adaptation of pecking behavior to the experimentally extended bill is different between pigeons and crows.**
Hiroshi Matsui¹, Ei-Ichi Izawa²
¹Dept Psychology, Keio Univ. ²Dept Psychology, Keio Univ.
- P3-171** **Establishment of behavioral task for investigating sensory and motor representations in rodent sensory, motor, and association areas**
Masanori Kawabata¹, Shogo Soma^{1,2}, Akiko Saiki^{1,3}, Junichi Yoshida¹, Yutaka Sakai^{1,3}, Yoshikazu Isomura^{1,3}
¹Brain Sci Inst, Tamagawa Univ, Tokyo ²JSPS Research Fellow (PD) ³Brain/MINDS

- P3-172** **Decoding agency grounded within the sensorimotor system: self-other action representation in the sensorimotor and the parietal cortices**
 Ryu Ohata^{1,2,3}, Asai Tomohisa⁴, Hiroshi Kadota^{5,6}, Hiroaki Shigemasu⁵, Kenji Ogawa⁷, Hiroshi Imamizu⁸
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⁷Dept. of Psychology, Grad. Sch. of Letters, Hokkaido Univ., Hokkaido, Japan ⁸Dept. of Psychology, The Univ. of Tokyo, Tokyo, Japan
- P3-173** **Local Neural Circuits Integrating Sensory Input and Behavioral Output during a C. Elegans Navigation Behavior**
 Muneki Ikeda, Shunji Nakano, Andrew C Giles, Ikue Mori
 Division of Biological Science, Graduate School of Science, Nagoya University
- P3-174** **Development of a visuomotor task useful for the analysis of interactions between neuronal activities in the visual and motor cortices of behaving rats**
 Rie Kimura^{1,2}, Yumiko Yoshimura^{1,2}
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- P3-175** **b-Learning, Studying Body and Mind Unifying Science (1) Usefulness of voluntary conscious trunk movement using tactile information and knowledge of human life system**
 Yoriko Atomii
 Tokyo University of Agriculture and Technology

Motor System: Others

- P3-176** **Properties of functional connectivity networks estimated based on high-density NIRS measurement**
 Harumi Christie Kudo, Shoya Matsuki, Naoki Tanaka
 Dept Biomed Eng, Toyo Univ, Saitama, Japan
- P3-177** **Modulation of Inhibitory Control and Error Monitoring by Open-Skill and Closed-Skill Sports**
 Chiachuan Yu¹, Neil G. Muggleton^{2,3,4}, Suyen Liu¹, Chiao-Yun Chen⁵
¹Graduate Institute of Sport and Leisure Education, National Chung Cheng University, Chia-Yi, Taiwan (R.O.C.)
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⁴Department of Psychology, Goldsmiths College, University of London, London, UK
⁵Department and Graduate Institute of Criminology, National Chung Cheng University, Chia-Yi, Taiwan (R.O.C)
- P3-178** **Characterization of somatosensory and motor cortices in common marmosets using nanocoated electrocorticographic electrodes**
 Akito Kosugi^{1,2}, Mitsuaki Takemi^{1,2,3}, Castagnola Elisa⁴, Ricci Davide⁴, Kenta Sato¹, Takafumi Nakamura¹, Tia Banty^{2,4}, Kazuhiko Seki⁵, Fadiga Luciano⁴, Atsushi Iriki², Junichi Ushiba^{2,6}
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⁶Dept. of Biosci. and Informatics, Keio Univ. Fac. of Sci. and Technol., Kanagawa, Japan

Drug Abuse and Addiction

- P3-179** **Cocaine-induced behavioral sensitization in Japanese quail may be dependent on gonadal hormones and dose**
 Shannon Elizabeth Eaton, Beth Ann Rice, Chana K Akins
 Dept Psychology, University of Kentucky, Lexington, United States
- P3-180** **Betaine attenuates relapse to methamphetamine seeking behaviors in rats**
 Ying-Ling Shen¹, Ming-Huan Chan², Hwei-Hsien Chen^{1,2,3}
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³Department of Pharmacology, Tzu Chi University, Hualien Taiwan
- P3-181** **Differential roles of dopamine D1 and D2 receptor-containing in the nucleus accumbens shell on the methamphetamine-induced behavioral sensitization.**
 Kayo Nishizawa¹, Nobuyuki Kai², Yuji Tsutsui³, Shuichi Ueda², Kazuto Kobayashi¹
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²Dept Histology & Neurobiology, Dokkyo Medical University School of Medicine, Tochigi, Japan
³Dept Human Support System, Fukushima University, Fukushima, Japan

P3-182 Effects of chronic ethanol treatment on kainic acid-induced neuronal oscillations in anterior cingulate cortex

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Learning, Memory and Plasticity

P3-183 A sex difference in the facilitatory effect of the CB₁ antagonist rimonabant on consolidation of cocaine-associated memory in mice

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P3-184 Ginseng as a neuroprotective agent against alteration of calcium binding proteins immunoreactivity in the mice hippocampus after chronic radiofrequency exposure.

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P3-185 Voluntary exercise facilitates acquisition and reversal learning of rats in the Barnes maze task

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P3-186 Hippocampal CA1 neurons represent elapsed time during temporal bisection task

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P3-187 Morphological changes in the hippocampal CA1 neurons by constitutive activation of CREB

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P3-188 Understanding the mechanism of discriminating novel and familiar mice in the social recognition memory task

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P3-189 Roles of calpain in fear memory in the hippocampus

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P3-190 Theta and gamma oscillation of amygdala in association with hippocampal high frequency oscillation after fear conditioning.

Sei-Etsu Fujiwara, Takafumi Kubota, Toshiya Funabashi, Tatsuo Akema

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P3-191 Reversal learning test using light stimulus operant conditioning task: For the real-time imaging in the MRI apparatus

Keisuke Sakurai, Yuki Tanaka, Akiko Enya, Tatsuhiro Hisatsune

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P3-192 Role of BDNF in exercise training mediated neuroprotection against hypobaric hypoxia induce memory impairment

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P3-193 BMAL1 regulates spine morphology of hippocampal CA1 neuron

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P3-194 Positive effect of theobromine on motor learning and adaptive behavior of mice assessed by three-lever operant task

