

Poster (The 2nd Poster Presentation Day)

March 30, Sat., 13:20-14:10/14:10-15:00

1F, Exhibition Hall

★Young Scientist Travel Award, ★★Young Scientist Travel Award & Masao Ito Memorial Award

PSJ Awards

see P.96~97 for each presentation.

Skeletal muscle & locomotion (2)

- 2P-001** Application of CGRP upregulates MyHC I mRNA through cAMP-dependent manner in C2C12 cells
Yoshiaki Mori¹⁾, Junko Yamaji²⁾
¹Department of Rehabilitation Sciences, Kansai University of Welfare Sciences, Japan, ²Department of Nutrition Sciences, Kansai University of Welfare Sciences, Japan
- 2P-002** Essential role of calcineurin but not cAMP in mRNA expression of MyHC II and IL-6 in murine myocytes
Junko Yamaji¹⁾, Yoshiaki Mori²⁾
¹Dept. of Nutrition sciences, Kansai University of Welfare Sciences, Japan, ²Dept. of Rehabilitation sciences, Kansai University of Welfare Sciences, Japan
- 2P-003** Differential Scanning Calorimeter reveals interaction between water and myoproteins
Naoya Nakahara¹⁾, Tetsuo Ohno¹⁾, Masako Kimura²⁾, Sumiko Kimura¹⁾, Shigeru Takemori¹⁾
¹Dept. Mol. Physiol., Jikei Univ. Sch. Med., Japan, ²Dept. Integr. Physiol., Kagawa Nutri. Univ., Japan
- 2P-004** Microscopic heat pulses induce activation of cardiac thin filaments in the *in vitro* motility assay
Shuya Ishii¹⁾, Kotaro Oyama^{1,2,3,4)}, Tomomi Arai^{1,2)}, Hideki Itoh^{1,5)}, Seine A. Shintani⁶⁾, Madoka Suzuki^{4,7)}, Fuyu Kobirumaki-Shimozawa²⁾, Shin'ichi Ishiwata⁸⁾, Norio Fukuda²⁾
¹Department of Physics, School of Advanced Science and Engineering, Waseda University, Japan, ²Department of Cell Physiology, The Jikei University School of Medicine, Japan, ³Quantum Beam Science Research Directorate, National Institutes for Quantum and Radiological Science and Technology, Japan, ⁴PRESTO, Japan Science and Technology Agency, Japan, ⁵Epithelial Biology Laboratory, Institute of Medical Biology, Agency for Science, Technology and Research, Singapore, ⁶Department Biomedical Sciences, Chubu University, Japan, ⁷Institute for Protein Research, Osaka University, Japan, ⁸Faculty of Science and Engineering, Waseda University, Japan
- 2P-005** Functional organization of spinal motor map depends on sport experience
Kazutake Kawai^{1,2)}, Toshiki Tazoe²⁾, Yukio Nishimura²⁾
¹College of Sports Sciences, Nihon University, Japan, ²Neural Prosthesis Project, Department of Dementia and Higher Brain Function, Tokyo Metropolitan Institute of Medical Science
- 2P-006** Thalamocortical Axon Activity in Motor Cortex Exhibits Layer-Specific Dynamics during Motor Learning
Yasuhiro R. Tanaka^{1,2,3)}, Yasuyo H. Tanaka^{1,2,3)}, Masashi Kondo^{1,2)}, Shin-Ichiro Terada^{1,2,4)}, Yasuo Kawaguchi^{3,5,6)}, Masanori Matsuzaki^{1,2,3,5,7)}

¹Department of Physiology, The University of Tokyo, Japan, ²Division of Brain Circuits, NIBB, Japan, ³CREST, JST, Japan, ⁴Graduate School of Biostudies, Kyoto University, Japan, ⁵SOKENDAI, Japan, ⁶Division of Cerebral Circuitry, NIPS, Japan, ⁷WPI-IRCN, The University of Tokyo Institutes for Advanced Study, Japan

2P-007 Leg muscle activity during postural control under optokinetic stimulation in healthy subjects

Junya Komagata^{1,2)}, Atsushi Sugiura¹⁾, Hiroshi Takamura²⁾, Yujiro Masu²⁾, Toshihiro Kitama¹⁾

¹Center for Life Science Research, University of Yamanashi, Japan, ²Department of Physical Therapy, Health Science University, Japan

2P-008 Effects of neonatal dopamine depletion on behavioral responses to anxiogenic tasks in adult rats

Masanori Ogata, Hisanao Akita, Hitoshi Ishibashi

Department of Physiology, School of Allied Health Sciences, Kitasato University, Japan

2P-009 Primary motor cortex single cell activity during quadrupedal vs. bipedal gait in Japanese macaques

Marc A Maier¹⁾, Katsumi Nakajima^{2,3)}, Kazunori Morita^{2,3)}, Akira Murata²⁾, Masahiko Inase²⁾

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2P-010 Features of fine motor skills in 5-year-old children with developmental coordination disorders

Misaki Mikami¹⁾, Shuhei Koeda¹⁾, Ayako Osato²⁾, Takahito Masuda³⁾, Manabu Saito²⁾, Kazuhiko Nakamura^{2,4)}, Junko Yamada¹⁾

¹Hirosaki University Graduate School of Health Sciences, Japan, ²Department of Neuropsychiatry, Hirosaki University Graduate School of Medicine, Japan, ³Hirosaki University Faculty of Education, Japan, ⁴Research Center for Child Mental Development, Hirosaki University Graduate School of Medicine, Japan

2P-011 Serotonin-induced synchronization to both respiratory rhythm and body movement in the pons

Hirotsuka Ooka, Chiaki Uchida, Reona Furukawa, Akiko Arata

Department of Physiology, Hyogo College of Medicine, Mukogawa, Japan

2P-012 Neuronal tuning to speed and acceleration of locomotion in mouse cerebellar cortex

Koji Ikezoe, Kazuo Kitamura

Faculty of Medicine, University of Yamanashi, Japan

2P-013 Characteristics of eye movements of 5-year-old children with developmental coordination disorder

Manabu Saito^{1,2,4)}, Shuhei Koeda³⁾, Misaki Mikami³⁾, Taihihiro Aoki⁵⁾, Kazutaka Yoshida¹⁾, Yui Sakamoto¹⁾, Junko Yamada³⁾, Kenji Tsuchiya⁶⁾, Taiichi Katayama⁷⁾, Kazuhiko Nakamura^{1,2)}

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2P-014 Postural adjustments associated with transition from quadrupedal to bipedal locomotion in monkeys

Takashi Suzuki¹), You Komagiri¹), Kazunori Morita¹), Akira Murata²),
Masahiko Inase²), Katsumi Nakajima¹)

¹Dept. Physiol., Iwate Med. Univ., Japan, ²Dept. Physiol., Facult. Med., Kindai Univ., Japan

2P-015 Distinctive compositions of nicotinic acetylcholine receptors in slow and fast muscles

Buntaro Zempo¹), Yasuhiro Yamamoto¹), Tory Williams²), Fumihito Ono^{1,2})

¹Department of Physiology, Division of Life Sciences, Faculty of Medicine, Osaka Medical College, Japan, ²Laboratory of Molecular Physiology, NIAAA, NIH.

2P-016 The effects of sensory and cognitive functions on motor coordination in 5-years old children

Ayako Osato¹), Misaki Mikami²), Manabu Saito¹), Shuhei Koeda²),
Tamaki Mikami³), Yui Sakamoto¹), Kazutaka Yoshida¹), Yuri Matsubara¹),
Junko Yamada²), Kazuhiko Nakamura^{1,3})

¹Department of Neuropsychiatry, Hirosaki University Graduate School of Medicine, Japan, ²Hirosaki University Graduate School of Health Sciences, Japan, ³Research Center for Child Mental Development, Hirosaki University Graduate School of Medicine, Japan

Exercise (2)

2P-017 Habitual physical exercise attenuates classical brown adipose tissue mass in interscapular region

Junetsu Ogasawara¹), Ken Shirato²), Amire Alimu¹), Takahiko Yoshida¹)

¹Department of Social Medicine, Asahikawa Medical University, School of Medicine, Japan, ²Department of Molecular Predictive Medicine and Sport Science, Kyorin University, School of Medicine

2P-018 Changes in Atf3 and Ankr2 following denervation induced skeletal muscle atrophy

Ippei Yamato¹), Shuichi Soeda²), Tetsuro Tamaki²)

¹Department of Medical Education, Tokai University School of Medicine, Japan, ²Department of Human Structure and Function, Tokai University School of Medicine

2P-019 Understanding Cardiac Hypertrophy Process After Training with Different Intensity In Wistar Rats

Julia Windi Gunadi¹), Vita Murniati Tarawan²), Ronny Lesmana^{2,4}),
Setiawan Setiawan²), Hanna Goenawan^{2,4}), Teresa Liliana Wargasetia³),
Roro Wahyudianingsih⁵), Gina Melawati Sukma⁶), Septo Andry Soesanto⁶),
Rizky Regia Triseynesya⁶)

¹Physiology Department, Faculty of Medicine, Maranatha Christian University, Indonesia, ²Physiology Division, Basic Medical Science Department, Faculty of Medicine, Padjadjaran University, ³Biology Department, Faculty of Medicine, Maranatha Christian University, ⁴Biological Activity Division, Central Laboratory, Padjadjaran University, ⁵Anatomy Pathology, Faculty of Medicine, Maranatha Christian University, ⁶Faculty of Medicine, Maranatha Christian University

2P-020 Alteration of Autophagy Gene Expression by Different Intensity of Exercise in Skeletal Muscles

Vita Murniati Tarawan¹), Julia Windi Gunadi²), Ronny Lesmana^{1,5}),
Hanna Goenawan^{1,5}), Setiawan Setiawan¹), Teresa Liliana Wargasetia³),
Wahyu Widowati³), Yenni Limyati⁴), Julidea Anggiriani Sipayung⁶),
Debby Eka Meilina⁶)

¹Physiology Division, Basic Medical Science Department, Faculty of Medicine, Padjadjaran University, Indonesia, ²Physiology Department, Faculty of Medicine, Maranatha Christian University, ³Biology Department, Faculty of Medicine, Maranatha

Christian University, ⁴Physical Medicine and Rehabilitation Department Immanuel Hospital Bandung, ⁵Biological Activity Division, Central Laboratory, Padjadjaran University, ⁶Faculty of Medicine, Maranatha Christian University

★ **2P-021**
(Y-01)

Effect of Swimming Exercise to Cardiac PGC-1 α and HIF-1 α Gene Expression in Mice

Nova Sylviana^{1,2}), Hanna Goenawan^{1,2}), Ronny Lesmana^{1,2}),
Badai Batara Tiksnadi³), Hasrayati Agustina⁴), Bethy S Hernowo⁴),
Vita Murniati Tarawan¹), Unang Supratman²), Ambrosius Purba¹),
Setiawan Setiawan^{1,2})

¹Department Biomedical Sciences, Faculty Medicine, Padjadjaran University, Bandung, Indonesia, ²Laboratorium Central, Universitas Padjadjaran, Indonesia, ³Department of Cardiology and Vascular Medicine, Universitas Padjadjaran-Hasan Sadikin Hospital, Indonesia, ⁴Department of Pathology Anatomy, Universitas Padjadjaran-Hasan Sadikin Hospital, Indonesia

2P-022

Influence exercise intensity moderate (walking) delay changes of physiology aging for elderly

Gusbakti R¹), S Sri Mukti²)

¹Department Physiology, Faculty of medicine, Universitas Muhammadiyah Sumatera Utara, Indonesia, ²Department Physiology Faculty of Medicine Univ. Gunadarma, Indonesia

2P-023

Drastic changes in arterial pressure during high intensity of treadmill exercise in rats

Kei Tsukioka¹), Ko Yamanaka¹), Hisashi Naito²), Hidefumi Waki¹)

¹Department of Physiology, Graduate School of Health and Sports Science, Juntendo University, Japan, ²Department of Exercise Physiology, Graduate School of Health and Sports Science, Juntendo University, Japan

2P-024

Differential improvement of performance by motor imagery of human ankle dorsal and plantar flexion

Nan Liang^{1,2}), Ayumi Tsubota²), Masato Mukai²), Aiko Takezawa²),
Takahiro Masuhara²), Kanji Matsukawa²)

¹Department of Human Health Sciences, Graduate School of Medicine, Kyoto University, Japan, ²Department of Integrative Physiology, Graduate School of Biomedical and Health Sciences, Hiroshima University

2P-025

The long-term exercise doesn't affect blood humoral immunity

Kihachiro Fukada¹), Hidehiko Kushi²), Terue Takashina¹)

¹Institute of Humanities and Social Sciences, Nihon University, Japan, ²Graduate School of Literature and Social Sciences, Nihon University, Japan

2P-026

Seasonal effect on resting energy expenditure is age and percent body fat dependent

Duong Duc Pham, Jeong Hun Lee, Ki Hwan Hong, Youn Joo Jung,
Sung Jin Kim, Chae Hun Leem

Department of Physiology, College of Medicine, University of Ulsan, Korea

2P-027

Exercise Prevents Hypertension by Modulating Sleep-Related Cardiovascular Autonomic Function in SHRs

Chieh-Wen Chen^{1,2}), Terry B. J. Kuo^{1,2,3,5,6}), Pei-Chi Hsu¹), Jai-Yi Li^{2,7}),
Kuan-Liang Kuo^{4,8}), Cheryl C. H. Yang^{1,2,3,5})

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- 2P-028** Does sport discipline at a young age influence the incidence of hypertension? -J-Fit*study-
Hiroshi Kumagai^{1,2)}, Yuki Someya^{3,4)}, Masaki Yoshioka⁵⁾, Eri Miyamoto-Mikami¹⁾, Youngju Choi⁶⁾, Yoshimitsu Kohmura¹⁾, Koya Suzuki¹⁾, Shuichi Machida¹⁾, Hisashi Naito¹⁾, Seiji Maeda⁶⁾, Noriyuki Fuku¹⁾
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- 2P-029** Regular exercise suppresses obesity-associated HCC development
Naoki Takada¹⁾, Miho Kumagai²⁾, Tatsuya Ando^{2,3)}, Fumitaka Kamachi^{1,2)}, Naoko Ohtani^{1,2)}
¹Department of Pathophysiology, Osaka City University Graduate School of Medicine, ²Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science, ³Division of Clinical Laboratory, Gifu University, School of Medicine
- 2P-030** Lower urinary tract symptoms are associated with reduced peak aerobic capacity in old people
Yu Takeda¹⁾, Shizue Masuki^{1,2)}, Mayuko Morikawa^{1,2,3)}, Hiroshi Nose³⁾
¹Department of Sports Medical Sciences, Shinshu University Graduate School of Medicine, ²Institute for Biomedical Sciences, Shinshu University, ³Jukunen Taiikudaigaku Research Center
- 2P-031** Assessment of thermal load during exercise in junior high school students using wearable sensors
Issei Kato, Kei Nagashima, Shuri Marui, Yuta Masuda
Department of Human science, University of waseda, Japan
- ★ **2P-032** Respiratory Muscle Training (RMT), Aerobic Fitness and Performance in Sri Lankan Rowers
(Y-02)
Dilani Priyashanthi Perera¹⁾, Anoja Ariyasinghe²⁾, Anula Kariyawasam²⁾
¹Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka, ²Department of Physiology, Faculty of Medicine, University of Peradeniya, Sri Lanka
- 2P-033** The expression and distribution of mitsugumin53 in skeletal muscle after lengthening contraction
Yuhei Hibino¹⁾, Yuki Katanosaka²⁾, Kimiaki Katanosaka¹⁾
¹Department of Life and Health Science, Chubu University, Japan , ²Department of Cardiovascular Physiology, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, Japan
- 2P-034** Neuroendocrine response to long-term exercise
Terue Takashina¹⁾, Hidehiko Kushi²⁾, Kihachiro Fukada¹⁾
¹Institute of Humanities and Social Sciences, Nihon University, Japan, ²Graduate School of Literature and Social Sciences, Nihon University, Japan
- 2P-035** The relationship of body mass index and aerobic capacity in primary school students in Jakarta

Nurul Paramita, Sophie Yolanda, Imelda Rosalyn Sianipar,
Dewi Irawati Soeria Santoso
Department of Medical Physiology, Universitas Indonesia, Indonesia

2P-036 The analgesic effect of voluntary running in a rat model of persistent inflammatory pain

Risa Yamauchi^{1,2)}, Hideshi Ikemoto¹⁾, Takayuki Okumo^{1,3)}, Nachi Ebihara¹⁾,
Mana Tsukada¹⁾, Hiroyuki Horikawa^{1,2)}, Shi-Yu Guo¹⁾, Yan-Qing Liu^{1,4)},
Tadashi Hisamitsu¹⁾, Masataka Sunagawa¹⁾

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2P-037 A Randomised Controlled Trial Evaluating Effect of Walking Advice on Improving Depressive Symptoms

Mei-Yuk Lam, Ka-Tik Cheung

School of Medical and Health Sciences, Tung Wah College, China

2P-038 Acute effects of mechanical compression in hypoxia on arterial stiffness

Masato Nishiwaki

Faculty of Engineering, Osaka Institute of Technology, Japan

★ **2P-039** Factors affecting oxygen pulse in a healthy Thai population

(Y-03)

Tichanon Promsrisuk, Napatr Sriraksa, Ratchaniporn Kongsui

Division of Physiology, School of Medical Sciences, University of Phayao, Thailand

2P-040 Circulatory dynamics and autonomic nervous activities between sprinters and distance runners

Xinru Sun¹⁾, Madoka Nozawa¹⁾, Sayaka Saito¹⁾, Junko Hoshi¹⁾,

Hiromasa Tanno¹⁾, Emi Kanno¹⁾, Ryoko Maruyama¹⁾

¹Department of Health Sciences, Tohoku University Graduate School of Medicine, Japan

2P-041 Exercise habit is correlated to lower fall risks among elderly people living in urban areas

Hisayo Yokoyama¹⁾, Hitoshi Watanabe¹⁾, Kazumi Saito²⁾, Ayane Shibata²⁾,
Yuta Suzuki¹⁾, Daiki Imai¹⁾, Kazunobu Okazaki¹⁾, Akira Ogita¹⁾

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2P-042 Asymmetry of plantar flexor muscle but not Achilles tendon in high jumpers

Keigo Tomoo, Tadashi Suga, Yusuke Izui, Hiromasa Ueno, Masafumi Terada,
Akinori Nagano, Tadao Isaka

Department of Sports and Health Science, Ritsumeikan University, Japan

Circulation & Respiration: Cardiac Physiology (2)

2P-043 nNOS regulation of myocyte contraction and $[Ca^{2+}]_i$ handling with fatty acid supplementation

Yin Hua Zhang

Department of Physiology, Seoul National University, College of Medicine, Korea

- 2P-044** A novel superforated-patch technique revealed the Ca²⁺-triggered arrhythmogenesis from the T-tubules
Takao Shioya
Department of Physiology, Faculty of Medicine, Saga University, Japan
- 2P-045** Propagation of repolarization induced in a cell array of human ventricular cell models
Shotaro Kiyokawa, Natsuki Yamamoto, Akinori Noma, Akira Amano
Department of Bioinformatics, Graduation school of Lifescience, University of Ritsumeikan, Japan
- 2P-046** Screening for novel RyR2 inhibitor by ER Ca²⁺ monitoring
Mai Tamura¹, Nagomi Kurebayashi¹, Takashi Murayama¹, Shuichi Mori², Mari Ishigami-Yuasa², Hiroyuki Kagechika², Junji Suzuki³, Kazunori Kanemaru⁴, Masamistu Iino⁴, Takashi Sakurai¹.
¹Dept Pharmacol, Fac Med, Juntendo Univ, Japan, ²Tokyo Med Dent Univ, Japan, ³Univ California San Francisco, USA, ⁴Nihon Univ Sch Med, Japan
- 2P-047** Molecular architecture of catecholamine-induced arrhythmogenicity in rat pulmonary vein
Yosuke Okamoto¹, Naing Ye Aung², Yoshinobu Nagasawa³, Daichi Takagi¹, Kyoichi Ono¹
¹Department of cell physiology, Akita University Graduate School of Medicine, Japan, ²Pathological and Image analysis center, Cancer Research center, Yamagata University Faculty of Medicine, ³Department of Pharmacology and Therapeutics, Faculty of Pharmaceutical Sciences, Toho University
- 2P-048** High throughout screening of RyR2 inhibitors as candidates for novel antiarrhythmic drugs
Masatoshi Ito¹, Nagomi Kurebayashi¹, Takashi Murayama¹, Mai Tamura¹, Mari Ishigami- Yuasa², Shuichi Mori², Hiroyuki Kagechika², Junji Suzuki³, Kazunori Kanemaru⁴, Masamitsu Iino⁴, Takashi Sakurai¹
¹Dept Pharmacol, Fac Med, Juntendo Univ, Tokyo, Japan, ²Tokyo Med Dent Univ, Japan, ³Univ California, USA, ⁴Nihon Univ Sch Med, Japan
- 2P-049** Anti-arrhythmic force of leak current enhancement in manufactured atrial fibrillation of rat
Kako Andoh, Yoriko Katoh, Yosuke Okamoto, Yui Takahashi, Daichi Takagi, Kyoichi Ono
Department of Cell Physiology, Akita Graduate School of Medicine, Japan
- 2P-050** Interventricular difference in calcium sensitivity with lower expression of calcium binding proteins
Young Keul Jeon^{1,2,3}, Ji Hyun Jang^{1,2,3}, Juhan Woo^{1,2,3}, Hae Jin Kim^{1,2,3}, Su Han Cho^{1,2,3}, Yin Hua Zhang^{1,2,3}, Sung Joon Kim^{1,2,3}
¹Department of Physiology, Seoul National University, College of Medicine, Republic of Korea, ²Department of Biomedical Sciences, Seoul National University, College of Medicine, Republic of Korea, ³Ischemic/Hypoxic Disease Institute, Seoul National University College of Medicine, Republic of Korea
- ★★**2P-051** Mitochondrial fusion promoter attenuates left ventricular dysfunction in pre-diabetic rats
(Y-04)
Chayodom Maneechote^{1,2,3}, Siripong Palee^{1,2,3}, Nattayaporn Apaijai^{1,2,3}, Thidarat Jaiwongkam^{1,2,3}, Sasiwan Kerdphoo^{1,2,3}, Siriporn C Chattipakorn^{1,2,4}, Nipon Chattipakorn^{1,2,3}

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2P-053 The use of fetal heart rate variability to identify evolving brain injury after asphyxia

Kyohei Yamaguchi¹⁾, Christopher Arther Lear²⁾, Alistair Jan Gunn²⁾, Tomoaki Ikeda¹⁾, Laura Bennet²⁾, Yoshiki Maeda¹⁾

¹Department of Obstetrics & Gynecology, Mie University Faculty of Medicine, Japan, ²The Fetal Physiology and Neuroscience Group, Department of Physiology, The University of Auckland, New Zealand

2P-054 Generation mechanism of transient EAD in a mathematical ventricular model

Yuichiro Ito, Hiroyuki Kitajima, Toru Yazawa

Department of Engineering and Design, Kagawa University, Japan

2P-055 Alternans in a Mathematical Crustacean Cardiac Model

Hiroyuki Kitajima, Toru Yazawa

Department of Engineering and Design, Kagawa University, Japan

2P-056 Dynamical mechanisms of phase-2 early afterdepolarizations in human ventricular myocyte models

Yasutaka Kurata¹⁾, Kunichika Tsumoto¹⁾, Mamoru Tanida¹⁾, Yuhichi Kuda¹⁾, Ichiro Hisatome²⁾

¹Department of Physiology II, Kanazawa Medical University, Japan, ²Division of Regenerative Medicine and Therapeutics, Institute of Regenerative Medicine and Biofunction, Tottori University Graduate School of Medical Science

2P-057 Mechanisms of L-type Ca²⁺ channel blockers to produce EAD in drug-induced arrhythmia

Shingo Murakami, Akira Kimura

Department of Electrical, Electronic, and Communication Engineering, Faculty of Science and Engineering, Chuo University, Japan

★★**2P-058** Crossbridge thermodynamics in right heart failure

(Y-05)

June-Chiew Han¹⁾, Toan Pham¹⁾, Kenneth Tran¹⁾, Andrew J. Taberner^{1,2)}, Denis S. Loiselle^{1,3)}

¹Auckland Bioengineering Institute, The University of Auckland, New Zealand,

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³Department of Physiology, The University of Auckland, New Zealand

★★**2P-059** LysoPC plays a crucial role in cholesterol-induced nonobese MS cardiomyopathy

(Y-06)

Jiung-Pang Huang, Li-Man Hung

Department of Biomedical Sciences, Chang Gung University, Taiwan

2P-060 Successful establishment of a murine model of cardiac reverse remodeling

Tatsuyuki Sato¹⁾, Norihiko Takeda¹⁾, Yu Nakagama²⁾, Masaki Wake¹⁾, Katsura Soma¹⁾, Hiroaki Semba¹⁾, Takayuki Isagawa³⁾, Issei Komuro¹⁾

¹Department of Cardiovascular Medicine, University of Tokyo Graduate School of Medicine, Japan, ²Department of Pediatrics, University of Tokyo Graduate School of Medicine, Japan, ³Department of Cardiovascular Medicine, Nagasaki University Graduate School of Biomedical Sciences, Japan

- 2P-062** Forced expression of DFCP1 attenuates cardiac fibroblasts activation via promoting autophagic flux
Xiaojing Liu^{1,2}
¹Laboratory of Cardiovascular Diseases, University of Sichuan, China, ²Department of Cardiology, University of Sichuan, China
- 2P-063** Chronic isoproterenol stimulation induced different cardiac disorders in *Tric*-deficient mice
Daiju Yamazaki
Division of Pharmacology, National Institute of Health Sciences, Japan
- 2P-064** SDH deficiency induced metabolic switch and dilated cardiomyopathy
Wenwen Li, Xianhua Wang, Heping Cheng, Qi Ma
Peking University, China
- 2P-065** Chronic response of renal and lumbar sympathetic nerve activity to myocardial infarction in rats
Misa Yoshimoto, Shizuka Ikegame, Fumi Hyodo, Yuki Shiwa, Kenju Miki
Department of Health Science, University of Nara women's University, Japan
- ★ **2P-066** Inhibition of p16^{INK4a} protects against myocardial ischemia/reperfusion injury
(Y-07)
Zhou Qiulian, Bei Yihua, Meng Xiangmin, Xiao Junjie
Institute of Cardiovascular Sciences, School of Life Science, Shanghai University, China
- 2P-067** The cytotoxic effect of 2-APB in H9c2 cells
YanCheng Shen¹, KunTa Yang^{2,3}
¹Department of Pharmacology and Toxicology, School of Medicine, Tzu Chi University, Taiwan, ²Department of Physiology, School of Medicine, Tzu Chi University, Taiwan, ³Institute of Medical Sciences, Tzu Chi University, Taiwan
- 2P-068** Protective Effect of Intermittent Hypoxia Against Oxidative Stress Injury in Rat Cardiomyocytes
I-Chieh Wang¹, Chih-Feng Lien², Kun-Ta Yang³
¹PhD Program in Pharmacology and Toxicology, Tzu Chi University, Taiwan, ²Institute of Medical Sciences, Tzu Chi University, Taiwan, ³Department of Physiology, School of Medicine, Tzu Chi University, Taiwan
- 2P-070** The cardiac end-systolic pressure-volume (force-length) relation is contraction-mode dependent
Kenneth Tran¹, Toan Pham^{1,2}, Andrew J Taberner^{1,3}, Denis S Loiselle^{1,2}, June-Chiew Han¹
¹Auckland Bioengineering Institute, University of Auckland, New Zealand, ²Department of Physiology, University of Auckland, New Zealand, ³Department of Engineering Science, University of Auckland, New Zealand
- 2P-071** Glycolytic pathway is activated in rat embryonic heart just after the beginning of the heartbeat
Tatsuya Sato^{1,2}, Nobutoshi Ichise¹, Takeshi Kobayashi¹, Hiroya Yamazaki¹, Yoshinori Terashima¹, Shunsuke Jimbo¹, Noritsugu Tohse¹
¹Department of Cellular Physiology and Signal Transduction, Sapporo Medical university School of Medicine, Japan, ²Department of Cardiovascular, Renal, and Metabolic Medicines, Sapporo Medical university School of Medicine, Japan
- 2P-072** Rapid heating induces high-frequency sarcomeric oscillations in living rat neonatal cardiomyocytes

Seine A. Shintani¹⁾, Kotaro Oyama²⁻³⁾, Shin'Ichi Ishiwata⁴⁾, Norio Fukuda⁵⁾

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2P-073 Roles of Epac1 in the regulation of contractility in cardiac muscle

Yoshiki Ohnuki, Kenji Suita, Satoshi Okumura

Department of Physiology, Tsurumi University School of Dental Medicine, Japan

2P-074 *In vivo* nano-analysis of the dynamics of individual sarcomeres in the beating mouse heart

Fuyu Kobirumaki-Shimozawa¹⁾, Kotaro Oyama²⁻³⁾, Togo Shimozawa⁴⁾, Shin'Ichi Ishiwata⁵⁾, Norio Fukuda¹⁾

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2P-075 Role of pannexin hemichannel on stretch-induced mitochondrial hyperpolarization in cardiomyocytes

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2P-076 Comparison of cardiomyocyte kinetics of rat left ventricle and turtle ventricle

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2P-077 Hydrogen Sulfide Exerts Cardioprotection in Sepsis by Inhibiting Endoplasmic Reticulum Stress

Yuming Wu^{1,4,5)}, Yuhong Chen^{1,2)}, Sheng Jin¹⁾, Xu Teng¹⁾, Zhenjie Hu²⁾, Xuan Qiu³⁾

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2P-078 Physiological Studies on the Protective Effect of Melatonin against Doxorubicin Cardiotoxicity

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2P-079 Optogenetic cardiac pacing in freely-moving mice

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2P-080 The prevalence of low physical activity and its association with other risk factors in Iran

Majid Askaripour¹⁾, Masoomah Kahnooji²⁾, Mahboobeh Yeganeh²⁾, Fatemeh Tavakoli³⁾, Mitra Shadkam⁴⁾, Farzaneh Rostamzadeh¹⁾,

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2P-081 Development of light-controllable nitric oxide releasing small compounds and biological application

Naoya Ieda, Hana Okuno, Ayaka Yamauchi, Yuji Hotta, Mitsuyasu Kawaguchi, Kazunori Kimura, Hidehiko Nakagawa
Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan

Circulation & Respiration: Lung Physiology (2)

2P-082 Airway epithelial integrin $\beta 4$ expression deficiency leads to lung dysplasia in mice

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2P-083 S1P₂ aggravates lung fibrosis through altering alveolar macrophage polarization in mice

Yasuo Okamoto^{1,2)}, Juanjuan Zhao¹⁾, Kazuaki Yoshioka¹⁾, Sho Aki¹⁾, Kazuhiro Ishimaru¹⁾, Noriko Takuwa^{1,3)}, Yoh Takuwa¹⁾

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2P-084 Lung Functions and Feno Levels during Phases of Menstrual Cycle in Asthmatic and Healthy Females

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2P-085 The role of miR-126 on LPS-induced acute lung injury in mice

Yongsheng Gong, Haizeng Zhang, Danyang Chen, Qiuyun Tian, Sunzhong Mao, Xiaofang Fan, Shufang Liu

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2P-086 Chloramphenicol induces autophagy and inhibits the HIF1 α pathway in NSCLC cells

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Circulation & Respiration: Vascular Physiology (2)

- ★ **2P-087** (Y-09) **Influence of Tobacco smoking on carboxyhaemoglobin levels and blood lipid levels**
Prasanna Herath¹⁾, Savithri Wimalasekera²⁾, Thamara Amarasekara³⁾
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- 2P-088** **Stimulation of nitric oxide production in vascular endothelial cells by *Raphanus sativus* extract**
Misato Wakamatsu¹⁾, Rei Kuroda¹⁾, Kimiko Kazumura²⁾, Yuji Minami³⁾, Katsuko Kajiya³⁾
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- 2P-089** **The vasodilatory effect of Tiliacorinine 12'-O-acetate in rat aorta**
Luckika Panthiya¹⁾, Jiraporn Tocharus²⁾, Rungusa Pantan¹⁾, Archawin Nakaew³⁾, Apichart Suksamrarn³⁾, Chainarong Tocharus¹⁾
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- 2P-090** **Effects of adiponectin against CoCl₂ induced apoptosis of SMCs via HIF-1 α /cAMP/PKA/Cx43 pathway**
Jingjie Xiao^{1,2)}, Wei Zhang^{1,3)}, Lei Wu^{1,4)}, Liang Zhang^{1,2)}, Yang Wang^{1,2)}, Li Li^{1,2)}, Junqiang Si^{1,2)}, Xinzhi Li^{1,5)}, Ketao Ma^{1,2)}
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- 2P-091** **Hemodynamic responses to hyperbaric treatment in skeletal muscle of obesity and type 2 diabetes rats**
Natsuki Goto¹⁾, Naoto Fujita¹⁾, Ryosuke Ochi¹⁾, Wataru Nino¹⁾, Kazuyoshi Hisatsune¹⁾, Hisao Nishijo²⁾, Susumu Urakawa¹⁾
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- 2P-092** **Differential changes of flow-induced vasodilation mechanisms in coronary arteries from SHR and WKY**
Suhan Cho, Hae Jin Kim, Ming Zhe Yin, Sung Joon Kim
Department of Physiology, Seoul National University College of Medicine, Korea
- 2P-093** **Measurement of pulmonary arterial capacitance in the pathogenesis of pulmonary hypertension in rats**
Hirotsugu Tsuchimochi¹⁾, Ryohei Fukuba^{1,2)}, Takashi Sonobe¹⁾, Shigeki Taniguchi²⁾, James T Pearson^{1,3)}
¹Department of Cardiac Physiology, National Cerebral and Cardiovascular Research

- 2P-094** Advanced method for vessel identification and assessment of concurrent dynamic vascular events
Naoki Honkura^{1,2)}, Mark Richerds²⁾, Tetsumei Urano¹⁾, Lena Claesson-Welsh²⁾
¹Department of Medical Physiology, Hamamatsu University school of Medicine, Japan, ²Department of Immunology, Genetics and Pathology, Rudbeck Laboratory, Uppsala University, Sweden
- 2P-095** Resveratrol stimulates Na⁺-Ca²⁺ exchanger to reduce cytosolic Ca²⁺ in rat aortic smooth muscle cells
Yunting Zhang¹⁾, F Yan²⁾, Xiaoqiang Yao¹⁾
¹Department of Biomedical Sciences, The Chinese University of Hong Kong, China, ²Department of Physiology, Guangzhou University of Chinese Medicine, China
- 2P-096** The involvement of calpain in abnormal vascular smooth muscle contraction induced by SPC and U46619
Hiroko Kishi¹⁾, Qian Lu¹⁾, Tomoka Morita¹⁾, Ying Zhang¹⁾, Bochao Lyu¹⁾, Min Zhang¹⁾, Nan Li¹⁾, Sei Kobayashi¹⁾
¹Department of Molecular and Cellular Physiology, Yamaguchi University Graduate School of Medicine, Japan
- 2P-097** Effects of Capsaicinoid Nonivamide on Obesity-Related Vascular Dysfunction in Obese Rat
Sivanan Sivasinprasan¹⁾, Naruemon Wikan¹⁾, Apichart Suksamrarn²⁾, Jiraporn Tocharus³⁾, Chainarong Tocharus¹⁾
¹Department of Anatomy, Faculty of medicine, Chiang Mai University, Thailand, ²Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Ramkhamhaeng University, Thailand, ³Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand
- 2P-098** Deficiency of HIF2 α in VSMCs Protects Against Angiotensin II-Induced Abdominal Aortic Aneurysm
Yanting Song¹⁾, Dan Qi¹⁾, Xia Wang¹⁾, Ye Liu¹⁾, Huihua Li^{1,2)}, Jie Du^{2,3)}, Aijuan Qu^{1,2)}
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- 2P-099** Intermedin reduces neointima formation by regulating vascular smooth muscle cell phenotype
Yong Fen Qi, Qing Zhu, Xian-Qiang Ni, Wei-Wei Lu, Jin-Sheng Zhang, Jin-Ling Ren, Di Wu, Yao Chen, Lin-Shuang Zhang, Yan-Rong Yu, Chao-Shu Tang
Peking University Health Science Center, China
- 2P-100** Role of mitochondrial phosphate transporters in vascular calcification
Nhung Thi Nguyen, Tuyet Thi Nguyen, Soo-Jin Kim, Luong Dai Ly, Dat Da Ly, Seung-Kuy Cha, Kyu-Sang Park
Department of Physiology, Wonju College of Medicine, Yonsei University, Korea
- 2P-101** Evolutional relationship between hearts and elastic protein connectins
Akira Hanashima, Yoshihiro Ujihara, Mayuko Tada, Mai Iwasa, Aya Kodama,