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Takako Ohno-Shosaku¹

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- P3-195 Effects of optogenetic inhibition or activation of hippocampus during retrieval on contextual fear memory**
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- P3-196 Roles of protein glycosylation in the hippocampus in consolidation and reconsolidation of fear memory**
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- P3-197 Reverse replays potentiate paths to rewards in recurrent network model with short-term and long-term plasticity**
Tatsuya Haga, Tomoki Fukai
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- P3-198 Electroencephalography (EEG) in the short-time learning on English rhythm and in**
Kotaro Wada, Kiyohisa Natsume
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- P3-199 Analysis of Sleep States during Memory Consolidation in Trace Eyeblink Conditioning in Mice**
Akina Kashino, Koji Usui, Shigenori Kawahara
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- P3-200 Acquisition of lateralized predation behavior through development in scale-eating cichlid fish**
Yuichi Takeuchi¹, Yoichi Oda²
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- P3-201 Connectional differences between calbindin positive neurons in the medial and lateral entorhinal cortex of the rat**
Shinya Ohara¹, Kazuki Itou¹, Masaru Shiraishi¹, Michele Gianatti², Yasuhiro Sota¹, Sho Kabashima¹, Mariko Onodera¹, Ken-Ichiro Tsutsui¹, Menno Witter², Toshio Iijima¹
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²Kavli Institute for Systems Neuroscience and Centre for Neural Computation, NTNU, Trondheim, Norway
- P3-202 Touchscreen-based visual temporal discrimination task in the behaving mouse by the constant method**
Yuichiro Nomura^{1,2}, Jumpei Mita^{2,3}, Syohei Ikuta^{2,3}, Shingo Takizawa^{2,3}, Takuma Arimura^{1,2}, Akira Amano⁴, Yasuhiro Tsubo⁶, Kazuhiro Shimonomura⁵, Yasuhiro Seya⁶, Chieko Koike^{1,2,7}
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- P3-203 Molecular mechanism for time-dependent regulation of memory retrieval by forebrain circadian clock**
Shunsuke Hasegawa^{1,2}, Hiroshi Hosoda¹, Yue Zhang^{1,2}, Miho Ohta¹, Shintaro Okada¹, Rie Ishikawa¹, Hotaka Fukushima^{1,2}, Kenji Hashimoto³, Paul W Frankland⁴, Sheena A Josselyn⁴, Satoshi Kida^{1,2}
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- P3-204 Impact of manipulation of visual feedback on the hippocampal EEG of free-moving mice in the virtual environment**
Yushiro Nakazawa, Norihiro Katayama, Keita Hidaka, Mitsuyuki Nakao
Graduate School of Information Sciences, Tohoku University, Japan
- P3-205 Labeling of active neural circuit by the calcium probe CaMPARI**
Keita Mori, Yu Toyoshima, Yuichi Iino
Dept Biol Sci, Graduate schl of sci, Univ of Tokyo
- P3-206 An internal simulation hypothesis to explain a cognitive process of graspable tools: A relationship between an internal model of the dominant/nondominant hand and cognitive judgment of tool sizes**
Yuusuke Akimaru, Masazumi Katayama
Dept Human and Artificial Intelligent Systems, Graduate School of Engineering, Univ of Fukui, Japan

- P3-207 Bone marrow-derived mesenchymal stem cells improve diabetes-induced cognitive impairment by secreting exosomes**
Masako Nakano¹, Naoto Konari¹, Yuki Saito¹, Takako Chikenji^{1,2}, Miho Otani², Yuka Mizue^{1,2}, Kanna Nagaishi^{1,2}, Mineko Fujimiya^{1,2}
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- P3-208 Effect of irrelevant stimulus on Contralateral Delay Activity that reflects visual working memory**
Atsuhiko Sayama, Akiko Kitami, Hitomi Azetaka, Tomokazu Urakawa, Osamu Araki
Dept of Applied Physics, Tokyo University of Science, Tokyo, Japan
- P3-209 Hippocampal sharp wave ripple effects on protein kinase A activity in sleep**
Krzysztof Andrzej Sypniewski¹, Jiyeon Cho¹, Constantine Pavlides^{1,2}
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- P3-210 Effects of lesions of the retrosplenial cortex on tracing the learned route in the environment with small change**
Tomohiro Hayashi, Nobuya Sato
Dept of Psychological Sciences, Kwansei Gakuin Univ, Japan
- P3-211 Impairment of learning and memory induced by chronic low dosage exposure of bisphenol AF (BPAF) in offspring male mice.**
Yoshiki Shirakata, Norio Kobayashi, Hirokatsu Saito, Yuuki Hiradate, Kenshiro Hara, Kentaro Tanemura
Graduate School of Agricultural Science, Tohoku University, Sendai, Miyagi, Japan
- P3-212 Dissect the role of cAMP-GEF II/RapGEF 4/Epac 2 in neural function related to memory and impulsive behavior.**
Yuki Kobayashi¹, Naomi Kogo¹, Atsuko Oba-Asaka¹, Hiroaki Kawasaki², Shigeyoshi Itoharu¹
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Decision Making

- P3-213 Identification of neuronal ensembles in the entire striatum that coincides with the transition period from goal-directed to habitual during instrumental learning**
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- P3-214 Neural mechanisms and behavioral function of distinct two types of hippocampal sharp-wave ripples**
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- P3-215 Withdrawn**
- P3-216 Distinct roles of serotonergic receptor subtypes in value-based decision-making in monkeys: A behavioral pharmacological study with PET imaging**
Yukiko Hori, Yuji Nagai, Arata Oh-Nishi, Erika Kikuchi, Tetsuya Suhara, Takafumi Minamimoto
Dept Molecular Neuroimaging, NIRS
- P3-217 Decoding the value related information from the ECoG signal recorded from the multiple areas of the prefrontal cortex**
Shingo Tanaka¹, Keisuke Kawasaki², Isao Hasegawa², Takafumi Suzuki³, Masamichi Sakagami¹
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²Department of Physiology, Niigata University School of Medicine, Niigata, JAPAN ³CiNet, NICT, Osaka, Japan
- P3-218 A mechanism underlying individual difference of susceptibility to novel auditory stimuli**
Tomoki Kurikawa, Tomoki Fukai
BSI, RIKEN

- P3-219 Elucidating the Function of the Prefronto-striatal Circuit of the Macaque Brain Using the Double Virus Vector Infection**
Mineki Oguchi-Tanaka¹, Shingo Tanaka¹, Xiaochuan Pan², Takefumi Kikusui³, Shigeki Kato⁴, Kazuto Kobayashi⁴, Masamichi Sakagami¹
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³School of Veterinary Medicine, Azabu Univ, Kanagawa, Japan ⁴Dept Mol Genet, Fukushima Medical Univ, Fukushima
- P3-220 Activity of dopamine D2 receptor-expressing striatal neurons during decision-making task**
Satoshi Nonomura¹, Ko Yamanaka¹, Kayo Nishizawa², Kazuto Kobayashi², Yutaka Sakai¹, Yasuo Kawaguchi³, Atsushi Nambu³, Yoshikazu Isomura¹, Minoru Kimura¹
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³National Institute for Physiological Sciences, Aichi, Japan
- P3-221 The role of the monkey orbitofrontal cortex in value-based decision-making**
Tsuyoshi Setogawa¹, Fumika Akizawa^{2,3}, Takashi Mizuhiki^{1,2}, Ryosuke Kuboki², Richmond J Barry⁴, Narihisa Matsumoto⁵, Munetaka Shidara^{1,2}
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⁴Lab. Neuropsychol., NIMH/NIH, Bethesda, MD, USA ⁵Human Informat. Res. Inst., AIST, Tsukuba, Japan
- P3-222 The role of serotonin in time perception of monkey**
Mai Takafuji¹, Takashi Mizuhiki^{1,2}, Munetaka Shidara^{1,2}
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- P3-223 Functional Network Connectivity and Eating Attitude in Anorexia Nervosa**
Masanori Isobe, Jun Miyata, Yasuo Mori, Ema Murao, Tomomi Noda, Michiko Kawabata, Haruka Kozuki, Noriko Matsukawa, Shun'ichi Noma, Toshiya Murai, Hidehiko Takahashi
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- P3-224 Choosing the lesser of two evils: Activation and inhibition of tph2-labeled serotonergic neurons dictates choice behavior in larval zebrafish**
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²Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore
³Neuroscience and Behavioral Disorders Program, Duke-NUS Graduate Medical School, Singapore
⁴Department of Physiology, National University of Singapore, NUS
- P3-225 Inequity response patterns in the amygdala and hippocampus predict long-term changes in depression tendency**
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Neurodevelopmental Disorders

- P3-226 Prediction for effects of methylphenidate administration in medication-naïve ADHD children: fNIRS-based assessment using go/no-go task**
Tatsuya Tokuda¹, Masako Nagashima², Ippeita Dan¹, Takahiro Ikeda^{2,5}, Minako Uga^{1,4}, Yasushi Kyutoku¹, Yuya Yamagishi², Hideo Shimoizui⁵, Takanori Yamagata², Yukifumi Monden^{1,2,3}
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²Department of Pediatrics, Jichi Medical University ³Department of Pediatrics, International University of Health and Welfare
⁴Center for Development of Advanced Medical Technology, Jichi Medical University
⁵Rehabilitation Center, International University of Health and Welfare
- P3-227 Partial loss of neuronal KCC2 function by biallelic *SLC12A5* mutations causes migrating focal seizures and developmental delay**
Miho Watanabe¹, Tenpei Akita¹, Hiroto Saito², Naomichi Matsumoto³, Atsuo Fukuda¹
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- P3-228 Resistance to Vitamin B1 deficiency-induced memory impairment by up-regulation of CREB activity**
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- P3-229 The delay of motor map distribution in the developmental white matter injury model rat without neuronal loss**
Yoshitomo Ueda, Akimasa Ishida, Haruka Nagai, Sachiyo Misumi, Hideki Hida
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- P3-230 Role of arcadlin in attention-deficit/hyperactivity disorder (ADHD)**
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¹Med Res Inst, Tokyo Women's Med Univ, Tokyo, Japan ²Neural Plasti Proj, Tokyo Metropoli Inst of Med Sci, Tokyo, Japan
- P3-231 Functional Analysis of Mutated RP58/ZNF238 Observed in Patients with Intellectual Disability**
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- P3-232 Chronic neonatal NMDA receptor blockade impairs sucrose-induced conditioned place preference in rats**
Hiroki Furuie¹, Kazuo Yamada², Yukio Ichitani²
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- P3-233 Thyroid hormone deficiency retards maturation of parvalbumin-positive GABAergic interneurons in the cortex and hippocampus of the mouse**
Katsuya Uchida¹, Kenichi Kobayashi², Toshimitsu Fuse^{1,2}, Keiichi Itoi¹
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- P3-234 Altered monoamine dynamics and exploratory behavior in Lrtm2-deficient mice**
Misato Ichise¹, Keiichi Katayama², Kazuto Sakoori², Naoko Morimura², Minoru Hatayama^{1,2}, Jun Aruga^{1,2}
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- P3-235 Variant-selective deletion of RP58/ZNF238 leads to morphological and functional abnormalities in mouse brain**
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³Development Neuropsychiatry, School of Medicine, Keio Univ, Tokyo, Japan

Sensory Disorders

- P3-236 Minoxidil Sulfate Attenuates Paclitaxel-induced Peripheral Neuropathy**
Yi-Fan Chen
National Cheng Kung University
- P3-237 Decrease of blood flow velocity and reactive hyperemia response due to progression of capillary disorder in diabetic rats**
Kimiya Esaki¹, Yuta Takahashi¹, Kijoon Lee³, Yumie Ono^{1,2}
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- P3-238 ASK1 deficiency and valproic acid synergistically reduce demyelination and visual impairment in experimental autoimmune encephalomyelitis**
Yuriko Azuchi^{1,3}, Atsuko Kimura¹, Xiaoli Guo¹, Takahiko Noro^{1,2}, Goichi Akiyama¹, Magdalena Drozd^{1,3,4}, Chikako Harada¹, Atsuko Saito³, Kazuhiko Namekata¹, Takayuki Harada¹
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- P3-239 Pain-inducing dual signals of Robo4 in spinal cord astrocyte**
Yasufumi Hayano¹, Toshihide Yamashita^{1,2}, Keisuke Shirakura³, Yoshiaki Okada³
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- P3-240 Differential effects of paclitaxel and platinum derivatives on primary cultured Schwann cells could be associated with the pathogenesis of peripheral neuropathy**
Madoka Koyanagi¹, Satoshi Imai¹, Yui Nakazato¹, Ziauddin Azimi², Shuji Kaneko², Takayuki Nakagawa¹, Kazuo Matsubara¹
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- P3-241 Xanthine-based KMUP-1 prevents the decreased KATP currents in rat dorsal root ganglion neurons after chronic constriction injury**
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- P3-242 Voltage-gated potassium channel modulation by miR-17-92 cluster in the neuropathic pain**
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 Takashi Okada², Hidenori Suzuki¹
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Movement Disorders