Takeshi Honda, Ken Hashimoto, Satoshi Mohri
First Department of Physiology, Kawasaki Medical school

2P-102 Changes in the Right Coronary Microvascular Function in Pulmonary Arterial Hypertension

Mark T Waddingham¹, Huiling Jin², Takashi Sonobe²,
Hirotosugu Tsuchimochi², Ryotaro Asano¹, Keiji Umetani³,
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2P-103 Decreased Kir and Kv of right coronary artery SMC in pulmonary arterial hypertensive rats

Sung Eun Kim^{1,2}, Ming Zhe Yin^{1,2}, Hae Jin Kim¹, Yin Hua Zhang^{1,2,3},
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★★★2P-104
(Y-10)

FUNDC2 regulates platelet activation through AKT/GSK-3β/cGMP axis

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2P-105 A Mathematical Model of Cardiac Cycle Driven by the Human Ventricular Cell Model

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2P-106 Atypical antipsychotic drug olanzapine leads to aggravation of atherosclerosis in apoE-null mice

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2P-107 Effect of Total Cholesterol on Blood Pressure and the Difference between Genders

Reza Ishak Estiko, Miranti Dewi Pramaningtyas
Faculty of Medicine, Universtas Islam Indonesia, Indonesia

2P-108 The prevalence of hypertension and incidence in Southeastern Iran: A Community-based Study

Soodeh Rajabi¹, HamidReza Nasri², Farzaneh Rostamzadeh³,
Freidoon Jahangir⁴, Mahboobeh Yeganeh-Hajahmadi¹, Mitra Shadkam⁵,
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Endocrine, Reproduction & Development (2)

- ★ **2P-110** Genistein and running exercise modulates HDAC3 and the fibrosis markers in OVX rats with NASH
(Y-11)

Namthip Witayavanitkul¹, Duangporn Werawatganon¹,
Naruemon Klaikeaw², Prasong Siriviriyakul¹

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- 2P-111** DHA Protects Against Hepatic Steatosis by Activating Sirt1 in Nonalcoholic Fatty Liver Disease Mice

Xiao Luo^{1,2}, Xinqian Gu^{2,3}, Xiaomin Su^{2,3}, Xin Liu⁴, Zhangya He^{2,3},
Xiaomin Li^{2,3}, Ru Jia⁵, Bei Han^{2,3}, Yan Yu^{2,3}, Xiaoqin Luo^{2,3},

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- 2P-112** Neurosecretory protein GL, a hypothalamic small protein, regulates appetite and energy homeostasis

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Eiko Iwakoshi-Ukena², Megumi Furumitsu², Kazuyoshi Ukena²

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- 2P-113** Effect of long term high-fat diet and calorie restriction on the hepatic NAD metabolism in mice

Xiaojing Wei¹, Ru Jia², Qiqi Wang¹, Jiaqi Huang¹, Xiao Luo¹, Jianqun Yan¹

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- 2P-114** Effect of flaxseed on a inflammatory response in patients with hypercholesterolemia-preliminary data

Dominika Kanikowska¹, Rafał Rutkowski¹, Krzysztof Pawlaczyk²,
Maki Sato³, Monika Misian², Andrzej Bręborowicz¹, Janusz Witowski¹

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- 2P-115** The hypothalamic feeding-related neuropeptides in the streptozotocin-induced diabetic rat

Satomi Sonoda^{1,2}, Kenya Sanada¹, Hiroki Beppu¹, Kazuaki Nishimura¹,

Haruki Nishimura¹, Kentaro Tanaka¹, Hiromichi Ueno¹,
Mitsuhiro Yoshimura¹, Takashi Maruyama¹, Yoshiya Tanaka², Yoichi Ueta¹
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Environmental Health, Japan, ²The First Department of Internal Medicine, School of
Medicine, University of Occupational and Environmental Health, Japan

2P-116 Effects of estradiol on an orexigenic function of ghrelin in ovariectomized rats fed high-fat diet

Naoko Yokota-Nakagi^{1,2}, Mizuho Kawakami¹, Haruka Takahashi¹,
Akira Takamata¹, Yuki Uchida¹, Keiko Morimoto¹

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Nara Womens University, Japan, ²Department of Health and Nutrition, Faculty of Health
Science, Kyoto Koka Womens University, Japan

2P-117 Possible involvement of central nesfatin-1 neurons in xenin-induced feeding suppression in rats

Hirofumi Hashimoto, Yoshiteru Seo
Department of Regulatory Physiology, Dokkyo Medical University, Japan

2P-118 Adrenomedullin enhances chorda tympani nerve responses to sugars in mice

Shusuke Iwata¹, Mayuko Inoue¹, Keiko Yasumatsu¹, Ryusuke Yoshida^{2,3},
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2P-119 Dietary fat modulation of oral fatty acid sensitivity and preference in young men and women

Yuhō Yamauchi, Mamiko Inoshita, Kyoko Ueshima, Yuki Uchida,
Keiko Morimoto
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2P-120 Nutritional status of Japanese children with developmental disorders

Shuhei Koeda¹, Misaki Mikami¹, Manabu Saito^{2,3}, Tamaki Mikami³,
Kazuhiko Nakamura^{2,3}, Junko Yamada¹

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Neuropsychiatry, Hirosaki University Graduate School of Medicine, Japan, ³Research
Center for Child Mental Development, Hirosaki University Graduate School of Medicine,
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★★2P-121 (Y-12) The influence of central leptin signalling upon Obesity-induced hypertension

Stephanie Elise Simonds, Jack T Pryor, Tony Tiganis, Michael A Cowley
Monash University, Australia

★★2P-122 (Y-13) FKBP51 defect is resistant to diet induced obesity, inflammation and insulin resistance

Luen-Kui Chen¹, Chi-Chang Juan^{1,2,3}

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²Department of Medical Research, Taipei Veterans General Hospital, ³Department of
Education and Research, Taipei City Hospital, Taiwan

2P-123 Leptin is a key regulator of glucose homeostasis in obesity

Jack Pryor, Stephanie Simonds, Michael Cowley
Department of Physiology, Monash University, Australia

- 2P-124** **Visfatin promotes monocyte-endothelial cell adhesion via activation of p38-PI3K-Akt signaling**
 Chi-Chang Juan^{1,2,3}, Yu-Ting Lin¹, Deng-Yuan Jian^{1,4}, Luen-Kui Chen¹, Tse-Ting Kuan¹, Shao-Yun Wu¹
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- 2P-125** **Pin1 suppress thermogenesis through promoting the degradation of PRDM16**
 Masa-ki Inoue, Yusuke Nakatsu, Takeshi Yamamotoya, Yasuka Matsunaga, Yuki Inoue, Koji Ueda, Yu Mizuno, Tomoichiro Asano
 Department of Medical Science, Graduate School of Medicine, University of Hiroshima, Japan
- ★ **2P-127** **Effect of Dapagliflozin on Glucose Metabolism and Renal and Hepatic PEPCK Expression in Obese Rats**
 (Y-14)
 Myat Theingi Swe, Krit Jaikumkao, Laongdao Thonak, Anchalee Pongchaidecha, Anusorn Lungkaphin
 Epithelial Transport and Intracellular Signaling Regulation Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand
- 2P-128** **Tentonin 3/TMEM150C contributes to glucose-stimulated insulin secretion in pancreatic β -cells**
 Jungwon Wee^{1,2}, Gysang Hong¹, Sungmin Pak¹, Uhtaek Oh¹
¹Brain Science Institute, Korea Institute of Science and Technology, Korea, ²Molecular Medicine and Biopharmaceutical Sciences, Seoul National University, Korea
- 2P-129** **Cytosolic phospholipase A2 in hypothalamus modulates systemic glucose metabolism differently by meal**
 Ming-Liang Lee¹, Hirokazu Matsunaga¹, Takahiro Hayasaka², Yuko Okamatsu¹, Kazuhiro Kimura¹, Chitoku Toda¹
¹Dept Biochemistry, Graduate School of Veterinary Medicine, Hokkaido University, ²Dept Surgery, Graduate School of Medicine, Hokkaido University
- 2P-130** **Heterotypic endosomal fusion as an initial trigger for insulin-induced GLUT4 translocation**
 Hiroyasu Hatakeyama^{1,2,3}, Makoto Kanzaki³
¹Department of Physiology, Kitasato University School of Medicine, Japan, ²Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Japan, ³Graduate School of Biomedical Engineering, Tohoku University, Japan
- 2P-131** **Exogenous pyruvate maintains glycolysis-TCA cycle flux in Schwann cell under high glucose conditions**
 Hideji Yako¹, Naoko Niimi¹, Ayako Kato², Shizuka Takaku¹, Koichi Kato², Kazunori Sango¹
¹Diabetic Neuropathy Project, Tokyo Metropolitan Institute of Medical science, Japan, ²Laboratory of Medicine, Aichi Gakuin University, School of Pharmacy
- 2P-132** **Early life stress effect on pancreatic PDH level and Krebs cycle enzymes activity in young adult rat**
 Mina Salimi¹, Forouzan Sadeghimahalli^{2,4}, Homeira Zardoost^{1,2}, Fariba Khodaghali³, Fatemeh Shaerzadeh⁵, Roxana Karbaschi²
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Medical Sciences, Iran, ³Neuroscience Research Center, Shahid Beheshti University of Medical Sciences, Iran, ⁴Education Development Center, Mazandaran University of Medical Science, Iran, ⁵Department of Physiology, Hormozgan University of Medical Sciences, Iran

2P-133 Chronic maternal separation impaired glucose-dependent insulin secretion from pancreatic islets

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Mina Salimi^{1,2)}, Forouzan Sadeghimahalli⁴⁾

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2P-134 Effect of maternal high-fat diet on HB9 expression and pancreatic insulin secretion in male rats

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Forouzan Sadeghimahalli⁴⁾, Rezvan Arian^{2,5)}

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2P-135 Postnatal stress induces morphological changes in islets of Langerhans in stressed adult male rats

Forouzan Sadeghimahalli^{1,2)}, Homeira Zardooz^{2,3)}, Mina Salimi³⁾,
Roxana Karbaschi²⁾

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★ **2P-136** Correlation of median nerve parameters with TSH values in hypothyroid patients (Y-15)

Shital Gupta¹⁾, Rita Khadka¹⁾, Dilip Thakur¹⁾, Bishnu Hari Poudel¹⁾,
Kishun Deo Mehta²⁾, Robin Maskey³⁾

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2P-137 Role of PCSK9 in lipid metabolic disorders and ovarian dysfunction in polycystic ovary syndrome

Meijiao Wang¹⁾, Dan Zhao¹⁾, Liangzhi Xu^{2,3)}, Wenjing Guo¹⁾, Li Nie¹⁾,
Yun Long¹⁾, Min Liu¹⁾, Yichen Wang¹⁾, Xueqin Zhang¹⁾, Dongzhi Yuan¹⁾,
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2P-138 Norepinephrine inhibits Th17 cells via beta2-adrenoreceptor signaling in collagen-induced arthritis

Yi-Hua Qiu, Yan Liu, Yu-Ping Peng

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- 2P-139** Roles of macrophages and PAI-1 in diabetic delayed bone repair in female mice
Naoyuki Kawao¹, Takeshi Shimoide¹, Yukinori Tamura¹, Kiyotaka Okada¹, Katsumi Okumoto², Shinji Kurashimo², Yoshitaka Horiuchi², Kohei Tatsumi¹, Osamu Matsuo¹, Hiroshi Kaji¹
¹Department of Physiology and Regenerative Medicine, Kindai University Faculty of Medicine, Japan, ²Life Science Research Institute, Kindai University
- 2P-140** Mechanical allodynia caused by peripheral nerve hyperexcitability in adult-onset hypothyroid mice
Machiko Suda¹, Yusuke Takatsuru², Noriyuki Koibuchi¹
¹Department of Integrative Physiology, Gunma University, Japan, ²Department of Medicine, Johmoh Hospital, Japan
- 2P-141** Ketogenic diet induces slow-type shift of skeletal muscle in male rat
Yuji Ogura¹, Mitsutoshi Kurosaka¹, Chiaki Kakehashi¹, Ryo Kakigi², Tatsuo Akema¹, Toshiya Funabashi¹
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- 2P-142** Administration of xylooligosaccharides from rice husk delayed the progression of diabetic rat model
Narissara Lailerd¹, Parichart Toejing¹, Nuntawat Khat-Udomkiri², Sasithorn Sirilun², Chaivavat Chaayasut²
¹Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, ²Innovation Center for Holistic Health, Nutraceuticals and Cosmeceuticals, Faculty of Pharmacy, Chiang Mai University, Thailand
- 2P-143** Improvement of organ bath technique as *ex vivo* systems in the insulin secretion assay
Motoshi Ouchi¹, Asuka Morita¹, Keitaro Satoh², Hidefumi Wakashin³, Hiroe Kon⁴, Misao Terada⁴, Tomoe Fujita¹
¹Department of Pharmacology and Toxicology, Dokkyo Medical University School of Medicine, Japan, ²Department of Pharmacology, Asahi University School of Dentistry, ³Department of Regulatory Physiology, Dokkyo Medical University School of Medicine, ⁴Laboratory Animal Research Center, Dokkyo Medical University
- 2P-144** Responsiveness of vomeronasal cells to a male-attractant, imorin in the newt, *Cynops pyrrhogaster*
Fumiyo Toyoda¹, Tomoaki Nakada², Kouhei Matsuda³, Takashi Nakakura⁴, Itaru Hasunuma⁵, Kazutoshi Yamamoto⁶, Sakae Kikuyama⁶
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- 2P-145** Uterine environment regulates nurturing behavior in the offspring with prolactin as a key factor
Taku James Sairenji¹, Shinnosuke Masuda¹, Oh Kwan Ee¹, Ryosuke Kaneko², Saya Kodohira³, Yuri Shirakawa³, Chieko Yamazaki³, Noriaki Shimokawa^{1,3}, Noriyuki Koibuchi¹
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- 2P-146** Effect of maternal high-fat diet and exercise during gestation on placental signaling
Lin Song, Bo Sun, Jianqun Yan
Department of Physiology & Pathophysiology, Xi'an Jiaotong University, China
- 2P-147** Fetal heart rate variability: a biomarker for evolving fetal hypoxic-ischaemic brain injury
Yoshiki Maeda^{1,2}, Christopher A Lear¹, Michi Kasai^{1,3}, Michael J Beacom¹, Victoria King¹, Joanne Davidson¹, Tomoaki Ikeda², Alistair Jan Gunn¹, Laura Bennet¹
¹Department of physiology, The University of Auckland, New Zealand, ²Department of Obstetrics and Gynecology, Mie University, Japan, ³Department of Obstetrics and Gynecology, Yokohama Municipal University, Japan
- 2P-148** Evaluation of spontaneous behaviors on an elevated plus maze using bisphenol A exposure model
Tetsuya Fujimoto¹, Shuji Aou²
¹Department of Physiology, Osaka Dental University, Japan, ²Department of Human Intelligence Systems, Kyushu Institute of Technology, Japan
- 2P-149** Genistein and daidzein augments thyroid hormone-mediated dendritogenesis of cerebellar Purkinje cell
Winda Ariyani¹, Wataru Miyazaki¹, Yu Lu², Toshiharu Iwasaki³, Noriyuki Koibuchi¹
¹Department of Integrative Physiology, Gunma University, Japan, ²Department of Physiology, College of Basic Medical Sciences, Jilin University, China, ³Department of Liberal Arts and Human Development, Kanagawa University of Human Services, Japan
- 2P-150** Positive effects of reduced nocturnal screen light on sleep in bedtime phone users
Chuan Li, Augustine WL Li, Chun Lok Wu, Zenab Bibi
School of Medical and Health Sciences, Tung Wah College, Hong Kong
- 2P-151** Association of sex and sex hormones with the functional brain network at rest
Tomohiro Donishi¹, Masaki Terada², Yoshiki Kaneoke¹
¹Department of System Neurophysiology, Graduate School of Wakayama Medical University, Japan, ²Wakayama-Minami Radiology Clinic, Japan
- 2P-152** The relationships between embryogenic outcome and membrane potential of mouse ova
Masao Miyake¹, Susumu Yoshie¹, Satoru Kaneko², Akihiro Hazama¹
¹Department of Cellular and Integrative Physiology, Fukushima Medical University, Japan, ²Ichikawa General Hospital, Tokyo Dental College, Japan
- 2P-153** Regulation of hyperactivation by interactions among oviductal hormones in hamster sperm
Masakatsu Fujinoki
Department of Physiology, Dokkyo Medical University, Japan
- 2P-154** Proteomics analysis of whole testis in cordycepin treatment in streptozotocin-induced diabetic mice
Wirasak Fungfuang¹, Kongphop Paranyakul¹, Krittika Srisuksai¹, Sittiruk Roytakul²
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★★2P-155
(Y-16)

Overexpression of Anthrax toxin receptor 2 (ANTXR2) promotes early development of endometriosis

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2P-156 Promoting follicle development by inducing ovarian angiogenesis

Kouji Komatsu, Satoru Masubuchi

Department of Physiology, Aichi Medical University, Japan

2P-157 Repression of COUP-TFII by proinflammatory cytokines contributes to endometriotic lymphangiogenesis

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2P-158 Effects of exposure to mild hyperbaric oxygen on the outcome of infertility treatment

Tsuyoshi Shimizu¹, Fumihiko Yoshikawa², Yahiro Netsu³, Kaori Kamijou³, Hiromi Hoshina², Akihiko Ishihara⁴

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2P-159 Insufficient in utero prolactin exposure causes impaired maternal behavior in the offspring

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2P-160 Dominantly expressed Serpina3n suppresses the phenotypes of osteoblasts of female mice

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2P-161 The role of CTCF in the mammalian cochlea