- P3-243 Diabetic neuropathy targets the phrenic nerve in rats**
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 Ken Muramatsu¹
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- P3-244 Analyses of a novel Dystonin spontaneous mutant mice showing dystonic-like movements**
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 Kenta Kobayashi⁵, Atsushi Nambu², Hirohide Takebayashi¹
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³Department of Zoology, Okayama Univ of Science ⁴Riken BRC ⁵Section of Virus Vector Development, NIPS, Okazaki, Japan
- P3-245 Major histocompatibility complex expression in a rotenone model of Parkinson disease in rats**
 Masami Ishido
 Natl Inst for Environ Studies, Tsukuba, Japan
- P3-246 High-frequency stimulation of subthalamic nucleus not globus pallidus interna depend on dopamine signaling**
 Asuka Nakajima¹, Yasushi Shimo^{1,2}, Takanori Uka³, Nobutaka Hattori¹
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³Dept Physiology, Juntendo University School of Medicine, Tokyo, Japan
- P3-247 Withdrawn**
- P3-248 USP15 is important for neuromuscular functions via regulation of alternative RNA splicing**
 Jaehyun Kim, Fuminori Tsuruta, Tomoki Chiba
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- P3-249 Cell-surface expression of dopamine transporter facilitates the uptake of α -synuclein**
 Junpei Kobayashi¹, Takafumi Hasegawa¹, Shun Yoshida¹, Naoto Sugeno¹, Ryuji Oshima¹, Akio Kikuchi¹,
 Atsushi Takeda², Masashi Aoki¹
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- P3-250 Identification of proteins sequestered by dipeptide repeat aggregates associated with ALS/FTD**
 Yoshihiro Kino, Mika Takitani, Junko Miyoshi, Jun-Ichi Satoh
 Dept Bioinformatics, Meiji Pharm Univ, Tokyo
- P3-251 Impaired synaptic plasticity at cerebellar parallel fiber-Purkinje cell synapses in AAV vector-based mouse model of spinocerebellar ataxia type 3.**
 Masashi Watanabe, Ayumu Konno, Hirokazu Hirai
 Dept Neurophysiol, Gunma Univ Grad Sch of Med, Maebashi, Japan

Brain Injury and Trauma

- P3-252 Erasing long-term fear memory of patients suffering from addiction after traumatic experience**
 Yukihiko Kayama^{1,2}
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- P3-253 Effects of endothelin ET_B receptor antagonist on acceleration of cerebral microvascular permeability and brain edema formation after fluid percussion injury in mice**
 Shotaro Michinaga, Akimasa Kimura, Shunichi Hatanaka, Shizuho Minami, Arisa Asano, Yuki Ikushima,
 Shingo Matsui, Yutaka Koyama
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Hericium erinaceus mycelium and its isolated Erinacine A protection from MPTP-induced neurotoxicity through the ER stress, triggering an apoptosis cascade

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Role of vitronectin in the inflammation and repair in stab-wounded mouse cerebral cortex

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Degeneration of motor axons in tibialis anterior muscle after peroneal nerve transection

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Association between IGF-1 and Anxiety after Mild Traumatic Brain Injury

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Structural connectivity and cognitive impairment in patients with diffuse axonal injury

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Dynamic reorganization of functional brain networks during recovery from spinal cord injury

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Cerebrovascular Disease and Ischemia

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BMP-4 expression by pericytes after chronic ischemia aggravates white matter damage

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Effects of preconditioning exercise on brain damage and neurotrophic factors in a rat model of transient cerebral ischemia and reperfusion

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Neuroprotection by Adenosine Deaminase (ADA) in the Striatum

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Distinct molecular mechanisms of HTRA1 mutants in manifesting heterozygotes with CARASIL

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The dynamical repertoire of resting-state synchrony networks is associated with ADL recovery in ischemic stroke patients

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Transient receptor potential vanilloid 4 is involved in brain edema in vitro

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The customary exercise prevents the poststroke memory dysfunction by elevation of hippocampal BDNF

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Therapeutic mechanisms of dopaminergic drug treatment on motor recovery in ischemic stroke

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Effects of selective blockade of the cortico-rubral tract on the efficiency of intensive use of impaired forelimb in rats with capsular hemorrhage

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Administration of mature adipocyte-derived dedifferentiated fat cells (DFAT), decreases hypoxic-ischemic brain injury in neonatal rats.

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Evaluation of motor symptoms of patients with neurological disorders based on the microsteps phenomenon during visually-guided wrist tracking movements

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Prolonged focal brain cooling induce transient abnormal activity in healthy rat brain

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Autism

- P3-272 Distinct Defects in Synaptic Differentiation of Neocortical Neurons in Response to Prenatal Valproate Exposure**
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- P3-273 Investigation of the spectral structure of four psychiatric disorders with respect to intrinsic functional connectivity in autism spectrum disorder**
Noriaki Yahata^{1,2,3}, Giuseppe Lisi³, Ryuichiro Hashimoto^{3,4,5}, Jun Morimoto³, Kazuhisa Shibata^{3,6}, Yuki Kawakubo⁷, Hitoshi Kuwabara⁸, Miho Kuroda^{7,9}, Takashi Yamada^{3,4}, Megumi Fukuda^{3,10}, Hiroshi Imamizu³, Hidehiko Takahashi¹¹, Yasumasa Okamoto¹², Kiyoto Kasai¹³, Nobumasa Kato⁴, Yuka Sasaki^{3,6}, Takeo Watanabe^{3,6}, Mitsuo Kawato³
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- P3-274 Advanced paternal age affects vocal communication deficits in offspring through transgenerational epigenetic inheritance**
Kaichi Yoshizaki¹, Ryuichi Kimura¹, Takako Kikkawa¹, Kohei Koike¹, Akira Yaegashi¹, Hitoshi Inada¹, Kinichi Nakashima², Takuya Imamura², Noriko Osumi¹
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- P3-275 Fetal oxytocin cell-autonomously regulates GABAergic excitatory and affects postnatal social behavior**
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- P3-276 Synaptic dysfunction in the Glp Knockout mouse model for Kliefstra syndrome**
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- P3-277 Prenatal minocycline treatment alters synaptic protein expression, and ameliorates abnormal mother call in oxytocin receptor-knockout mice**
Shinji Miyazaki, Yuichi Hiraoka, Katsuhiko Nishimori
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- P3-278 Characteristics of a visual attention to social images of adults with autism spectrum disorder**
Akihiro Yamashita¹, Chihiro Sutoh¹, Yoshiyuki Hirano², Fumiyo Oshima², Aki Tsuchiyagaito², Daisuke Matsuzawa^{1,2}, Eiji Shimizu^{1,2}
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- P3-279 Prefrontal response to CT-targeted tactile stimulation in young adults with ASD**
Aika Yasui¹, Nozomi Naoi^{2,3}, Kiyomi Yatabe², Hirokazu Kumazaki⁴, Yasuyo Minagawa^{3,5}
¹Dept Psy, Univ of Keio, Tokyo ²Keio Advance Research Centers, Tokyo ³CREST, JST, Tokyo
⁴Research Center for Child Mental Development, Fukui University ⁵Dept Psy, Univ of Keio, Tokyo
- P3-280 Identification and functional characterization of a novel Neuroligin1 variant in autism spectrum disorder**
Moe Nakanishi^{1,2}, Jun Nomura^{1,2}, Xiaoxi Liu¹, Takashi Arai¹, Eiki Takahashi¹, Maja Bucan³, Li Zhou⁴, Manabu Abe⁴, Kenji Sakimura⁴, Toru Takumi^{1,2}
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³Department of Genetics, University of Pennsylvania School of Medicine, Philadelphia, U.S.A. ⁴Niigata Univ. BRI, Niigata, Japan
- P3-281 Verification of abnormality of postnatal synapse formation/pruning in a primate model of ASD**
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Depression and Bipolar Disorders