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- 2P-162** Electric axon guidance in embryonic retina: Regulation of integrin activities by extracellular Ca^{2+}
Masayuki Yamashita
Center for Medical Science, International University of Health and Welfare, Japan
- 2P-163** Improvement of motor function induced by skeletal muscle contraction in spinal cord injury rats
Norito Hayashi^{1,2)}, Naoyuki Himi¹⁾, Emi Nakamura-Maruyama¹⁾, Naohiko Okabe¹⁾, Issei Sakamoto^{1,2)}, Toru Hasegawa²⁾, Osamu Miyamoto¹⁾
¹Department of Physiology2, Kawasaki Medical School, Japan, ²Department of Orthopedics, Kawasaki Medical School, Japan
- 2P-164** TRPV4 is functionally expressed in cultured mouse Schwann cells
Xiaona Feng^{1,2,3)}, Yasunori Takayama^{1,2)}, Makoto Tominaga^{1,2,3)}
¹Division of Cell Signaling, National Institute for Physiological Sciences, Japan, ²Thermal Biology Group, Exploratory Research Center on Life and Living Systems (ExCELLS), ³Department of Physiological Sciences, The Graduate University for Advanced Studies (SOKENDAI)
- 2P-165** Spontaneous network activity in the embryonic CNS analyzed with voltage-sensitive dye recording
Katsushige Sato¹⁾, Yoko Momose-Sato²⁾
¹Department of Health and Nutrition Sciences, Faculty of Human Health, Komazawa Women's University, Japan, ²Department of Nutrition and Dietetics, College of Nutrition, Kanto-Gakuin University, Japan
- 2P-166** Optical analysis of functional development of the mouse vestibular nucleus
Yoko Momose-Sato¹⁾, Katsushige Sato²⁾
¹Department of Nutrition and Dietetics, College of Nutrition, Kanto-Gakuin University, Japan, ²Department of Health and Nutrition Sciences, Faculty of Human Health, Komazawa Women's University, Japan
- 2P-167** Sexual differentiation of the preoptic area by estrogen-induced cell migration through Rac1 pathway
Tomohiro Hamada¹⁾, Yasuo Sakuma²⁾
¹Clinical Departments Laboratory, Nippon Medical School, Japan, ²Faculty of Rehabilitation, School of Allied Health Sciences, University of Tokyo Health Sciences, Japan
- 2P-168** Neuronal differentiation induced by vitamin K and generation of derivatives to treat brain diseases
Yoshihisa Hirota^{1,2)}, Yuta Takagi²⁾, Yutaro Yamashita¹⁾, Mayu Okazeri¹⁾, Yoshitomo Suhara^{1,2)}
¹Department of Bioscience and Engineering, College of Systems Engineering and Sciences, Shibaura Institute of Technology, Japan, ²Systems Engineering and Science, Graduate School of Engineering and Science, Shibaura Institute of Technology
- 2P-169** Intranasal IGF-1 reduced neonatal LPS-induced behavioral deficits and inflammation in juvenile rats
Lu-Tai Tien¹⁾, Yih-Jing Lee¹⁾, Chih-Hsueh Tseng¹⁾, Lir-Wan Fan²⁾
¹School of Medicine, Fu Jen Catholic University, Taiwan, ²Department of Pediatrics, Division of Newborn Medicine, University of Mississippi Medical Center, USA

- 2P-170** Early exercise inhibits inflammation and promotes neuroprotection in intracerebral hemorrhage rats
Keigo Tamakoshi, Keishi Hayao, Hideaki Takahashi, Hiroyuki Tamaki
Department of Physical Therapy, Niigata University of Health and Welfare, Japan
- 2P-171** Glial cells missing 1 promote cell differentiation and angiogenesis in the mammalian brain
Yoshitaka Hayashi, Satoshi Fuke, Takahiro Fuchigami, Naoko Morimura, Natsu Koyama, Seiji Hitoshi
Department of Integrative Physiology, Shiga University of Medical Science, Japan
- 2P-172** The effect of forced limb training of rats under photochemically induced focal cerebral ischemia
Junko Yamada, Kazuki Akahira, Misaki Mikami, Yuuri Kato, Chihiro Sato
Department of Comprehensive Rehabilitation Science, Hirosaki University Graduate School of Health Sciences, Japan
- 2P-173** Role of SAD-A kinase in radial neuronal migration during development of cerebral cortex
Keiko Nakanishi^{1,2)}, Hiroyuki Niida^{3,4)}, Hidenori Tabata⁵⁾, Yoshikazu Johmura^{3,6)}, Kenichiro Yamada⁷⁾, Koh-Ichi Nagata⁵⁾, Nobuaki Wakamatsu⁷⁾, Masashi Kishi⁸⁾, Yujiro Higashi²⁾, Makoto Nakanishi^{3,6)}.
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- 2P-174** Voluntary and forced rehabilitation to promote motor palsy recovery in intracerebral hemorrhage rats
Chihiro Sato¹⁾, Kunikazu Tanji²⁾, Shuji Shimoyama²⁾, Misaki Mikami¹⁾, Kazuki Akahira¹⁾, Junko Yamada¹⁾
¹Department of Health Science, University of Hirosaki, Japan, ²Department of Medicine, University of Hirosaki, Japan
- 2P-175** Alteration of gut microbiota and cerebellar structures in Glyphosate-exposure rat
Kana Miyamoto¹⁾, Ken Futagami¹⁾, Kwon Soon Thomas Tiong¹⁾, Yuu Hirose¹⁾, Jianzhong Hu²⁾, Yoko Nomura³⁾, Yasunari Kanda⁴⁾, Sachiko Yoshida¹⁾
¹Department of Environmental and Life Science, Toyohashi University of Technology, Japan, ²Icahn school of medicine at Mount Sinai, USA, ³Queens College, the City University of New York, USA, ⁴National Institute of Health Sciences, Japan
- 2P-176** Analysis of rat fetal movement before and after anesthetic drug using non-anesthesia pregnant rat
Suzuka Hashiguchi^{1,2)}, Hodaka Natsuka^{1,2)}, Marin Tanimoto^{1,2)}, Akira Tamaki¹⁾, Akiko Arata²⁾
¹Physical Ther. for Int. Disorders, Sch. of Rehabilitation, Hyogo Univ of Helth Sci., Japan, ²Department of Physiology, Hyogo College of Medicine, Japan

- 2P-177** Altered gut flora and cerebellar development abnormalities in VPA rat model of ASD
 Kwong Soon Thomas Tiong¹, Seita Sato¹, Kana Miyamoto¹, Yuu Hirose¹, Yasunari Kanda², Sachiko Yoshida¹
¹Department of Environmental and Life Sciences, Toyohashi University of Technology, Japan, ²Division of Pharmacology, National Institute of Health Sciences, Japan
- 2P-178** Histological analysis of peripheral nerve injury in methylmercury-exposed rat
 Yo Shinoda¹, Shunsuke Ehara¹, Satoshi Tatsumi¹, Tatsuro Amemiya¹, Eiko Yoshida², Tsutomu Takahashi¹, Toshiyuki Kaji², Yasuyuki Fujiwara¹
¹Tokyo University of Pharmacy and Life Sciences, Japan, ²Tokyo University of Science
- 2P-179** The role of Cdon in differentiation of mouse embryonic stem cells into motor neurons
 Seul-Yi Lee^{1,3}, Hye-Been Kim^{2,3}, Jong-Sun Kang^{2,3}, Hana Cho^{1,3}
¹Department of Physiology, Korea, ²Department of Molecular Cell Biology, ³Cell Network Research Center, Sungkyunkwan University School of Medicine, Korea
- 2P-180** PlexinA1 is crucial for the midline crossing of callosal axons during corpus callosum development
 Md Mosharaf Hossain¹, Takuji Ito², Takamasa Tsuzuki¹, Fumitaka Imaizumi¹, Kana Kamiya¹, Mitsuki Okada¹, Ikuko Takahashi¹, Takayuki Negishi¹, Kazunori Yukawa¹
¹Department of Pharmacy, Meijo University, Japan, ²Aichi Medical University
- 2P-181** The maintenance of adult neural stem cells by *Klf5* gene
 Anri Kuroda¹, Takahiro Fuchigami¹, Natsu Koyama¹, Masatsugu Ema², Seiji Hitoshi¹
¹Department of Physiology, Shiga University of Medical Science, Japan, ²Research Center for Animal Life Science, Shiga University of Medical Science, Japan
- 2P-182** Upregulation of heat shock factor and Factor XIII-A after optic nerve injury in zebrafish
 Kayo Sugitani¹, Kazuhiro Ogai², Yoshiki Koriyama³, Satoru Kato²
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- 2P-183** Oligodendrocyte progenitor cells during development and upon sensory loss in mouse visual cortex
 Hyeryun Shin, Hideki Derek Kawai
 Department of Bioinformatics, Soka University, Japan
- 2P-184** Enhanced neuronal migration through activated glia promotes post-stroke neuronal regeneration
 Naoko Kaneko¹, Vicente Herranz-Pérez^{2,3}, Takeshi Otsuka⁴, Hiromi Sano⁵, Nobuhiko Ohno^{6,7}, Taichi Omata¹, Huy Bang Nguyen⁷, Truc Quynh Thai⁷, Jose Manuel García-Verdugo², Kazunobu Sawamoto^{1,8},
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- 2P-185** Postnatal development of core fields in the mouse auditory cortex
Feifan Chen, Wenjie Song, Makoto Takemoto, Masataka Nishimura, Ryohei Tomioka
Department of Sensory and Cognitive Physiology, University of Kumamoto, Japan
- 2P-186** Moduration of CRMP2 Accelerates Motor Function Recovery from Brain Damage
Susumu Jitsuki¹, Hiroki Abe¹, Waki Nakajima¹, Aoi Jitsuki-Takahashi¹, Hitoshi Masuyama², Takashi Komori², Nobuyuki Mochizuki², Tomohiro Okuda², Yoshio Goshima³, Takuya Takahashi¹
¹Department of Physiology, Yokohama City University, Japan, ²Pharmacology Research Department, Toyama Chemical Co., LTD, Japan, ³Department of Molecular Pharmacology and Neurobiology, Yokohama City University, Japan
- 2P-187** Neurochemical differentiation of hypothalamic MCH neurons derived from mouse embryonic stem cells
Yu Kodani¹, Hidetaka Suga², Yoko S Kaneko¹, Miho Kawata¹, Akira Nakashima³, Hiroshi Nagasaki¹
¹Department of Physiology, Fujita Health University School of Medicine, Japan, ²Department of Endocrinology & Diabetes, Nagoya University, Graduate School of Medicine, Japan, ³Department of Physiological Chemistry, Fujita Health University School of Medicine, Japan

Neuroscience: Synapse & neural cellular communication (2)

- 2P-188** Accelerated climbing fiber synapse elimination in cerebellar Purkinje cells lacking protocadherin 10
Takaki Watanabe^{1,2}, Shutaro Inoue¹, Tsubasa Akamatsu¹, Honoka Suzuki¹, Manabu Abe³, Kenji Sakimura³, Naofumi Uesaka^{1,2}, Masanobu Kano^{1,2}
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- 2P-189** Vesicular GABA Uptake can be Rate-Limiting for Recovery of IPSCs from Synaptic Depression
Manami Yamashita^{1,2}, Shin-ya Kawaguchi³, Tetsuya Hori⁴, Tomoyuki Takahashi⁵
¹Department of Physiology, Osaka Medical College, Japan, ²Laboratory of Molecular Synaptic Function, Graduate School of Brain Science, Doshisha University, Japan, ³Society-Academia Collaboration for Innovation, Kyoto University, Japan, ⁴Department of Neurophysiology, Graduate School of Life and Medical Sciences, Doshisha University, Japan, ⁵Cellular and Molecular Synaptic Function Unit, Okinawa Institute of Science and Technology (OIST) Graduate University, Japan
- 2P-190** M1 receptor-mediated presynaptic inhibition of IPSCs in basal forebrain cholinergic neurons
Toshihiko Momiyama, Takuma Nishijo
Department of Pharmacology, The Jikei University School of Medicine, Japan
- 2P-191** Construction Rules of the Axospinous Synapses Revealed by FIB-SEM Imaging
Yugo Fukazawa^{1,2,3}, Taito Sakurai^{1,4}, Ruwaida Elhanbaly^{1,5}, Tatsuya Ishikawa^{1,6}
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Development, University of Fukui, Japan, ⁴Rakuhoku High School, Japan, ⁵Department of Anatomy, Histology and Embryology, Faculty of Veterinary Medicine, Assiut University, Egypt, ⁶Department of Functional Anatomy, Kanazawa University Graduate School of Medical Sciences, Japan

2P-192 Analysis of the central circadian clock in AVP neuron-specific VGAT deficient mice

Takashi Maejima¹⁾, Emi Hasegawa²⁾, Yusuke Tsuno¹⁾, Michihiro Mieda¹⁾

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2P-193 Regulation of reciprocal current in the mouse accessory olfactory bulb by vasopressin V1a receptors

Mutsuo Taniguchi, Yoshihiro Murata, Masahiro Yamaguchi, Hideto Kaba
Department of Physiology, Kochi Medical School, Kochi University, Japan

2P-194 The activity of metabotropic glutamate receptor affects drebrin localization in dendritic spines

Nobuhiko Kojima¹⁾, Mai Sawabe¹⁾, Kaiin Shu¹⁾, Kenji Hanamura²⁾,
Tomoaki Shirao²⁾

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2P-195 Dopamine induced long-lasting calcium increase in orexin neurons via D₁-like receptor

Yasutaka Mukai^{1,2,3,4)}, Kenji F Tanaka⁵⁾, Takeharu Nagai⁶⁾,
Akihiro Yamanaka^{1,2,3)}

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2P-196 Drebrin depletion affects stability of microtubules in dendrites

Noriko Koganezawa, Hiroyuki Yamazaki, Tomoaki Shirao

Department of Neurobiology and Behavior, Gunma University Graduate School of Medicine, Japan

2P-197 Induction of electrophysiologically-active brain organoids showing human midbrain-specific structure

Takeshi Ken Matsui^{1,3)}, Nobuyuki Eura¹⁾, Hitoki Nanaura¹⁾, Tomo Shiota¹⁾,
Yasuhiko Saitoh²⁾, Kazuma Sugie¹⁾, Eiichiro Mori³⁾

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2P-198 C1q1-Bai3 Signaling Dynamically Modulates Climbing Fiber Synapses in Adult Cerebellum

Takahiro Aimi, Wataru Kakegawa, Michisuke Yuzaki

Department of Physiology, Keio University School of Medicine, Japan

2P-199 Layer 5 sublayer-dependent excitatory-inhibitory connections in the rat frontal cortex

Mieko Morishima^{1,2)}, Yasuo Kawaguchi^{1,2)}

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- 2P-200** Phasic inhibition in the interval of carbachol-induced β oscillation in rat hippocampal
Toyohiro Sawada, Kiyohisa Natsume
Dept. of Brain Sci. and Eng., Grad. Sch. of Life Sci. and Sys. Eng., Kyusyu Inst. of Tech., Japan

Neuroscience: Neuron-glia interactions / functions of glia

- 2P-201** Exendin-4 promotes myelination in a co-culture of DRG neurons and immortalized Schwann cells IFRS1
Kazunori Sango, Shizuka Takaku, Masami Tsukamoto, Naoko Niimi, Hideji Yako
Diabetic Neuropathy Project, Tokyo Metropolitan Institute of Medical Science, Japan
- 2P-202** Loss-of-function of glial ABCA1 increases the risk for pathogenesis of glaucoma
Youichi Shinozaki¹, Kazuhiko Namekata², Kenji Kashiwagi³, Nobuhiko Ohno^{4,5}, Akiko Takeda¹, Takayuki Harada², Schuichi Koizumi¹
¹Department of Neuropharmacology, University of Yamanashi, Japan, ²Vis. Res. Project, Tokyo Metr. Inst. Med. Sci., Japan, ³Dept. Ophthalmol, Interdiscip. Grad. Sch. Med. Univ. Yamanashi, JAPAN, ⁴Dev. Neurobiol. Bioinfo., Natl. Inst. Physiol. Sci., Japan, ⁵Div. Anatomy, Jichi Med. Univ. Japan
- 2P-203** Müller glial swelling activates TRPV4 and triggers photoreceptor cell death at body temperature
Koji Shibasaki¹, Hidetaka Matsumoto², François Seghers³, David Krizaj⁴, Hideo Akiyama², Yasuki Ishizaki¹, Philippe Gailly³
¹Dep. Mol. Cellular Neurobiology, Gunma Univ. Grad. Sch. Medicine, Japan, ²Dep. Ophthalmology, Gunma Univ., Japan, ³Instit. Neurosci., Univ. Catholique de Louvain, Belgium, ⁴Moran Eye Instit., Univer. Utah School of Medicine, United States
- 2P-204** Stress-Induced Microglial Activation Occurs through a beta-Adrenergic Receptor
Shuei Sugama, Hisayuki Ohata, Yasuhiro Takenaka, Yoshihiko Kakinuma
Department of Physiology, Nippon Medical School, Japan
- 2P-205** Electrophysiological approach with ex vivo trigeminal ganglia to clarify neuron-glia interactions
Asako Kubo¹, Shiori Sugawara^{1,2}, Koichi Iwata¹
¹Department of Physiology, School of Dentistry Nihon University, Japan, ²Department of Psychosomatic Dentistry, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan
- 2P-206** The role of primary somatosensory cortex in causing mirror image pain
Tatsuya Ishikawa^{1,2}, Kei Eto^{2,3}, Noriyuki Ozaki¹, Hitoshi Ishibashi⁴, Junichi Nabekura^{2,3}
¹Department of Functional Anatomy, Kanazawa University, Japan, ²Department of Development Physiology, National Institute for Physiological Sciences, Japan, ³Department of Physiological Sciences, The Graduate School for Advanced Study, Japan, ⁴Department of Physiology, Kitasato University School of Allied Health Sciences, Japan
- 2P-207** Visualization of spatiotemporal interaction of neurons and astrocytes
Eiji Shigetomi¹, Yukiho J Hirayama¹, Kazuhiro Ikenaka², Kenji F Tanaka³,

Haruhiko Bito⁴⁾, Schuichi Koizumi¹⁾

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2P-208 Activation of TRPV4 induced significant ATP release in Müller glia
Shouta Sugio^{1,2)}, Hidetaka Matsumoto³⁾, Mai Oda²⁾, Yasuki Ishizaki²⁾,
Koji Shibasaki²⁾

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2P-209 Excitatory synaptic transmission is reduced by astrocytes previously exposed to amyloid β 1-40

Kohei Oyabu¹⁾, Hiroyuki Kawano¹⁾, Hideaki Yamamoto²⁾, Kei Eto^{3,4)},
Yuna Adaniya¹⁾, Kaori Kubota^{1,5)}, Takuya Watanabe^{1,5)},
Ayumi Hirano-Iwata^{6,7)}, Junichi Nabekura^{4,8,9)}, Shutaro Katsurabayashi¹⁾,
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2P-210 Acute stress induced the alterations of astrocytes and glutamate receptors in the hippocampus of rat

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2P-211 Visualizing the Interaction of Immune Cells and Peripheral Sensory Fibers in Mice Neuropathic Model

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2P-212 Tonic release of D-serine through Best1 channel is critical for long term depression

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★ **2P-213**
(Y-17)

TRPA1 channel is critical for gliotransmitter release from astrocyte by eliciting calcium entry

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2P-215 Astrocytes mediate persistent respiratory augmentation in the recovery phase after hypoxic exposure

Isato Fukushi¹), Yosuke Kono^{1,2}), Kotaro Takeda^{1,3}), Shuntaro Okazaki⁴), Shigefumi Yokota⁵), Itaru Yazawa⁶), Hiroshi Onimaru⁷), Yasumasa Okada¹)

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2P-216 AQP4 involvement in normalization of extracellular potassium after acute ischemic stroke

Hiromu Monai^{1,2}), Xiaowen Wang²), Kazuko Yahagi²), Nanhong Lou³), Humberto Mestre³), Qiwu Xu³), Youichiro Abe⁴), Masato Yasui⁴), Youichi Iwai²), Hajime Hirase²)

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2P-217 Efficacy of *Cinnamomi Cortex* & Coumarin on cold allodynia by oxaliplatin : modulating spinal gila

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2P-218 Pioglitazone reversed the developmental programming of fructose in the astrocytic glucose metabolism

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2P-219 Microglial activation caused by lipopolysaccharide and trimethyltin administration in the rat brain

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2P-220 Brain area-dependent astrocyte heterogeneity detected in mice by dopamine receptor expressions

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2P-221 Social defeat stress reduces newly born oligodendrocytes and induces anxiety-like behavior in mice
Takeshi Shimizu, Sawa Kondo, Akimasa Ishida, Naoki Tajiri, Hideki Hida
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2P-222 Rediscovery of GIT1 hetero mice as more practical model for hyperactivity
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Neuroscience: Imaging of brain

2P-223 Functional connectivity changes after rTMS used to detect plasticity decline associated with obesity
Shuyan Han¹), Takahiro Osada¹), Akitoshi Ogawa¹), Masaki Tanaka¹), Masaaki Hori²), Shigeki Aoki²), Takahiro Shimizu³), Hiroyuki Enomoto⁴), Ritsuko Hanajima³), Yoshikazu Ugawa⁴), Seiki Konishi¹)
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2P-224 Visualization of the activation pattern causality during pain chronicization using DREADD-MEMRI
Daigo Arimura^{1,2,3}), Kei Shinohara³), Yukari Takahashi^{1,2}), Tomokazu Tsurugizawa^{1,2,4}), Ryo Ikeda³), Keishi Marumo³), Fusao Kato^{1,2})
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2P-225 Correlation analysis of sister mitral and tufted cells
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2P-226 Novel fluoropolymer nanosheets extending *in vivo* two-photon imaging of living mouse brain
Taiga Takahashi^{1,2}), Kenji Yarinome³), Hong Zhang⁴), Ryosuke Kawakami⁵), Yosuke Okamura^{3,4}), Tomomi Nemoto^{1,2})
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2P-227 Wide-field imaging of neural activity with high spatial resolution
Masanori Matsuzaki, Shin-Ichiro Terada, Eriko Yoshida
Department of Physiology, The University of Tokyo, Japan

2P-228 3-D visualization of avian brainstem auditory circuits using Brainbow labeling and tissue clearing
Hiroshi Sekikawa^{1,2}), Ryo Egawa²), Hiroshi Kuba²)
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- 2P-229** Anesthesia alters orientation and direction selective properties in mouse superior colliculus
Masatoshi Kasai, Tadashi Isa
Department of Neuroscience, Graduate School of Medicine, Kyoto University, Japan
- 2P-230** Analysis of a novel higher visual area, ECT, in the mouse ventral stream
Nana Nishio^{1,2)}, Hiroaki Tsukano²⁾, Ryuichi Hishida²⁾, Manabu Abe³⁾, Junichi Nakai⁴⁾, Meiko Kawamura³⁾, Atsushi Aiba⁵⁾, Kenji Sakimura³⁾, Katsuei Shibuki²⁾, Kenichi Ohki¹⁾
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- 2P-231** An fMRI Study of Brain Network Involved in Elderly Teeth Tapping
Yosinori Sahara¹⁾, Hideyuki Fukami^{1,2)}
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- 2P-232** Hippocampus abnormalities evaluated by density imaging in COPD patients
Natsuko Iizuka^{1,2)}, Yuri Masaoka¹⁾, Masaki Yoshida³⁾, Ryo Manabe⁴⁾, Koji Kamagata⁵⁾, Yuki Takenaka⁵⁾, Kentaro Okuda⁶⁾, Akira Yoshikawa¹⁾, Satomi Kubota^{1,2)}, Masahiro Ida⁷⁾, Masahiko Izumizaki¹⁾
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- 2P-233** Relationship between Resting-State Functional Connectivity and cognitive function
Akira Yoshikawa¹⁾, Yuri Masaoka¹⁾, Masaki Yoshida²⁾, Nobuyoshi Koiwa³⁾, Satomi Kubota^{1,4)}, Ryo Manabe^{1,5)}, Natsuko Iizuka^{1,4)}, Masahiro Ida⁶⁾, Masahiko Izumizaki¹⁾
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- 2P-234** Decoder construction for MEG signals in a subitizing task
Kouji Takano¹⁾, Kenji Kansaku^{1,2,3)}
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- 2P-235** Application of a Spatiotemporal Neural Network to Segment Low Contrast Calcium Fluorescence Images
Pelonomi Moiloa, Noriyasu Homma, Makoto Osanai
Tohoku University, Japan
- 2P-236** Circuitry changes in Parkinson's disease assessed by qAIM-MRI
Makoto Osanai^{1,2)}, Satomi Kikuta^{1,3)}, Pelonomi Moiloa²⁾, Hiroki Tanihira¹⁾,

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- 2P-237** Positron Emission Tomography Tracer for AMPA receptors Characterizes Psychiatric Disorders in Human
Mai Hatano
Department of Physiology, University of Yokohama City University, Japan
- ★ **2P-238** (Y-18) Molecular profiling of the subthalamic nucleus
Jiwon Kim^{1,2)}, Hyungju Jeon¹⁾, Hojin Lee^{1,2)}, Linqing Feng¹⁾, Jinhyun Kim^{1,2)}
¹Center for Functional Connectomics, Korea Institute of Science and Technology (KIST), Republic of Korea, ²Division of Bio-Medical Science & Technology, KIST-School, University of Science and Technology (UST), Republic of Korea
- 2P-239** Dynamics of local networks in the motor cortex during sleep and wakefulness
Takeshi Kanda¹⁾, Takehiro Miyazaki¹⁾, Daiki Nakatsuka¹⁾, Hideitsu Hino²⁾, Masashi Yanagisawa¹⁾
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- 2P-240** Relation between Montreal Cognitive Assessment and amygdala-hippocampus volumes in the elderly
Satomi Kubota^{1,2)}, Yuri Masaoka¹⁾, Masaki Yoshida³⁾, Ryuta Kinno²⁾, Akira Yoshikawa¹⁾, Ryo Manabe⁴⁾, Natsuko Iizuka^{1,2)}, Masahiro Ida⁵⁾, Kenjiro Ono²⁾, Masahiko Izumizaki¹⁾
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- 2P-241** Sensory integration and behavioral choice regulated by the metabotropic glutamate receptor
Yuji Suehiro, Shohei Mitani
Department of Physiology, Tokyo Women's Medical University School of Medicine, Japan
- 2P-242** Two-photon imaging of neuronal activity in motor cortex of non-human primate during reaching tasks
Tepei Ebina, Yoshito Masamizu, Keitaro Obara, Masanori Matsuzaki
Department of Physiology, Graduate School of Medicine, The University of Tokyo, Japan
- 2P-243** Calcium imaging data from premotor area predict features of upcoming movement
Wing-Ho Yung, Chunyue Li, Ya Ke
School of Biomedical Sciences, The Chinese University of Hong Kong, Hong Kong
- 2P-244** *In vivo* Ca²⁺ imaging of mouse brain by two-photon excitation spinning-disk confocal microscopy
Mitsutoshi Ataka^{1,2)}, Takafumi Kamada^{1,2)}, Kohei Otomo^{1,2)}, Tomomi Nemoto^{1,2)}
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- 2P-245** Uptake and Release of Mn Ions from Neuron as a Basis of Mn MRI
Akio Inoue¹⁾, Yuriko Inoue²⁾, Hiromitsu Ezure²⁾, Naruto Ohtsuka²⁾,

Yoshinobu Manome³), Koichi Shiraishi⁴), Akitoshi Inoue⁵)

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2P-246 Two-photon laser ablation cut sole neural processes without severe damage on surrounding astrocytes

Kazushi Yamaguchi¹), Ryosuke Kawakami^{1,2}), Tomomi Namoto^{1,2})

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2P-247 Topical pH change in the brain by visual stimulation revealed by CCD pH image sensor

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2P-248 Differential characteristics of D1 and D2-type medium spiny neuron via cortico-striatal stimulation

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Neuroscience: Learning, memory & neuronal plasticity (2)

2P-249 Error signals in the red nucleus drive adaptation in reaching

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2P-250 Modulatory effects of dopamine on synaptic plasticity in hippocampus of kindled mice

Nahid Roohi, Yaghoob Fathollahi, Mahboubeh Ahmadi, Javad Mirnajafi-Zadeh

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2P-251 LTD is regulated by drebrin isoforms conversion likely due to the difference in the isoform dynamics

Tomoaki Shirao¹), Kenji Hanamura¹), Nobuhiko Kojima²), Hiroki Yasuda³), Yuko Sekino⁴)

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2P-253 A strategy of NMDA receptor-dependent oscillation in the visual cortex of rats

Hiroshi Yoshimura

Department of Molecular Oral Physiology, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan

- 2P-254** Retrieval-Induced Forgetting in Young Mice
Asahi Haijima, Noriyuki Koibuchi
Department of Integrative Physiology, Gunma University Graduate School of Medicine, Japan
- 2P-255** The mitochondrial system of hippocampal adult-born neurons in the Tg2576 mouse model
Trinovita Andraini^{1,2)}, Kevin Richetin²⁾, Petnoi Petsophonsakul²⁾, Laurent Roybon³⁾, Marie-Christine Miquel²⁾, Claire Rampon²⁾
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- 2P-256** Effects of PDIA3 on Neurogenesis in the Dentate Gyrus of Normal and Ischemic Gerbils
In Koo Hwang¹⁾, Woosuk Kim¹⁾, Dae Young Yoo²⁾, Su Bin Cho³⁾, Jong Whi Kim¹⁾, Yeo Sung Yoon¹⁾, Dae Won Kim⁴⁾
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- 2P-257** Different mechanism of actions of testosterone and estradiol on cognitive impairment in male rats
Taratorn Fainanta, Sukanya Jaroenporn, Thaweechai Saetae, Patteera Wititsuwankul, Suchinda Malaivijitnond
Department of Biology, Chulalongkorn University, Thailand
- 2P-258** Modulation of dentate granule cell activity during fear memory extinction in freely moving mice
Alvaro Carrier Ruiz^{1,2)}, Yuki Sugaya^{1,2)}, Masanobu Kano^{1,2)}
¹Department of Neurophysiology, Graduate School of Medicine, The University of Tokyo, Japan, ²WPI-IRCIN, UTIAS, The University of Tokyo, Japan
- 2P-259** Impairment of memory and hippocampal synaptic plasticity induced by high-fat diet in animal model
Yun-Chi Chang¹⁾, Han-Fang Wu¹⁾, Ting-Yi Lu¹⁾, Yi-Ju Chen¹⁾, Hui-Ching Lin^{1,2,3)}
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- 2P-260** Overexpression of K+ Cl- cotransporter promotes activity dependent synaptic plasticity and learning
Kayo Nakamura, Junichi Nabekura
Department of Physiological Sciences, National Institute for Physiological Science, Japan
- 2P-261** Investigating the effects of muscle wasting on Alzheimer's disease
Ya-Hsin Hsiao, Yung-Shuen Lin, Fang-Yu Lin
Department of Pharmacology, College of Medicine, National Cheng Kung University, Taiwan

- 2P-262** HSYA improves cognitive function in MCAO rats via recovering synaptic plasticity in the hippocampus
Lu Yu¹, Yanhong Duan², Zheng Zhao², Wendi He², Ming Xia¹, Qiujuan Zhang³, Xiaohua Cao²
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- 2P-263** The response to whisker stimulation in the visual cortex of monocular deprived mice *in vivo*
Akari Hashimoto, Akiko Miyamoto, Yoshihisa Tachibana, Koichiro Haruwaka, Hiroaki Wake
Department of System Neuroscience, University of Kobe, Japan
- 2P-264** Metabotropic glutamate receptor 5 (mGluR5) has a critical role in behavioral flexibility
Chul Hoon Kim, Shinwon Kang, Jisoo Lim, Hyun Jong Noh
Pharmacology, Yonsei University College of Medicine, Korea
- 2P-265** Increase of sleep spindle density induced by rTMS for major depression
Takuji Izuno^{1,2}, Motoaki Nakamura³, Takashi Saeki⁴, Nobuhide Hirai⁵, Mana Tsukada¹, Hideshi Ikemoto¹, Chiaki Tezuka¹, Kana Takahashi¹, Masataka Sunagawa¹, Masahiko Izumizaki¹
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- 2P-266** Speed representation in the hippocampus and entorhinal cortex
Motosada Iwase, Takuma Kitanishi, Kenji Mizuseki
Department of Physiology, Osaka City University Graduate School of Medicine
- 2P-267** Single Purkinje Neuron Voltage Imaging to Detect Cerebellar Parallel Fibre Long Term Depression
Ruth M Empson^{1,2}, Emmet m Power¹, Emma Deeney¹, Dan Potapov¹, Kay Potapov¹, Thomas Knopfel²
¹University of Otago, New Zealand, ²Imperial College, UK
- 2P-268** Hippocampal, amygdala neuronal, and sympathetic nerve activities in odor-cue fear conditioned rats
Kana Yaguchi, Sizuka Ikegame, Kana Nagao, Misa Yoshimoto, Kenju Miki
Department of Health Science, University of Nara Woman's University, Japan
- 2P-269** Two groups of SPNs in cholinergic modulation of corticostriatal plasticity in dorsomedial striatum
Atsushi Tamura, Kiyoto Kurima, Yumiko Akamine, Jeffery R Wickens
Neurobiology Reserch Unit, Okinawa Institute of Science and Technology, Japan
- 2P-270** Contribution of Thyrotropin-Releasing Hormone to Cerebellar Long-Term Depression and Motor Learning
Masashi Watanabe¹, Yasunori Matsuzaki¹, Yasuyo Nakajima², Atsushi Ozawa², Masanobu Yamada², Hirokazu Hirai¹

- 2P-271** Sharp-wave ripples facilitate memory consolidation via activation of cAMP
Constantine Pavlides, Jiyeon Cho, Krzysztof A Sypniewski
University of Tsukuba, Japan
- 2P-272** Real-time dynamism of hippocampal CA1 firings after the 4 different episodic stimuli
Takuto Tomokage, Junko Ishikawa, Dai Mitsushima
Department of Physiology, Yamaguchi University Graduate School of Medicine, Japan
- 2P-273** Understanding the mechanism of odor-specific memory formation in *Caenorhabditis elegans*
Kyoung-Hye Yoon, Hee Kyung Lee
Department of Physiology, Mitohormesis Research Center, Yonsei University Wonju College of Medicine, Korea
- 2P-274** Nitric oxide into the basolateral amygdala potentiates stress-induced spatial memory disorder in rat
Roya Ranjbar Saber¹, Hedayat Sahraei², Esmaeil Nikkar³, Hassan Ghoshooni³, Mohammad Hadipour³
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Neuroscience: Neurologic and psychiatric diseases (2)

- ★ **2P-276** (Y-19) Characterization of a novel and potent neuronal Kv7/M opener SCR2682 for anti-epilepsy
Yani Liu¹, Fan Zhang², Feng Tang³, Bo Liang³, Huanming Chen³, Ge Jin⁴, Qi Sun³, Hailin Zhang², Kewei Wang¹
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- 2P-277** (AP-1) Chronic stress causes excessive aggression by altering synaptic actin dynamics in the mPFC
Hirobumi Tada^{1,2}, Takuya Takahashi²
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- 2P-278** ASD-like Behaviors and Synaptic Defects Inherit to Subsequent Generations in VPA-Induced Rat Model
Ming-Chia Chu¹, Han-Fang Wu¹, Hui-Ching Lin^{1,2,3}
¹Department and Institute of Physiology, School of Medicine, National Yang-Ming University, Taiwan, ²Brain Research Center, National Yang-Ming University, Taiwan, ³Ph.D. Program for Neural Regenerative Medicine, College of Medical Science and Technology, Taipei Medical University, Taiwan
- 2P-279** The antiseizure activities of new hydrazine derivatives: behavioral and electrophysiological studies
Elmira Heidarli¹, Hamid Irannejad², Nima Naderi³

¹Department of Toxicology and Pharmacology, PhD student, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Iran, ²Department of Medicinal Chemistry, Associate professor, Mazandaran University of Medical Sciences, Iran, ³Department of Toxicology and Pharmacology, Associate professor, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Iran

2P-280 Genome-wide screening of genes involved in tau aggregation by CRIPSR/Cas9 system

Ihori Ebinuma, Yu Nemoto, Takanobu Suzuki, Yukiko Hori, Taisuke Tomita
Laboratory of Neuropathology and Neuroscience, Graduate School of Pharmaceutical Sciences, University of Tokyo, Japan

2P-281 Berberine attenuated the cytotoxicity induced by t-BHP via inhibiting oxidative stress and mitophagy

Zhengmao Li
Key Laboratory of Biotechnology and Pharmaceutical Engineering, School of Pharmaceutical Sciences, Wenzhou Medical University, China

2P-282 Chloroquine promotes the recovery of SCI by inhibiting inflammation and ER stress

Hongyu Zhang¹), Xiaojie Wei²)
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2P-283 GLYX-13 alleviates chronic stress-induced depression-like behavior through its actions in midbrain