- P3-282** The administration of an autophagy-promoting nutraceutical can improve cognitive function in an Aβ42-injection mouse model of Alzheimer's disease
Yung-Feng Liao¹, Yun-Wen Chen¹, Bo-Jeng Wang¹, Rita P.-Y. Chen², Chang-Jen Huang²
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- P3-283** Serotonin-1A receptor C-1019G polymorphism alters brain network efficiency: Evidence from resting-state functional connectivity
Haixia Zheng, Keichi Onoda, Yasuko Wada, Shingo Mitaki, Syuhei Yamaguchi
Department of Neurology, Faculty of Medicine, Shimane University, Izumo, Japan
- P3-284** Antidepressant-like effect of kososan is partially mediated by alleviation of increased neuroinflammation in socially defeated mice
Naoki Ito¹, Eiji Hirose², Tatsuya Ishida³, Atsushi Hori⁴, Takayuki Nagai^{1,2,5}, Yoshinori Kobayashi^{1,3}, Hiroaki Kiyohara^{1,2,5}, Tetsuro Oikawa¹, Toshihiko Hanawa^{1,4}, Hiroshi Odaguchi¹
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³Sch Pharmaceu, Kitasato Univ, Tokyo, Japan ⁴Grad Sch Med Sci, Kitasato Univ, Tokyo, Japan
⁵Kitasato Inst Life Sci, Kitasato Univ, Tokyo, Japan
- P3-285** Effects of diet quality and psychosocial stress on the metabolic profiles in mice
Atsushi Toyoda^{1,2,3}, Tatsuhiko Goto^{1,2}, Shozo Tomonaga⁴
¹Col of Agri, Ibaraki Univ, Ibaraki, Japan ²Ibaraki Univ Coop between Agri and Med Sci (IUCAM), Ibaraki, Japan
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- P3-286** Abnormal Bipolar Disorder Brain regions as revealed by T1-weighted/T2-weighted Magnetic Resonance Ratio Images
Takuya Ishida¹, Jun Iwatani², Kazuhiro Shinosaki², Tomohiro Donishi¹, Masaki Terada³, Yoshiki Kaneoke¹
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²Dept Neuropsych, Wakayama Medical University, Wakayama, Japan ³Wakayama-Minami Radiology Clinic, Wakayama, Japan
- P3-287** Structural alterations and functional declines of the nodes of Ranvier by exposed repeated stressful events is associated with the onset of major depressive disorder
Shingo Miyata¹, Shoko Shimizu¹, Takashi Tanaka¹, Akiyo Matsumura¹, Ayumi Kawakami¹, Masaya Tohyama^{1,2}
¹Div Mol Brain Sci, Res Ins Tra Asian Med, Kindai Univ, Osaka, Japan ²Osaka Pref Hospital Org, Osaka, Japan
- P3-288** Transcriptomic evidence for dematuration of the mouse frontal cortex and hippocampus by chronic antidepressant treatment
Hideo Hagihara¹, Koji Ohira^{1,2}, Tsuyoshi Miyakawa^{1,3}
¹Div Sys Med Sci, ICMS, Fujita Hlth Univ, Aichi ²Department of Food Science and Nutrition, Mukogawa Women's University
³Center for Genetic Analysis of Behavior, National Institute for Physiological Sciences
- P3-289** Contrasting expression patterns of inflammation-related genes in mouse models of depression and psychosis
Hisatsugu Koshimizu¹, Hideo Hagihara¹, Tsuyoshi Miyakawa^{1,2}
¹Div. of Sys. Med. Sci., ICMS, Fujita Hlth. Univ., Aichi, Japan ²Ctr. for Gene. Anal. of Behav., NIPS, Aichi, Japan
- P3-290** Group housing with parents contributes to developing resilience in male rat pup via the increase in hippocampal neurogenesis
Yusuke Murata, Minako Hayashi, Yui Shibata, Masayoshi Mori, Munechika Enjoji
Dept Pharmacotherapeutics, Fac Pharmaceut Sci, Fukuoka Univ, Fukuoka, Japan
- P3-291** Could intermittent threat stress only, as purely emotional stress, exposure to rats be a potent stressor leading to depression model in Resident-Intruder paradigm?
Masayoshi Mori, Maria Hatanaka, Hiroyoshi Harada, Nanako Kibe, Yusuke Murata, Munechika Enjoji
Dept pharmacol, Fukuoka Univ, Fukuoka, Japan

Disorders of Neural Systems: Others

- P3-292** Cognitive behavioural therapy on hippo campus thalamus and brain asymmetry among text anxious students
Saratadevi Krishnan
Tamil Nadu Teachers Education University

- P3-293 Possible role of AnkyrinG dysfunction in neurodegenerative process in HuC KO mice**
Yuki Ogawa¹, Kyoko Kakumoto², Junji Yamaguchi³, Tetsu Yoshida², Robert Darnell⁴, Yasuo Uchiyama³, Hideyuki Okano², Hirotaka James Okano¹
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³Dept. Cell & Mol. Neuropathol., Juntendo Univ Sch. Med., Tokyo, Japan ⁴The Rockefeller Univ, NY, USA
- P3-294 Establishment of IP-MS method using SH-SY5Y cell to detect novel anti-neuronal antibody**
Satoru Ito¹, Kazuhiro Nakaso², Kenji Nakashima¹
¹Div Neurology, Fac Med, Univ of Tottori, Tottori, Japan ²Div Medical Biochemistry, Fac Med, Univ of Tottori, Tottori, Japan
- P3-295 Relationships between striatal dopaminergic activity and cerebral perfusion in Parkinson disease**
Yoshikazu Nakano^{1,2}, Shigeki Hirano^{1,2}, Shogo Furukawa^{1,2}, Kazuho Kojima^{1,2}, Ai Ishikawa^{1,2}, Makiko Yamada², Tetsuya Suhara², Satoshi Kuwabara¹
¹Dept Neurobiology, Chiba Univ, Chiba ²NIRS, Chiba, Japan
- P3-296 Functional connectivity from medial parietal cortex and superior parietal lobule: a Cortico-cortical evoked potential study**
Masaya Togo¹, Riki Matsumoto^{1,2}, Hirofumi Takeyama¹, Katsuya Kobayashi¹, Akihiro Shimotake², Kiyohide Usami¹, Morito Inouchi³, Takuro Nakae⁴, Takeharu Kunieda⁴, Susumu Miyamoto⁴, Ryosuke Takahashi¹, Akio Ikeda²
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²Kyoto University Graduate School of Medicine, Department of Epilepsy, movement disorder and physiology
³Kyoto University Graduate School of Medicine, Department of Respiratory Care and Sleep Control Medicine
⁴Kyoto University Graduate School of Medicine, Department of Neurosurgery
- P3-297 Yokukansan has an anti-inflammatory effect on microglia in the central nervous system.**
Taichi Nomura, Yoshio Bando, Tatsuhide Tanaka, Takuma Takano, Shigetaka Yoshida
Dept Functional Anatomy and Neuroscience, Asahikawa Medical University, Asahikawa, Japan
- P3-298 Withdrawn**
- P3-299 Withdrawn**
- P3-300 Exploring the neural hyper-active regions in the Sodium pump disease model mice**
Keiko Iino Ikeda¹, Kiyoshi Kawakami²
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- P3-301 In vivo evidence for the involvement of phospho-ubiquitin signal**
Kahori Shiba¹, Kei-Ichi Ishikawa^{2,3}, Wado Akamatsu², Yuzuru Imai⁴, Nobutaka Hattori³
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²Center for Genomic and Regenerative Medicine, Juntendo Univ Sch Med, Tokyo, Japan
³Department of Neurology, Juntendo University Graduate School of Medicine
⁴Department of Research for Parkinson's Disease, Juntendo University Graduate School of Medicine
- P3-302 Continuous focal brain cooling inhibits KCl-induced repetitive cortical spreading depression: Electrophysiological and molecular biological studies.**
Yuya Hirayama¹, Takao Inoue¹, Hiroyuki Kida², Kazutaka Sugimoto¹, Satoshi Sirao¹, Hirochika Imoto¹, Sadahiro Nomura¹, Michiyasu Suzuki¹
¹Dept Neurosurg, Yamaguchi Univ, Grad Sch Med, Yamaguchi
²Systems Neuroscience, Yamaguchi University Graduate School of Medicine
- P3-303 Gene Expression Profiling of the members of JAK-STAT Signalling Pathway in the Brain of Ts1Cje Mouse Model for Down syndrome**
Han Chung Lee¹, Norshariza Nordin¹, Sharmili Vidyadaran², Pike See Cheah³, King Hwa Ling¹
¹Department of Biomedical Science, Universiti Putra Malaysia, Selangor, Malaysia
²Immunology Unit, Department of Pathology, Universiti Putra Malaysia, Selangor, Malaysia
³Department of Human Anatomy, Universiti Putra Malaysia, Selangor, Malaysia
- P3-304 D1⁺MSNs optogenetic overactivation induce OCD-like behaviors**
Yousef Bouchekioua, Iku Tsuitsui-Kimura, Masaru Mimura, Kenji F. Tanaka
Keio University

Neuroinformatics and Large Scale Simulation

- P3-305** **Evaluation of a novel EEG denoising method based on generalized inverse filter for sensor position errors on different days**
 Ken-Ichi Morishige^{1,2}, Takaki Kikuchi¹, Masa-Aki Sato², Mitsuo Kawato³
¹Dept Intelligent Systems Design Eng, Toyama Pref Univ, Toyama, Japan ²ATR Neural Information Analysis Laboratories, Kyoto, Japan
³ATR Brain Information Communication Research Laboratory Group, Kyoto, Japan
- P3-306** **Three-dimensional reconstruction of brain structures of the common marmoset: a digital brain atlas constructed from Nissl sections**
 Atsushi Iriki, Reiko Nakatomi, Tsutomu Hashikawa
 Laboratory for Symbolic Cognitive Development, RIKEN Brain Science Institute, Saitama, Japan
- P3-307** **Finding Repetition of Sequential Activity Patterns in Spike Trains by Edit Similarity Score**
 Keita Watanabe^{1,2}, Tatsuya Haga¹, Tomoki Fukai^{1,2}
¹RIKEN Brain Science Institute, Saitama, Japan ²Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Chiba, Japan
- P3-308** **GPU-accelerated calculation of electric field generated by electric fish**
 Kazuhisa Fujita^{1,2}, Yoshiki Kashimori²
¹Department of Electronics and Control Engineering, Tsuyama National College of Technology
²Dept. of Engineering Science, Univ. of Electro-Communications
- P3-309** **Identifying important information flows from a network dynamics model of the human brain**
 Yusuke Takeda¹, Nobuo Hiroe¹, Makoto Fukushima^{1,2}, Masa-Aki Sato¹, Okito Yamashita¹
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²Department of Psychological and Brain Sciences, Indiana University, Bloomington, Indiana, USA

Brain-Machine Interface

- P3-310** **Effect of neurofeedback training of steady-state visual evoked potentials**
 Shohei Morota, Kensuke Ikemoto, Yumie Ono
 Department of Electronics and Bioinformatics, School of Science and Technology, Meiji University
- P3-311** **Appropriate timing for sensory feedback in ERD-BMI**
 Naoto Seki¹, Hidenori Kayanuma¹, Miku Matsubara¹, Yumie Ono¹, Takanori Tominaga²,
 Nathuko Kashida², Maho Imanishi², Satoko Oomathu², Marina Tani², Emika Oda²
¹Department of Electronics and Bioinformatics, School of Science and Technology, Meiji University
²Suisyokai Murata Hospital, Osaka, Japan
- P3-312** **A BMI-based robotic exoskeleton for neurorehabilitation and daily actions: effects of hybrid BMI-based assistance on muscle activities in a stroke patient**
 Toshihiro Kawase^{1,2}, Yasuharu Koike², Kenji Kansaku^{1,3}
¹Sys Neurosci Sect, Dept of Rehab for Brain Func, Res Inst of NRCD, Tokorozawa, Japan
²Solution Sci Res Lab, Tokyo Inst Tech, Yokohama, Japan
³Brain Sci Inspir Life Supp Res Cent, Univ of Electro-Communications, Chofu, Japan
- P3-313** **Diffuse optical tomography for resting-state brain activity measurement: a simulation study**

 Takeaki Shimokawa¹, Akihiro Ishikawa², Yoshihiro Inoue², Okito Yamashita^{1,3}
¹ATR-NIA, Kyoto, Japan ²R & D Dept Medical Systems Div, Shimadzu Corp, Kyoto, Japan
³Brain Functional Imaging Technologies Group, CiNet, Osaka, Japan
- P3-314** **Apply Artifact Rejection on Multi-channel Dry EEG System under Motion**