Yu-Cheng Ho
Department of Medicine, Mackay Medical College, Taiwan

2P-284 Effects of optogenetic inhibition of 5-HT neurons in the dorsal raphe nucleus on respiratory control

Mitsuko Kanamaru^{1,2}), Mana Tsukada²), Akira Yoshikawa²), Hiroshi Onimaru²), Ayako Mochizuki³), Masataka Sunagawa²), Tomio Inoue³), Masahiko Izumizaki²)
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2P-285 Astrocytic Ca²⁺ signals via IP₃ receptor type2 mediate reactive astrocytes after status epilepticus

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2P-286 CSD is accompanied by mitochondrial oxidation wave revealed with Flaboprotein autofluorescence

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2P-287 Impaired olfactory identification in patients with cerebrovascular disease

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2P-288 Physiological characteristics of rhythmic masticatory muscle activity during sleep in children

Yuki Shiraishi^{1,2}, Masaya Tachibana³, Sheng-Yun Lu³, Ai Shirota¹, Ikuko Mohri³, Shingo Haraki⁴, Atsuko Tsujisaka⁴, Masako Taniike³, Takashi Yamashiro², Takafumi Kato²

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2P-289 Masseter muscle activity during REM sleep in young adults with sleep bruxism

Risa Toyota^{1,2}, Mutsumi Okura^{1,3}, Shigeru Nonoue^{4,5}, Shingo Haraki⁶, Akiko Tsujisaka⁶, Hiroyoshi Adachi^{4,5,7}, Kazunori Ikebe², Takafumi Kato¹

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2P-290 Role of cortico-brainstem circuits in poststroke rehabilitation-induced functional recovery

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2P-291 The effect of orally-administered baclofen on spinocerebellar ataxia type 3 (SCA3) model mice

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2P-292 Metabotropic Glutamate Receptor as a potential therapeutic target for the treatment of SCA1

Mohamed Fasil Ibrahim, Daniil Potapov, Kay Potapov, Ruth M Empson

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2P-293 Transgeneration of environmental chemicals-primed rat hyperactivity
Masami Ishido

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2P-294 Social isolation during developmental critical window affects inhibitory neuronal circuits in mPFC

Hiroki Yoshino¹, Kazuhiko Yamamuro¹, Yoichi Ogawa², Manabu Makinoda¹, Yasuhiko Saito², Toshifumi Kishimoto¹

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2P-295 The 40Hz-ASR may be a good predictor of conscious outcome in patients with severe head injury

Shun-ichiro Hirano

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2P-296 Deep brain stimulation for depression in rats: correction of left/right hemispheric imbalance

Yukitoshi Sakaguchi, Yoshio Sakurai

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2P-297 Experience and cell type-dependent induction of MeCP2 in the visual thalamus

Yuki Yagasaki, Goichi Miyoshi, Mariko Miyata

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2P-298 Function of the primate medial frontal cortex in the control of mood and affect: an rTMS study

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Neuroscience: Somatosensory & Pain (2)

2P-299 Inflammatory pain changes the electrophysiological properties of locus coeruleus neurons

Fatemeh Farahani, Hossein Azizi, Saeed Semnianian

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2P-300 Widespread Hyperalgesia and Autonomic Dysregulation in a Rat Model of Chronic Back Pain

Ryota Tokunaga^{1,2)}, Harumi Hotta⁴⁾, Nobuhiro Watanabe⁴⁾, Sara Touj^{1,2)}, Hugues Leblond^{2,3)}, Mathieu Piché^{1,2)}

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2P-301 TRPA1 mediates the uterine PGE2-induced cross-organ reflex sensitization in anesthetized rats

Tzer-Bin Lin

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2P-302 Inhibitory effects of Sake lees (Sake Kasu) on stress-induced hyperalgesia in the rats

Shiho Shimizu^{1,2)}, Yoshito Kakihara^{3,4)}, Mayumi Taiyoji⁵⁾, Yosuke Nakatani^{1,2)}, Masayuki Kurose¹⁾, Nobuyuki Ikeda²⁾, Makio Saeki³⁾, Ritsuo Takagi²⁾, Kensuke Yamamura¹⁾, Keiichiro Okamoto¹⁾

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2P-303 Renin-angiotensin system and angiotensin II receptors in rat geniculate ganglion

Takeshi Suwabe, Toshiaki Yasuo, Noritaka Sako

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- 2P-304** Inhibitory effect of bee venom on the reserpine-induced pain and depression-like behavior in mice
 Jae-Gyun Choi¹, Dong-Wook Kang¹, Cuk-Seong Kim², Sang Do Lee²,
 Byeong Hwa Jeon², Jin Bong Park¹, Hyun-Woo Kim¹
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- 2P-305** Distribution of HCN4 positive cell in mouse spinal dorsal horn
 Taku Nakagawa¹, Toshiharu Yasaka², Noriyuki Nakashima¹,
 Makoto Takano¹
¹Department of Physiology, Kurume University, Japan, ²Department of Immunology, Graduate School of Medical and Dental Sciences, Kagoshima University, Japan
- 2P-306** Response properties of premotor heat-sensitive neurons in awake behaving monkeys
 Shumpei Unno¹, Masamichi Shinoda², Koichi Iwata²
¹Department of Oral Physiology, Matsumoto Dental University, Japan, ²Department of Physiology, School of Dentistry, Nihon University, Japan
- ★ **2P-307** Molecular mechanism of dopamine-induced itch in mice
 (Y-20)
 YoungIn Choi¹, PyungSun Cho^{1,2}, HanKyu Lee¹, SungJun Jung¹
¹Department of Biomedical Science, Hanyang University, Korea, ²Department of Physiology, Korea University, Republic of Korea
- 2P-308** Negative modulation of TRPV1 by alpha 2 adrenergic receptor agonist, Dexmedetomidine
 Byeong-min Lee^{1,3}, Yoonsun Jang¹, Yong Ho Kim⁴, Chul-kyu Park⁴,
 Teo Jeon Shin², Gehoon Chung^{1,3}
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- 2P-309** Direct Mechanical stimulation evoked Gd³⁺-sensitive inward current in trigeminal ganglion neurons
 Asuka Higashikawa¹, Maki Kimura¹, Miyuki Shimada¹, Hidetaka Kuroda³,
 Wataru Ofusa¹, Sadao Ohyama^{1,2}, Masayuki Ando¹, Kyousuke Kono¹,
 Hiroyuki Mochizuki¹, Yoshiyuki Shibukawa¹
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- 2P-310** ASIC 3 contributes to mechanical hypersensitivity in the rat model of cold exposed osteoarthritis
 Sungtae Koo^{1,2,3}, So-Hee Kim^{3,4}, Byeong Uk Ji^{1,3}, Ji Eun Lee³
¹Department of Korean Medical Science, School of Korean Medicine, Pusan National University, Korea, ²Division of Meridian and Structural Medicine, School of Korean Medicine, Pusan National University, ³Healthy Aging Korean Medical Research Center, School of Korean Medicine, Pusan National University, ⁴Institute of Korean Medical Science, School of Korean Medicine, Pusan National University
- 2P-311** Increased transport of spinal l-lactate from astrocytes causes mechanical hyperalgesia via PKA

- 2P-312** Neuronal representation in the S1 cortex during formalin-induced spontaneous pain in mice
Heera Yoon¹⁾, Yoo Rim Kim²⁾, Sa-Yoon Park³⁾, Chang-Eop Kim³⁾,
Geehoon Chung¹⁾, Sang Jeong Kim²⁾, Sun Kwang Kim¹⁾
¹⁾Department of Physiology, College of Korean Medicine, Kyung Hee University, Korea,
²⁾Department of Physiology, College of Medicine, Seoul National University, Korea,
³⁾Department of Physiology, College of Korean Medicine, Gachon University, Korea
- 2P-313** Effects of Cinnamic Acid on Chemotherapy-Induced Peripheral Neuropathy
Hyeonkyeong Chae, Woojin Kim, Sun Kwang Kim
Department of Physiology, College of Korean Medicine, Kyung Hee University, Korea
- 2P-314** Effect of Bee Venom Derived Phospholipase A2 on Nerve Injury-Induced Neuropathic Pain
Seunghui Woo, Geehoon Chung, Sun Kwang Kim
Department of Physiology, College of Korean Medicine, Kyung Hee University, Korea
- 2P-315** EP₄ receptor-mediated augmentation of I_h currents in Abeta DRG neurons underlies neuropathic pain
Mitsuhiro Yamada¹⁾, Hao Zhang^{1,2)}, Toshihide Kashihara¹⁾,
Tsutomu Nakada¹⁾, Satoshi Tanaka²⁾, Kumiko Ishida²⁾, Satoshi Fuseya²⁾,
Hiroyuki Kawagishi¹⁾, Kenkichi Kiyosawa^{1,2)}, Mikito Kawamata²⁾
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²⁾Department of Anesthesiology and Resuscitology, Shinshu University School of Medicine, Japan
- 2P-316** Effects of Venlafaxine on Oxaliplatin and Paclitaxel Induced Neuropathic Pain in Mice
Daxian Li^{1,2)}, Woojin Kim¹⁾, Sun Kwang Kim¹⁾
¹⁾Department of Physiology, College of Korean Medicine, Kyung Hee University, Korea,
²⁾Department of Science in Korean Medicine, Graduate School, Kyung Hee University
- 2P-317** Plastic changes in cortical excitatory responses in the model rat with infraorbital nerve ligation
Manabu Zama^{1,2)}, Masayuki Kobayashi²⁾, Morio Tonogi¹⁾,
Tadayoshi Kaneko¹⁾
¹⁾Department of Oral and Maxillofacial Surgery, University of Nihon, Japan, ²⁾Department of Pharmacology, University of Nihon, Japan
- 2P-318** Perineural expression of TNF- α contributes to long-term mechanical allodynia in CRPS model mice
Shiho Shibata^{1,2)}, Hideaki Tagashira¹⁾, Satomi Kita^{1,3)}, Tomo Kita¹⁾,
Sari Suzuki¹⁾, Ken Yamaura²⁾, Takahiro Iwamoto¹⁾
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³⁾Department of Pharmacology, Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Japan
- 2P-319** Acute nociceptive stimuli induce the activity of serotonin and noradrenalin neurons in awake mice
Akira Yamashita¹⁾, Shunpei Moriya¹⁾, Ryusei Nishi¹⁾, Yoko Ikoma¹⁾,
Akihiro Yamanaka²⁾, Tomoyuki Kuwaki¹⁾
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2P-320 Effects of naftopidil in substantia gelatinosa neurons of the rat spinal dorsal horn

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2P-321 Profiles of excitatory projection from the insular cortex to trigeminal spinal subnucleus caudalis

Yuka Nakaya, Kiyofumi Yamamoto, Masayuki Kobayashi

Department of Pharmacology, Nihon University School of Dentistry, Japan

2P-322 Dexmedetomidine inhibits voltage-gated sodium channels in trigeminal ganglion neurons

Chul-Kyu Park, Sang-Taek Im, Ki Whan Kim, Joong Soo Kim, Yong Ho Kim

Gachon Pain Center and Department of Physiology, College of Medicine, Gachon University, Korea

2P-323 *In vivo* Ca²⁺ imaging of somatosensory cortex in postoperative and inflammatory pain models of mice

Takuya Okada^{1,2,3}, Yoshihisa Tachibana^{1,3}, Yuki Nomura², Norihiko Obata², Satoshi Mizobuchi², Hiroaki Wake^{1,3}

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2P-324 Alteration of spinal sensory processing from the LUT in rats with streptozotocin-induced diabetes

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Noriyuki Ozaki³, Masahito Kawatani⁴, Keiji Imoto², Hidemasa Furue^{1,2}

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2P-325 Effects of ethanol on nociceptive synaptic transmission in the rat spinal dorsal horn

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2P-326 Dexmedetomidine suppresses rat nodose ganglion tetrodotoxin-resistant voltage-gated sodium current

Ryoji Ide, Kosuke Iwasaki, Chikako Saiki, Toshio Imai, Shigeji Matsumoto

Department of Physiology, Nippon Dental University, School of Life Dentistry at Tokyo, Japan

- 2P-327** Expression of c-Fos and the cardiovascular response evoked by an odor fear stressor in the rat
Seita Hori, Ena Yamamoto, Jouji Horiuchi
Department of Biomedical Engineering, Toyo University, Japan
- 2P-328** Does listening to Mozart's or Bach's music have any effects on autonomic nervous activity?
Junko Hoshi, Xinru Sun, Hiromasa Tanno, Emi Kanno, Ryoko Maruyama
Department of Health Sciences, Tohoku University Graduate School of Medicine, Japan
- 2P-329** Effects of GABA agonist injection into the ventrolateral medulla on oropharyngeal swallowing
Shinya Fuse^{1,2)}, Yoichiro Sugiyama²⁾, Rishi Dhingra³⁾, Mathias Dutschmann³⁾, Shigeru Hirano²⁾, Yoshitaka Oku¹⁾
¹Department of Physiology, Hyogo College of Medicine, Japan, ²Department of Otolaryngology-Head and Neck Surgery, Kyoto Prefectural University of Medicine, Japan, ³Florey Institute of Neuroscience and Mental Health, Australia
- 2P-330** Coordinated involvement of the amygdala and claustrum for blood pressure control during exercise
Ko Yamanaka, Jimmy Kim, Hidefumi Waki
Department of Physiology, Health and Sports Science, Juntendo University, Japan
- 2P-331** Hormonal secretion from the thyroid gland is promoted by mechanical stimulation of the pharynx
Kaori Imura, Harue Suzuki, Harumi Hotta
Department of Autonomic Neuroscience, Tokyo Metropolitan Institute of Gerontology, Japan
- 2P-332** Exercise improve stress-induced high blood pressure and abnormal gene expression in the amygdala
Keisuke Tomita¹⁾, Ko Yamanaka¹⁾, Kei Tsukioka¹⁾, Makoto Suzuki¹⁾, Linh Pham²⁾, Sabine S. Gouraud²⁾, Hidefumi Waki¹⁾
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- 2P-333** Ethanol injection differently activated autonomic nerve activity in anesthetized rats
Chen Fu^{1,2)}, Tanida Mamoru¹⁾
¹Physiology 2, Kanazawa Medical University, Japan, ²General Surgery Department, the Fourth Affiliated Hospital of China Medical University, China
- 2P-334** Estradiol-dependent gene expression profile in the amygdala of ovariectomized SHRs
Linh Thuy Pham^{1,2)}, Onishi Makiko^{1,4)}, Yamanaka Ko⁵⁾, Miyamoto Yasunori^{1,2,4)}, Waki Hidefumi⁵⁾, Gouraud Sabine^{2,3)}
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- 2P-335** Discharge activities of diaphragm motor units during inspiratory load
Ryosuke Takei¹⁾, Kenta Kawamura¹⁾, Yukako Sedaka¹⁾, Kazumasa Sasaki²⁾, Seiichi Sasaki³⁾, Kazuhide Tomita¹⁾
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- 2P-336** A role of TRPA1 in oxygen detection
Sichong Chen^{1,2}, C. Kuroki¹, N. Takahashi^{1,3}, Ly. Hao², Y. Mori³,
T. Kuwaki¹
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Dental Sciences, Japan, ²Department of Pharmaceutical Toxicology, China Medical
University School of Pharmacy, China, ³Department of Synthetic Chemistry and
Biological Chemistry, Graduate School of Engineering, Kyoto University, Japan
- 2P-337** Descending inhibition on spinal seizure-like activity in the phrenic
nerve output
Shih Tien Lin
Department of Physiology, Showa University School of Medicine, Japan
- 2P-338** Measurement of paraventricular nucleus neuronal and sympathetic
nerve activities in conscious rats
Shizuka Ikegame, Misa Yoshimoto, Kenju Miki
Department of Health science, Nara Women's University, Japan
- 2P-339** Projection from the midbrain to the rostroventral medulla and the
cardiovascular response to stress
Mio Matsuyama, Ena Yamamoto, Jouji Horiuchi
Department of Biomedical Engineering, Toyo University, Japan
- 2P-340** Gut hormone signal alters lick microstructure and taste reactivity to
sweet stimulation in mice
Yasunobu Yasoshima, Erina Yamaguchi
Division of Behavioral Physiology, Graduate School of Human Sciences, Osaka
University, Japan
- 2P-341** Hyposalivation and impaired parasympathetic vasodilation in parotid
glands with diabetes mellitus
Toshiya Sato, Kohei Mito, Hisayoshi Ishii
Division of Physiology, Department of Oral Biology, School of Dentistry, Health Sciences
University of Hokkaido, Japan
- 2P-342** Acute myocardial infarction activates hypothalamic vasopressin and
oxytocin neurons
Colin Hamilton Brown, Ranjan K Roy, Rachael A Augustine,
Daryl O Schwenke
Department of Physiology, University of Otago, New Zealand

Neuroscience: Others (2)

- 2P-343** Phospholipase C-related inactive protein type-1 deficiency alters
propofol-induced EEG activity
Yoshikazu Nikaido^{1,2}, Tomonori Furukawa³, Shuji Shimoyama²,
Yoshiki Ogata², Tetsuya Kushikata¹, Kazuyoshi Hirota¹, Masato Hirata^{3,4},
Takashi Kanematsu⁵, Shinya Ueno²
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College, Japan, ⁵Department of Cellular and Molecular Pharmacology, Division of Basic
Life Sciences, Institute of Biomedical and Health Sciences, Hiroshima University, Japan