 Che-Lun Chang¹, Chih-Sheng Huang¹, Shao-Wei Lu², Chin-Teng Lin¹
¹National Chiao Tung University Taiwan ²Brain Rhythm Inc.
- P3-315** **Classification of steady-state visual evoked potentials by canonical correlation analysis using electrode coordinates**
 Shingo Ryu, Hiroshi Higashi, Shigeki Nakauchi, Tetsuto Minami
 Toyohashi University of Technology
- P3-316** **Wireless EEG recording and optical stimulation by iPad**
 Mitsuhiro Hashimoto¹, Kenta Matsumoto¹, Hiroyuki Yaginuma¹, Akihiro Yamanaka²
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- P3-317** **Comparison of slow fluctuations in regional cerebral blood volume in ALS patients and healthy subjects**
Naoki Tanaka^{1,2,3}, Tomoaki Takemoto¹, Harumi Christie Kudo², Kuniaki Ozawa³, Masayoshi Naito³
¹Dept Biomed Eng, Toyo Univ, Kawagoe, Japan ²Dept Biomed Eng, Toyo Univ, Kawagoe, Japan
³Res Inst Industry Eng, Toyo Univ, Kawagoe, Japan
- P3-318** **Transfer of volitional modulation of firings between different neuron groups in rats**
Kichan Song, Susumu Takahashi, Yoshio Sakurai
Graduate School of Brain Science, Doshisha University, Kyoto, Japan
- P3-319** **An attempt of speed-up of "Neurocommunicator", an EEG-based BMI system.**
Ryohei P Hasegawa, Yoshiko Nakamura
AIST
- P3-320** **A data-mining study: Relation between a starting point for a rat's running and the theta phase**
Tsukasa Irei, Ryota Miyata
Dept Mech Sys Eng, Univ of Ryukyus, Okinawa, Japan



Neural Circuit Manipulation

- P3-321** **Use of an optimized chimeric envelope glycoprotein for enhancement of the efficiency of retrograde gene transfer of a pseudotyped lentiviral vector in the primate brain**
Ken-ichi Inoue¹, Soshi Tanabe¹, Hitomi Tsuge¹, Takafumi Ueno¹, Kiyomi Nagaya¹, Maki Fujiwara¹, Masateru Sugawara², Shigeki Kato², Kazuto Kobayashi², Masahiko Takada¹
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- P3-322** **Novel manipulation method of neural activity using laser and liposomes**
Takashi Nakano^{1,2}, Dani M Keshav¹, Jeff Wickens¹
¹Okinawa Institute of Science and Technology ²Hiroshima University
- P3-323** **A simultaneous recording/stimulation device with light emitting diodes and whole-cortical electrocorticographic electrodes arrays in common marmosets**
Misako Komatsu¹, Eriko Sugano², Hiroshi Tomita², Naotaka Fujii¹
¹Lab Adaptive Intelligence, RIKEN Brain Sci Inst, Saitama, Japan ²Dept Chemistry and Bioengineering, Iwate Univ, Iwate, Japan
- P3-324** **Comparison of the efficiency of retrograde gene transfer between lentiviral vectors pseudotyped with FuG-E and FuG-B2 glycoprotein in primate brains: Striatal input system**
Soshi Tanabe¹, Shiori Uezono¹, Hitomi Tsuge¹, Maki Fujiwara¹, Kiyomi Nagaya¹, Masateru Sugawara², Miki Miwa³, Naho Konoike³, Shigeki Kato², Katsuki Nakamura³, Kazuto Kobayashi², Ken-ichi Inoue¹, Masahiko Takada¹
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- P3-325** **Analytical study of correlation and Fisher information caused by common inputs**
Safura Rashid Shomali¹, Majid Nili Ahmadabadi^{1,2}, Hideaki Shimazaki³, Seyyed Nader Rasuli^{4,5}
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⁴Department of Physics, University of Guilan, Rasht, Iran
⁵School of Physics, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran
- P3-326** **Comparison of efficiency of retrograde gene transfer between lentiviral vectors pseudotyped with FuG-E and FuG-B2 glycoprotein in primate brains: Cortical input system**
Hitomi Tsuge¹, Shiori Uezono¹, Soshi Tanabe¹, Maki Fujiwara¹, Kiyomi Nagaya¹, Masateru Sugawara², Miki Miwa³, Naho Konoike³, Shigeki Kato², Katsuki Nakamura³, Kazuto Kobayashi², Ken-ichi Inoue¹, Masahiko Takada¹
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³Cogn Neurosci Sec, Primate Res Inst, Kyoto Univ, Inuyama, Japan
- P3-327** **Optical inactivation of synaptic AMPA receptors for artificial memory erasure**
Kiwamu Takemoto¹, Hiroko Iwanari², Takeharu Nagai³, Takao Hamakubo², Takuya Takahashi¹
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²Dept of Quantitative Biology and Medicine, RCAST, Univ of Tokyo, Tokyo, Japan
³Dept of Biomol Sci and Eng, ISIR, Osaka Univ, Osaka, Japan
- P3-328** **Optical trapping and assembling dynamics of quantum-dot labeled AMPA receptors located on hippocampal neurons**
Tatsunori Kishimoto^{1,2}, Yasuyo Meazawa¹, Suguru N. Kudoh², Takahisa Taguchi³, Chie Hosokawa¹
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- P3-329 Low-invasive optogenetical stimulation of neurons using near infra-red light**
Takayuki Yamashita¹, Hideya Yuasa², Hiromu Yawo³, Akihiro Yamanaka¹
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Molecular, Biochemical and Genetic Techniques

- P3-330 A new strategy for precise mapping of the subcellular localization of endogenous proteins in the mammalian brain**
Takayasu Mikuni¹, Jun Nishiyama¹, Ye Sun^{1,2}, Naomi Kamasawa¹, Ryohei Yasuda¹
¹Max Planck Florida Institute for Neuroscience, Jupiter, USA ²Florida Atlantic University, Jupiter, USA
- P3-331 The establishment of droplet electroporation for neural cell transfection**
Rika R.N. Numano, Minako Matsuo, Hirofumi Kurita, Naofumi Kimura, Akira Mizuno
Department of Environmental and Life Sciences, Toyohashi University of Technology
- P3-332 Reversible conversion of the neuron-specific enolase promoter activity from neuron to astrocyte induced by neuroinflammation after brain injury**
Yusuke Sawada, Ayumu Konno, Jun Nagaoka, Hirokazu Hirai
Dept Neurophysiol & Neural Repair, Gunma Univ Grad Sch of Med, Maebashi, Japan
- P3-333 Comprehensive DNA methylation analysis of neurons and oligodendrocytes from human postmortem brains**
Miki Bundo¹, Junko Ueda², Taeko Miyauchi², Takao Ishii³, Wataru Ukai³, Eri Hashimoto³, Kiyoto Kasai⁴, Tadafumi Kato², Kazuya Iwamoto¹
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³Dept Neuropsy, Sapporo Medical Univ, Sapporo, Japan ⁴Dept Neuropsy, Univ of Tokyo, Tokyo, Japan
- P3-334 Delineation of neuronal connectivity employing intercellular GFP reconstitution method: GRAPHIC**
Nagatoki Kinoshita^{1,2}, Arthur Huang³, Thomas McHugh³, Sachihito Suzuki⁴, Ichiro Masai⁴, Atsushi Miyawaki^{2,5}, Tomomi Shimogori¹
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⁴Developmental Neurobiology Unit, OIST, Okinawa, Japan ⁵Cell Function Dynamics, BSI, RIKEN, Saitama, Japan
- P3-335 Development of a photo-activatable CaMKII for the study of synaptic plasticity**
Akihiro Shibata^{1,2}, Hideji Murakoshi¹
¹National Institute for Physiological Sciences ²JSPS Research Fellow

Computational Theories and New Technologies: Others

- P3-336 Comparison of two popular segmentation tools with manual tracing for hippocampus volumes**
Ozgun Ozalay¹, Ece Durmusoglu²
¹Human Brain Research Center, Graduate School of Medicine, Univ Kyoto, Kyoto, Japan
²SoCAT Project, Dep of Psychiatry, School of Medicine, Ege University, Izmir, Turkey
- P3-337 Automatic sorting system of accurate spike timings from calcium imaging data with overlapping cells**
Takashi Takekawa^{1,3}, Takahiro Nemoto¹, Akihiro Fujii¹, Teruo Tanaka¹, Noriaki Ohkawa², Masaaki Sato^{3,4}, Yasunori Hayashi^{3,5,6}, Kaoru Inokuchi², Tomoki Fukai^{3,7}
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⁷Grad Sch of Front Sci, Univ of Tokyo, Tokyo, Japan
- P3-338 A virtual reality paradigm for testing social interaction in head-fixed mice**
Nobuhiro Nakai¹, Masaaki Sato^{1,2}, Yasunori Hayashi¹, Toru Takumi¹
¹RIKEN BSI, Wako, Japan ²JST PRESTO
- P3-339 Python libraries for neuroscientific experiments and evaluation of their timing accuracy**
Ryo Tachibana^{1,2}, Keiyu Niikuni³, Toshiaki Muramoto^{3,4}
¹Dept of Psychology, Tohoku Univ, Miyagi, Japan
²Japan Society for the Promotion of Science ³Graduate School of Information Sciences, Tohoku University, Japan
⁴International Research Institute of Disaster Science, Tohoku University, Japan

- P3-340** **Detection of temperature-dependent blood flow changes at subcutaneous and muscle tissues using Diffuse Correlation Spectroscopy**
Mikie Nakabayashi¹, Ketaro Nagano², Yuya Murakami², Kijoon Lee³, Yumie Ono^{1,2}
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²Graduate School of Science and Technology, Meiji Univ., Kanagawa, Japan ³College of Transdisciplinary Studies, DGIST, Daegu, Korea
- P3-341** **Study on non-invasive estimation of the language lateralization**
Masahiro Miyata, Takeshi Aihara, Hiroshi Sasaki
Graduate School of Engineering, Tamagawa University
- P3-342** **Multilayer cortical imaging in freely behaving animals**
Jonathan Nassi, Srishti Gulati, Vania Cao, Pushkar Joshi, Stephani Otte
Inscopix, Palo Alto, CA, USA
- P3-343** **Simultaneous measurement of neural activities in mouse hippocampal slices using multi-electrode array system and laser confocal calcium imaging**
Natsumi Haba¹, Yoshiki Uno¹, Yuuta Hamasaki², Minoru Saito^{1,2}
¹Grad Sch of Integrated Basic Sciences, Nihon Univ, Tokyo, Japan ²College of Humanities and Sciences, Nihon Univ, Tokyo, Japan
- P3-344** **Metastable states and information flow in the resting-state human brain**
Takumi Sase, Keiichi Kitajo
RIKEN Brain Science Institute
- P3-345** **Epileptogenic response generation in induced human pluripotent stem cell-derived neurons by humoral factor from astrocytes - trial for drug-induced seizure risk assessment system**
Norimasa Miyamoto^{1,3}, Kaoru Sato^{2,3}, Kouhei Sawada¹
¹Tsukuba Res Lab, Eisai Co.Ltd. Ibaraki, Japan ²Division of Pharmacology, National Institute of Health Sciences
³iPS Non-clinical Experiments for Nervous System (iNCENS)
- P3-346** **A simple method for improved deep observation in 3D microscopy**
Shunsaku Homma, Takahisa Suzuki, Takako Shimada, Hiroyuki Yaginuma, Ikuo Wada
Dept. Neuroanat. Embryol., Fukushima Medical Univ.
- P3-347** **Mapping Functional Whole-Brain Networks in an Awake State of Mice**
Hiroaki Hamada¹, Yuki Sakai², Norio Takata³, Keigo Hikishima¹, Kenji Tanaka³, Kenji Doya¹
¹Okinawa Institute of Science and Technology ²Kyoto Prefectural University of Medicine ³Keio University
- P3-348** **Correlation between the structure of the neural network and neural function of *Caenorhabditis elegans***
Kazumi Sakata, Tokumitsu Wakabayashi, Taro Ogurusu
Dept Chemistry and Bioengineering, Faculty of Engineering, Iwate University

Translational and Applied Neuroscience

- P3-349** **Marmoset Brain Architecture Project: A high-throughput Neurohistological pipeline for Brain-wide Mesoscale connectivity mapping of Marmoset**
Meng Kuan Lin¹, Yeonsook S Takahashi¹, Khurshida Hossain¹, Bingxing Huo¹, Kevin Weber², Alexander S Tolpygo², Daniel Ferrante², Junichi Hata¹, Jonathan Chan³, Akiya Watakabe⁴, Noriyuki Kishi¹, Atsushi Iriki⁵, Marcello G.P Rosa³, Erika Sasaki⁶, Hideyuki Okano^{1,7}, Mitra P Partha^{1,2}
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⁷Department of Physiology, Keio University School of Medicine 35 Shinanomachi, Shinjuku, Tokyo 160-8582, Japan

Neuroscience and Society- Others

- P3-350** **Anesthetic effect of menthol via GABA_A-receptors on goldfish**
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Role of oxytocin and vasopressin in mouse pup-directed behaviors

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