- 2P-344** A microsensing system for the *in vivo* real-time detection of local drug kinetics and dynamics
 Genki Ogata¹⁾, Kai Asai²⁾, Seishiro Sawamura¹⁾, Madoka Takai³⁾, Hiroyuki Kusuhara⁴⁾, Yasuaki Einaga²⁾, Hiroshi Hibino¹⁾
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- 2P-345** Treatment of Alzheimer's disease by a disease-modifying small molecule
 Ya Ke, Xiao Man Zhang, Sheng Xi Yang, Ming Dao Mu, King Lin Rong, Wing Ho Yung
 School of Biomedical Sciences, The Chinese University of Hong Kong
- 2P-346** Andrographolide relieved pain generated by post-operative pain model in rat
 Meng-Jen Lee¹⁾, Yilo Lin²⁾, Siendong Huang³⁾
¹Department of Applied Chemistry, Chaoyang University of Technology, Taiwan, ²Graduate Institute Veterinary Pathobiology, National Chung Hsing University, Taiwan, ³Department of Applied Mathematics, National Dong Hwa University
- 2P-347** Comparing the natural and morphine induced reward in conditioning place preference paradigm
 Shoele Jamali, Abbas Haghparast
 Neuroscience Research Center, Shahid Beheshti University of Medical Sciences, Iran
- 2P-348** Mouse strain-dependent BBB (blood-brain barrier) permeability of AAV-PHP.B
 Yasunori Matsuzaki, Masami Tanaka, Sachiko Hakoda, Tatsuki Masuda, Ryota Miyata, Ayumu Konno, Hirokazu Hirai
 Department of Neurophysiology and Neural Repair, Gunma university, Japan
- 2P-349** A coagulation factor IX peptide regulates endothelial barrier function in brain
 Yuusuke Fujiwara¹⁾, Hisataka Kitano^{1,2)}, Chiaki Hidai²⁾, Shinichiro Kokubun²⁾
¹Division of Dental Surgery, Nihon University School of Medicine, Japan, ²Division of Physiology, Nihon University School of Medicine
- 2P-350** Fatty acid-responding neurons in mouse glossopharyngeal nerve
 Keiko Yasumatsu¹⁾, Shusuke Iwata¹⁾, Mayuko Inoue¹⁾, Yuzo Ninomiya^{1,2)}
¹Division of Sensory Physiology, Research and Development Center for Taste and Odor Sensing, Kyushu University, Japan, ²Monell Chemical Senses Center, Philadelphia, PA, USA
- 2P-351** The role of HCN4-positive cells in the gastrointestinal development and motility of zebrafish
 Kensuke Fujii¹⁾, Koichi Nakajyo^{2,3)}, Koichi Kawakami⁴⁾, Yoshihiro Egashira²⁾, Yasuhiro Yamamoto²⁾, Kohei Tanigushi¹⁾, Masaru Kawai¹⁾, Hideki Tomiyama¹⁾, Kazuhisa Uchiyama¹⁾, Fumihito Ono²⁾
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- 2P-352** NHEJ and BER are Concurrently Engaged by APE1 in Oxidative DNA Damage Repair in Rat Cortical Neurons
Jenq-Lin Yang¹), Shu-Fang Sun¹), Yun-Ru Yang¹), Shang-Der Chen^{1,2)}
¹Institute for Translational Research in Biomedicine, Kaohsiung Chang Gung Memorial Hospital, Taiwan, ²Department of Neurology, Kaohsiung Chang Gung Memorial Hospital
- 2P-353** Remote control of neuronal function using X-ray
Takanori Matsubara^{1,2)}, Shin-Ichiro Horigane^{3,4)}, Shuhei Ueda^{3,4)}, Sayaka Takemoto-Kimura^{3,4,6)}, Noriaki Kawaguchi⁵⁾, Takayuki Yanagida⁵⁾, Akihiro Yamanaka^{1,2,7)}, Takayuki Yamashita^{1,2,6,7)}
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- 2P-354** Development of lentiviral vectors for glutamatergic-selective gene expression in cultured neurons
Yoshihiro Egashira^{1,2)}, Yasunori Mori²⁾, Yuchio Yanagawa³⁾, Shigeo Takamori²⁾
¹Department of Physiology, Osaka Medical College, Japan, ²Graduate School of Brain Science, Doshisha University, ³Graduate School of Medicine, Gunma University
- 2P-355** Effects of Cigarette Smoking on the motor nerve conduction study parameters among young adults
Rama Mohammed Baba Musa¹⁾, Lamis Kaddam¹⁾, Mustafa Abdelrahman¹⁾, Humeda Suekit²⁾
¹Al-Neelain University faculty of Medicine, Sudan, ²International University of Africa
- 2P-356** Dysregulated microRNA expression profiles in extracellular vesicles of schizophrenia
Kittima Lekmanee^{1,2)}, Woraphat Ratta-Apha³⁾, Chanatip Metheetrairut⁴⁾, Wittawin Worakitchanon^{1,2)}, Pholphat Losatiankij⁵⁾, Natini Jinawath⁶⁾, Witchuda Saengsawang^{1,2)}, Arthit Chairoungdua^{1,2,7)}
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- 2P-357** Oral capsaicin sensitivity and preference for spicy food in Japanese medical students
Yoshihiro Murata¹⁾, Kiwamu Shibano¹⁾, Masahiro Yamaguchi¹⁾, Fumino Okutani^{1,2)}
¹Department of Physiology, Kochi Medical School, Japan, ²Department of Occupational Health, Kochi Medical School, Japan
- 2P-358** Hypnotic and anti-inflammatory actions of bromovalerylurea
Haruna Takeda, Naoto Seo, Kohdai Fujita, Arisa Sato, Nanako Kihara, Me Choudhury, Hajime Yano, Junya Tanaka

- 2P-359** Memantine selectively ameliorates gait impairment to hyperalgesia in MPTP-injected mice
Ramesh Sharma^{1,2}, Chiranjivi Neupane^{1,2}
¹Department of medical sciences, Chungnam National University, Korea, ²Department of BK21plus CNU Integrative Biomedical Education Initiative, Korea
- 2P-360** Physiologic process before rhythmic jaw movements after ketamine injections in guinea pigs
Takafumi Kato¹, Yutaka Matsuura¹, Hiroshi Yano³, Makoto Higashiyama¹, Hiroki Toyoda¹, Ayano Katagiri¹, Hajime Sato¹, Narikazu Uzawa³, Atsushi Yoshida²
¹Department of Oral Physiology, Osaka University Graduate School of Dentistry, Japan, ²Department of Oral Anatomy and Neurobiology, Osaka University Graduate School of Dentistry, Japan, ³Department of Oral & Maxillofacial Surgery II, Osaka University Graduate School of Dentistry, Japan
- 2P-361** Mitochondrial disease diagnosis by urinary tRNA modification analysis
Tetsuya Watanabe^{1,2}, Kazuhito Tomizawa¹, Fanyan Wei¹, Yukio Ando²
¹Department of Molecular Physiology, Graduate School of Medical Sciences, Kumamoto University, Japan, ²Department of Neurology, Graduate School of Medical Sciences, Kumamoto University
- 2P-362** Age-related changes in hemodynamics and their mechanisms in the orofacial area
Kohei Mito¹, Toshiya Sato¹, Hisayoshi Ishii¹
¹Div. of Physiol., Dept. of Oral Biol., Sch. of Dent., Health Sci. Univ. of Hokkaido, Japan
- 2P-363** Proteomic analysis of the transport system in a connective tissue of the mammalian cochlea
Seishiro Sawamura¹, Yoriko Nonomura^{1,2}, Fumiaki Nin¹, Arata Horii², Sugata Takahashi², Shushi Nagamori³, Yoshikatsu Kanai⁴, Hiroshi Hibino¹
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- 2P-364** Rodent posterior parietal cortex controls ipsilateral as well contralateral movement
Shogo Soma¹, Junichi Yoshida², Shigeki Kato³, Satoshi Nonomura², Yae K Sugimura⁴, Alain Rios², Masanori Kawabata², Kazuto Kobayashi³, Fusao Kato⁴, Yutaka Saka², Yoshikazu Isomura²
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- 2P-365** Development of a Low-cost, Comprehensive Recording System for Circadian Rhythm Behavior
Jea Kwon Kwon, Changjoon Justin Lee
Korea Institute of Science and Technology, Korea

- ★ **2P-366** (Y-21) **Molecule REST interacts with brain 5-HT system in tilapia fish during social stress**
Shingo Nakajima, Tomoko Soga, Ishwar S Parhar
Brain Research Institute Monash Sunway (BRIMS), School of Medicine and Health Sciences, Monash University Malaysia
- ★ **2P-367** (Y-22) **Altered electrical responsiveness of CA1 pyramidal neurons in a *valproic acid rat model* of autism**
Mona Rahdar, Raziieh Hajisoltani, Shima Davoudi, Narges Hosseinmardi, Mahyar Janahmadi
Neuroscience Research Center and Dept. of Physiology, Medical School, Shahid Beheshti University of Medical Sciences, Iran
- ★ **2P-368** (Y-23) **Lumbrokinase improves neurological deficit by preventing endoplasmic reticulum stress**
Yi Hsin Wang¹, Hsing Hui Su², Jiuan Miaw Liao³, Shiang Suo Huang⁴
¹Institute of Medicine, Chung Shan Medical University, Taiwan, ²Department and Institute of Pharmacology, School of Medicine, National Yang-Ming University, Taiwan, ³Department of Physiology, Chung Shan Medical University and Chung Shan Medical University Hospital, Taiwan, ⁴Department of Pharmacology and Institute of Medicine, Chung Shan Medical University, and Department of Pharmacy, Chung Shan Medical University Hospital, Taiwan
- ★ **2P-369** (Y-24) **Oxytocin effects on nicotine aversion and anxiety in nicotine-exposed early adolescent rats**
Minji Jang, Taesub Jung, Jihyun Noh
Department of Science education, University of Dankook, South Korea
- ★ **2P-370** (Y-25) **Mesenchymal stem cell conditioned medium therapy modulates neuroinflammatory symptoms**
Vida Nazemian, Jalal Zaringhalam
Physiology Department, Shahid Beheshti University of Medical Sciences
- ★ **2P-371** (Y-26) **Depolarized subicular microcircuits mediate generalized seizure in temporal lobe epilepsy**
Yi Wang, Cenglin Xu, Zhenghao Xu, Caihong Ji, Ying Wang, Shuang Wang, Xiaoming Li, Zhong Chen
School of Medicine, Zhejiang University, China
- ★ **2P-372** (Y-27) **Mitochondrial fission inhibitor attenuates brain mitochondrial dysfunction in pre-diabetic rats**
Siripong Palee^{1,2}, Chayodom Maneechote^{1,2,3}, Nattayaporn Apaijai^{1,2}, Thidarat Jaiwongkam^{1,2}, Sasiwan Kerdphoo^{1,2}, Nipon Chattipakorn^{1,2,3}, Siriporn C Chattipakorn^{1,2,4}
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- 2P-373** **Effects of vagotomy and area postrema lesion on induction of emesis by emetine**
Makoto Funahashi, Yoshiyuki Hirai, Mayu Fujita, Kazunari Hisadome, Hitoshi Maezawa
Oral Physiology, Department of Oral Functional Science, Faculty of Dental Medicine and Graduate School of Dental Medicine, Hokkaido University

Epithelial Transport, Secretion & Absorption: Epithelium (2)

- 2P-374** Kampo medicine Junchoto promotes intestinal Cl⁻/water secretion by cAMP-dependent CFTR activation
Tomohiro Numata¹), Kaori Sato-Numata²), Yasunobu Okada³), Ryuji Inoue¹)
¹Department of Physiology, Graduate School of Medical Sciences, Fukuoka University, Japan., ²Japan Society for the Promotion of Science, Japan., ³Department of Physiology and Systems Bioscience, Kyoto Prefectural University of Medicine, Japan
- 2P-375** CFTR function and *CFTR* mutations of cystic fibrosis in Japan
Yuka Kozawa¹), Akiko Yamamoto¹), Miyuki Nakakuki¹), Kotoyo Fujiki²), Shiho Kondo³), Itsuka Taniguchi¹), Satoru Naruse⁴), Hiroshi Ishiguro¹)
¹Department of Human Nutrition, Nagoya University Graduate School of Medicine, ²Department of Nutritional Sciences, Nagoya University of Arts and Sciences, ³Department of Food Science and Nutrition, Nagoya Women's University, ⁴Miyoshi Municipal Hospital
- 2P-376** Characterization of the Most Frequent Cfr-Mutant Found in Japanese Cystic Fibrosis Patients
Yoshiro Sohma^{1,2)}, Kanako Wakabayashi-Nakao¹), Yingchun Yu²), Miyuki Nakakuki³), Tzyh-Chang Hwang²), Hiroshi Ishiguro³)
¹Department of Pharmaceutical Sciences, International University of Health and Welfare, Japan, ²John M Dalton Cardiovascular Research Center, University of Missouri-Columbia, USA, ³Department of Human Nutrition, Nagoya University Graduate School of Medicine, Japan
- 2P-377** Non-morphogenic function of Sonic Hedgehog as a negative regulator of gastric H⁺,K⁺-ATPase
Takuto Fujii, Siriporn Phutthathiraphap, Takahiro Shimizu, Hideki Sakai
Department of Pharmaceutical Physiology, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Japan
- 2P-378** Aldosterone action on epithelial Na⁺ channel trafficking under the insulin-stimulated condition
Rie Marunaka¹), Yoshinori Marunaka^{1,2,3)}
¹Department of Molecular Cellular Physiology, Kyoto Prefectural University of Medicine, ²Research Institute for Clinical Physiology, Kyoto Industrial Health Association, ³Research Center for Drug Discovery and Pharmaceutical Development Science, Research Organization of Science and Technology, Ritsumeikan University
- 2P-379** Loss of ezrin causes impaired proximal tubular solute reabsorption in the kidney
Ryo Hatano¹), Mikiko Takayama²), Kotoku Kawaguchi²), Toru Kimura³), Toshiyuki Fukutomi³), Hiroyuki Sakurai³), Takashi Miki¹), Shinji Asano²)
¹Department of Medical Physiology, Chiba University Graduate School of Medicine, ²Department of Molecular Physiology, College of Pharmaceutical Sciences, Ritsumeikan University, ³Department of Pharmacology and Toxicology, Korin University School of Medicine
- 2P-380** Inhibition of prostaglandin E₂-induced Cl⁻ secretion by dihydropyrazole derivatives in rat colon
Hideki Sakai¹), Nozomi Murata¹), Kenji Sugimoto²), Yuka Miura²), Takahiro Shimizu¹), Takuto Fujii¹), Yuji Matsuya²)
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- 2P-381** ZO family proteins regulate epithelial polarity independent of Tight Junction strand assembly
Tetsuhisa Otani^{1,2)}, Shinsaku Tokuda³⁾, Mikio Furuse^{1,2)}
¹Division of Cell Structure, National Institute for Physiological Sciences, Japan, ²Department of Physiological Sciences, School of Life Sciences, The Graduate School for Advanced Studies (SOKENDAI), Japan, ³Division of Nephrology and Hypertension, Department of Internal Medicine, University of Kansas Medical Center, USA
- 2P-382** Establishment of a tight junction-deficient epithelial cell line by genome editing of claudin genes
Mikio Furuse¹⁾, Tetsuhisa Otani¹⁾, Daichi Sugawara¹⁾, Shinsaku Tokuda²⁾, Mika Watanabe¹⁾, Kyoko Furuse¹⁾, Osamu Nagata¹⁾
¹Division of Cell Structure, National Institute for Physiological Sciences, Japan, ²Kidney Institute, KUMC School of Medicine, USA

Epithelial Transport, Secretion & Absorption: G-I tract (2)

- 2P-383** Electrogenic K⁺ secretion induced by butyrate in rat rectal colon
Akihiro Inagaki¹⁾, Mikio Hayashi²⁾, Naaz Andharia²⁾, Hiroko Matsuda²⁾
¹Institute of Biomedical Sciences, Tokushima University Graduate School, Japan, ²Department of Physiology, Kansai Medical University, Japan
- 2P-384** Dragon fruit oligosaccharide ingestion enhances mouse intestinal motility
Pissared Khuituan¹⁾, Sakena K-Da^{1,2)}, Kanrawee Bannop^{1,2)}, Fittree Hayeeawaema¹⁾, Santad Wichienchot³⁾, Saranya Peerakietkhajorn²⁾, Narattaphol Charoenphandhu⁴⁾
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- 2P-386** The Effect of Fermented Milk and Soy for Controlling Blood Glucose and Lipid Level on Rats
Lovita Adriani¹⁾, Ronny Lesmana²⁾
¹Animal Husbandry Faculty, Padjadjaran University, Indonesia, ²Departement of Basic Science, Faculty of Medicine, Padjadjaran University, Indonesia
- 2P-387** Effects of dragon fruit oligosaccharide on microbiota in proximal and distal colon of mouse
Saranya Peerakietkhajorn¹⁾, Nilobon Jeanmard¹⁾, Papatsorn Chuenpanitkit¹⁾, Sakena K-Da^{1,2)}, Kanrawee Bannop¹⁾, Pissared Khuituan²⁾
¹Department of Biology, Faculty of Science, Prince of Songkla University, Thailand, ²Department of Physiology, Faculty of Science, Prince of Songkla University, Thailand
- 2P-388** Daikenchuto ameliorates intestinal fibrosis by activating myofibroblast TRPA1 channel
Keizo Hiraishi¹⁾, Lin-Hai Kurahara¹⁾, Yaopeng Hu¹⁾, Kaori Koga²⁾, Miki Onitsuka²⁾, Ryuji Inoue¹⁾
¹Department of Physiology, School of Medicine, Fukuoka university, Japan, ²Department of Pathology, School of Medicine, Fukuoka university, Japan
- 2P-389** The peripheral regulation of rectal visceral sensation by 5-HT₄-cAMP and NO-cGMP pathways

Kazumasa Matsumoto-Miyai¹), Junichi Hashimoto¹),
Eriko Okuyama-Shinzawa²), Masahito Kawatani²)

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²Department of Neurophysiology, Akita University Graduate School of Medicine, Japan

2P-390 **Calcium Oscillation Complexes in Colonic Musculatures of Mice**

Shinsuke Nakayama¹), Chiho Takai¹), Takana Yamada¹), Naoko Iwata¹),
Kazunori Kanemaru^{2,3}), Kenji Tanaka⁴), Masamitsu Iino^{2,3})

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²Department of Pharmacology, Graduate School of Medicine, The University of Tokyo,

³Division of Cellular and Molecular Pharmacology, Nihon University School of Medicine,

⁴Department of Neuropsychiatry, Keio University School of Medicine

2P-391 **Chronic vomiting observed in captive common marmosets**

Yumiko Yamazaki¹), Shinpei Kawarai²), Hidetoshi Morita³),
Takefumi Kikusui⁴), Atsushi Iriki¹)

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Dynamics Research, ²Laboratory of Small Animal Clinics, Veterinary Teaching Hospital,

Azabu University, ³Graduate School of Environmental and Life Science, Okayama

University, ⁴Companion Animal Research, School of Veterinary Medicine, Azabu

University

2P-392 ***Clostridium difficile* disrupts epithelial barrier function by altering tight junction proteins**

Pei-Jane Tsai, Tai-Chieh Wu, Yi-Hsin Lai

Department of Medical Laboratory Science and Biotechnology, University of National
Cheng-Kung University

2P-393 **Characterization of physiological function of IBD-associated gene LRRK2 in mouse intestine**

Yuta Ishikawa, Fumitaka Kawakami, Rei Kawashima, Tatsunori Maekawa,
Fumitaka Ichikawa

Department of regulation Biochemistry, Graduate School of Medical Sciences, Kitasato
University

2P-394 **Analysis of the effect of high-fat diet on intestinal barrier using mouse colitis model**

Mayuka Yamashita, Fumitaka Kawakami, Rei Kawashima,
Tatsunori Maekawa, Fumitaka Ichikawa

Department of Regulation Biochemistry, Graduate School of Medical Sciences, Kitasato
University

Epithelial Transport, Secretion & Absorption: Renal Physiology (2)

★ **2P-395** **Protective effects of dapagliflozin and atorvastatin on renal function in insulin-resistant rats**
(Y-28)

Laongdao Thongnak, Myat Theingi Swe, Krit Jaikumkao,
Anchalee Pongchaidecha, Anusorn Lungkaphin

Epithelial Transport and Intracellular Signaling Regulation Unit, Department of
Physiology, Chiang Mai University, Thailand

2P-396 **Protective Effects of Agomelatine on Inflammation in Obesity-Induced Kidney Injury**

Sasivimon Promsan, Rada Chenwelling, Anchalee Pongchaidecha,
Anusorn Lungkaphin

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Thailand

- ★ **2P-397** Melatonin activates sirtuin 3 to protect the kidney from long-term consequences of bisphenol A
(Y-29)
Anongporn Kobroob¹, Wachirasek Peerapanyasut², Sirinart Kumfu³, Nipon Chattipakorn³, Orawan Wongmekiat²
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- 2P-398** Effects of chronic renal failure on cognitive function and neurogenesis in rats
Rina Murata Murata, Masanori Katakura, Haruka Matsuzawa
Department of Pharmaceutical Sciences, University of Josai, Japan
- 2P-399** The application of predictive equation on estimation sodium intake in Hong Kong young adults
Ka Tik Cheung, Samuel Sze Ming Wong
School of Medical and Health Sciences, Tung Wha College, Hong Kong

Molecular & Cellular Biology: Channels & Transporters (2)

- 2P-400** Withdrawn
- 2P-401** Inhibitory effect of a novel less-odorous TRPA1 antagonist
Masayuki Takaishi¹, Yutaro Koide¹, Maki Sawada¹, Yoshiro Suzuki^{2,3}, Fumitaka Fujita¹, Makoto Tominaga^{2,3}
¹Mandom Corp., Japan, ²National Institute for Physiological Sciences (Exploratory Research Center on Life and Living Systems), National Institutes of Natural Sciences, Japan, ³Department of Physiological Sciences, SOKENDAI, (The Graduate University for Advanced Studies), Japan
- 2P-402** Regulation of the leak channel NALCN by H₂O₂
Hyunsu Kang¹, Jong-Sun Kang², Hana Cho¹
¹Department of Physiology, Single Cell Network Research Center, Sungkyunkwan University School of Medicine, South Korea, ²Department of Molecular Cell Biology, Single Cell Network Research Center, Sungkyunkwan University School of Medicine, South Korea
- 2P-403** Regulation of reactive oxygen species and calcium by chloride intracellular channel 1 in A549 cells
Jongyoon Lee¹, Jaerin Lee², Myongjoon Hahn², Jongsun Kang², Hana Cho¹
¹Department of Physiology, University of Sungkyunkwan, School of Medicine, South Korea, ²Department of Molecular Cell Biology, Single Cell Network Research Center, University of Sungkyunkwan, School of Medicine, South Korea
- 2P-404** Ferulic acid enhanced L-type Ca²⁺ channel function in rat insulinoma cell line
Katesirin Ruamyod, Wattana B Watanapa, Pimchanok Nambandit, Sukrit Treewaree, Parin Wongsanupa
Department of Physiology, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
- 2P-405** High Glucose-Induced Alterations in Ion Channel and Vascular Functions in Human Umbilical Vein

Aung Hein Nyan^{1,2)}, Wattana B Watanapa³⁾, Suwattanee Kooptiwut²⁾,
Pinpat Tripatara³⁾

¹Defence Services Medical Research Center, Myanmar, ²Department of Physiology, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand, ³Department of Pharmacology, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand

2P-406 Mechanism of ginsenoside Re effect on SK_{Ca} current in human coronary artery endothelial cell

Kitinat Rodthongdee, Luecha Boontaveekul, Wattana B Watanapa

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2P-407 Gq-mediated activation of non-selective cation channels in insulin releasing b-cells

Dezaki Katsuya¹⁾, Masashi Yoshida²⁾, Toshihiko Yada¹⁾

¹Department of Physiology, Jichi Medical University, Japan, ²Saitama Medical Center, Jichi Medical University, Japan

2P-408 Polyamine-mediated inward rectification of TRPC4 channel

Jinsung Kim, Insuk So

Department of Physiology, Seoul National University, Korea

2P-409 Effect of STIM1 knockdown on calcium response in bovine ciliary myocytes

Miyazu Motoi, Kosuke Takeya, Toshiyuki Kaneko, Akira Takai

Dept Physiol, Asahikawa Med, Univ., Japan

2P-410 TRPM4 channel is involved in cellular damage caused by simulated ischemia-reperfusion injury

Chen Wang, Heng Wei

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2P-411 Molecular property changes of endoplasmic reticulum IK_{Ca} channels in early diabetic hepatocytes

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2P-412 TRPM2 channel-Stat3 complex regulates the polarity of tumor-associated macrophage

Yuji Yamada, Yoshifumi Ueda, Ryuhei Kurogi, Yoshiaki Hasegawa,

Tarek Mohamed Abd El-Aziz, Masayuki x Mori, Yasuo Mori

Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Japan

2P-413 Regulation of neuronal excitability by Trim69 E3 ubiquitin ligase

Chankyo Kim¹⁾, Seul-Yi Lee¹⁾, Hyeon-Ju Jeong²⁾, Hyun-Kyung So²⁾,

Yoo-Bin Kim¹⁾, Jae-Rin Lee²⁾, Myong-Joon Hahn²⁾, Jong-Sun Kang²⁾,

Hana Cho¹⁾

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2P-414 Activation of TRPM6 current by 2-aminoethyldiphenyl borate is impaired by hydrogen peroxide

Ryo Mizumoto¹⁾, Dai Masui²⁾, Hana Inoue¹⁾, Masato Konishi¹⁾

2P-415 Structure-based virtual screening for G protein-gated inwardly rectifying K⁺ (GIRK) channel blockers

Atsushi Inanobe, Yoshihisa Kurachi

Department of Pharmacology, Osaka University Graduate School of Medicine, Japan

2P-416 A novel variant of TRPV3 p.A628T in East Asians showing fast sensitization by chemical agonists

Choi Si Won^{1,3}, Seong Woo Choi^{7,8}, Jeeseo Chae^{2,5,6}, Jong-Il Kim^{2,5,6}, Sung Joon Kim^{1,3,4}

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2P-417 Structure analysis of the binding between Cav1.2 channel and calmodulin

Masaki Kameyama, Etsuko Minobe, Jianjun Xu, Qinghua Gao

Kagoshima University, Japan

2P-418 Voltage-clamp fluorometry analyses of voltage-dependent gating of ATP receptor channel P2X2

Andriani Tsari Rizki^{1,2}, Yoshihiro Kubo^{1,2}

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2P-419 Functional Coupling of Metabolic Sensors, TRPM2 and Sirtuin

Makiko Kashio¹, Makoto Tominaga^{2,3,4}, Satoru Masubuchi¹

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2P-420 Examination of the contribution of SLCO2A1 to maxi-anion channel currents in murine cells

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★★**2P-421** Protein arginine methyltransferase 1-dependent regulation of slow delayed rectifier K⁺ current (Y-30)

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2P-422 Effects of chemical chaperone on surface expression of PHHI mutant K_{ATP} channel (SUR1/A28VKir6.2)

Chen Pei-Chun^{1,2}, Yu-Chi Lin¹, Yen-Yu Yang³, Shi-Bing Yang³

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2P-423 Effects of antihistamine drugs on G-protein-gated inwardly rectifying K⁺ channels

Chang Liu^{1,2)}, I-Shan Chen^{1,2)}, Yoshihiro Kubo^{1,2)}

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2P-424 Measurements of water flux across a lipid bilayer membrane with evaluation of unstirred water layer

Keita Yano, Masayuki Iwamoto, Shigetoshi Oiki

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2P-425 *in bulla* channel synthesis and functional expression system under applied membrane potentials

Masayuki Iwamoto, Shigetoshi Oiki

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2P-426 Regulation of TRPV1 and TRPA1 function by free fatty acid receptor

Pyo Hyun-Jeong¹⁾, Myong-Ho Jeong²⁾, Tong Mook Kang¹⁾, Jong-Sun Kang²⁾, Hana Cho¹⁾

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2P-427 Cav1.2 channel inactivation induced by two molecules of calmodulin

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2P-428 Dipole Potential Evaluated by Hydrophobic Ions using the Contact Bubble Bilayer Method

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★★**2P-429**
(Y-31)

TTYH family encodes the pore-forming subunits of the volume-regulated anion channel in the brain

Han Youn-Eun^{1,2,3)}, Jea Kwon^{1,2,4)}, Joungha Won^{1,2,5)}, Heeyoung An^{1,2,4)}, Minwoo Wendy Jang^{1,2,4)}, Junsung Woo^{1,2)}, Je Sun Lee⁶⁾, Min Gu Park^{1,2,4)}, Soo-Jin Oh^{1,2,7)}, Changjoon Justin Lee^{1,2,3)}

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- ★ **2P-430** The Arginine in the side portal determines the physiological [pH]_i sensing of TALK1

(Y-32)

Tsai Wen-Hao^{1,2)}, Shi-Bing Yang¹⁾¹Institute of Biomedical Science, Academia Sinica, Taiwan, ²Taiwan International Graduate Program-Molecular Medicine, National Yang-Ming University Taiwan

- 2P-431** Down-regulation of K_{Ca} 3.1 K⁺ channels by the treatment with VDR agonists in mouse pre-osteoblasts

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Molecular & Cellular Biology: Cellular Physiology (2)

- 2P-432** Cell imaging with magnetic particle with on a diamond sensor

Yoshie Harada¹⁾, Takeharu Sekiguchi^{1,2)}, Takayuki Iwasaki³⁾,Mutsuko Hatano³⁾, Yuji Hatano¹⁾¹Institute for Protein Research, Osaka University, Japan, ²Graduate School of Science and Technology, Keio University, ³School of Engineering, Tokyo Institute of Technology

- 2P-433** A novel mechanism responsible for the intracellular zinc-sensing

Zhelong Xu, Huanhuan Zhao, Liang Zhao

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- 2P-434** TRPA1 receptors mediate the hypoxia-induced surfacing response of goldfish

Masanori Kasai, Aika Kawabata, Rina Nakashima, Takuya Iwao,

Yuya Horinouchi, Mitsuhiro Kimura, Yukiko Yokogawa

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- 2P-435** MicroRNAs in mouse salivary glands as a putative Bio-Marker of stress-dependent diseases

Kinji Kurihara

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- ★★ **2P-436** Circadian gene Clock post-transcriptionally regulates mitochondrial morphology and functions

(Y-33)

Lirong Xu¹⁾, Qianyun Cheng¹⁾, Bingxuan Hua³⁾, Tingting Cai¹⁾, Jiixin Lin¹⁾,Gongsheng Yuan¹⁾, Zuoqin Yan³⁾, Xiaobo Li¹⁾, Ning Sun¹⁾, Chao Lu^{1,2)},Ruizhe Qian^{1,2)}¹Department of Physiology and Pathophysiology, School of Basic Medical Sciences, Fudan University, China, ²Basic Research Institute for Aging and Medicine, School of Basic Medical Sciences, Fudan University, China, ³Department of Orthopedics, Zhongshan Hospital, Fudan University, China

- 2P-437** Improvement of genetically encoded probe to measure Ca²⁺ dynamics in subcellular compartments

Naoya Murooka, Takashi Kikuchi, Hideki Shirakawa

Department of Engineering Science, The University of Electro-Communications, Japan

- 2P-438** Method to Record Single-Molecule Fluctuations and Conformational Changes in Proteins

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- 2P-439** Development of a photo-activatable CaMKII and its application to the study of synaptic plasticity
Akihiro Shibata, Hideji Murakoshi
National Institute for Physiological Sciences, Japan
- 2P-440** Truncated dystrophin ameliorates the dystrophic phenotype by sarcolipin-mediated SERCA inhibition
Jun Tanihata^{1,2}, Tetsuya Nagata², Naoki Ito², Takashi Saito²,
Akinori Nakamura³, Susumu Minamisawa¹, Yoshitsugu Aoki², Urs Ruggel⁴,
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- 2P-441** Flonicamid affects insect proprioception and feeding through 5-HT₇ receptors
Fen Mao, Yixiang Qi, Gongyin Ye, Jia Huang
Institute of insect science, University of Zhejiang, China
- 2P-442** Analysis of electrically-modulated molecules that enhance bone marrow stromal cell proliferation
Jun Ichikawa, Ryuji Inoue
Department of Physiology, Fukuoka University School of Medicine, Japan
- 2P-443** Involvement of VNUT-exocytosis in TRPV4 ion channel-dependent ATP release from colonic epithelium
Hiroshi Mihara^{1,2}, Kunitoshi Uchida³, Schuichi Koizumi⁴,
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⁴Department of Neuropharmacology, University of Yamanashi, Japan, ⁵Department of Membrane Biochemistry, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, Japan
- 2P-444** Essential role of Ca²⁺ and pH for in vitro cornification in isolated mouse stratum granulosum cells
Takeshi Matsui¹, Masayuki Amagai^{1,2}
¹Laboratory for Skin Homeostasis, RIKEN Center for Integrative Medical Sciences, Japan,
²Department of Dermatology, Keio University School of Medicine
- 2P-445** CTLA4-Ig suppressed intracellular calcium oscillation and inhibited murine osteoclast formation
Hiroyuki Okada¹, Hiroshi Kajiya², Yasunori Omata¹, Jun Hirose¹,
Takumi Matsumoto¹, Koji Okabe², Takeshi Miyamoto³, Sakae Tanaka¹
¹Department of Orthopaedic Surgery, the University of Tokyo, Japan, ²Department of Physiological Science and Molecular Biology, Fukuoka Dental College, ³Department of Orthopaedic Surgery, Keio University School of Medicine
- 2P-446** Metabotropic glutamate receptor mGlu2 regulates signaling via Gq-coupled serotonergic receptor

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2P-447 Altered expression of taste signaling elements in jejunal tissue of obese patients

Toshiaki Yasuo^{1,2)}, Peihua Jiang²⁾, Craig Wood³⁾, Xin Chu³⁾, Peter Benotti³⁾, Christopher Still³⁾, David DK Rolston³⁾, Robert F Margolskee²⁾, Yuzo Ninomiya^{2,4)}

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2P-448 The intracellular C-terminal domain is responsible for cell surface expression of mGluR6

Dilip Rai, Takumi Akagi, Atsushi Shimohata, Ikuo Ogiwara, Makoto Kaneda
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2P-449 Effects of PCSK9 inhibitor and atorvastatin on mitochondria of red muscle fibers in obesity

Chanisa Thonusin^{1,2,3)}, Siripong Palee^{1,2)}, Wasana Pratchayasakul^{1,2,3)}, Patchareeya Amput^{1,2)}, Sasiwan Kerdpoo^{1,2)}, Thidarat Jaiwongkam^{1,2)}, Nattayaporn Apaijai^{1,2)}, Siriporn C Chattipakorn^{1,2,4)}, Nipon Chattipakorn^{1,2,3)}

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2P-450 Intracellular calcium responses to mechanical stimulation in mouse and human synoviocytes

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2P-451 Global analysis of specific gene expression in thymus gland of AQP11 null mice

Yasuko Tanaka, Yumi Tsuji, Natsumi Kato, Minoru Nakae, Haruka Okada, Kei Masaka, Kenichi Ishibashi

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2P-452 Different expression of Olig2 and O4 in cultured mouse brain cells

Hiromi Hiruma

Department of Physiology, Kitasato University School of Medicine, Japan

2P-453 L6H21 reduces EtOH-LPS-induced liver injury through inhibition of NLRP3 inflammasome activation

Kong Xiaoxia¹⁾, Guicheng Wu^{2,4)}, Fengyuan Li⁴⁾, Hongyu Zhang³⁾, Wenke Feng⁴⁾

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- 2P-454** MitoQ protects endothelial barrier injury and inflammation by inhibiting ROS and autophagy in HUVECs
 Chen Sha¹, Yu Wang¹, Hailin Zhang², Ran Chen¹, Li Yang³
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- 2P-455** MR-1 promotes cardiomyogenic differentiation of H9c2 cells via the myogenin-mediated pathway
 Wang Xiaoreng, Dandan Song, Tianqi Tao, Xiuhua Liu
 Department of Pathophysiology, 301 hospital, China
- 2P-456** Nardilysin in hepatocyte regulates adaptive thermogenesis in brown adipose tissue
 Eiichiro Nishi¹, Hirotaka Iwasaki¹, Kiyoto Nishi³, Mikiko Ohno¹, Shintaro Matsuda²
¹Department of Pharmacology, Shiga University of Medical Science, Japan, ²Department of Cardiovascular Medicine, Graduate School of Medicine, Kyoto University, ³Department of Anesthesiology & Pain Medicine University of Washington
- 2P-457** Structure Development of Oxolinic Acid, a Novel Inhibitor of Type 1 Ryanodine Receptor
 Yoshiaki Nishijima¹, Takashi Murayama¹, Shuichi Mori², Hiroto Iinuma², Noriaki Manaka², Nagomi Kurebayashi¹, Mari Ishigami-Yuasa², Hiroyuki Kagechika², Takashi Sakurai¹
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- 2P-458** Ribosome binding protein GCN1L1 controls cell cycle and is essential for embryonic development
 Hiromi Yamazaki, Shuya Kasai, Junsei Mimura, Peng Ye, Atsushi Inose Maruyama, Ken Itoh
 Department of Stress Response Science, Hirosaki University Graduate School of Medicine, Japan
- 2P-459** Malignancy of cancer cell lines correlates with NKCC1 expression and intracellular Cl⁻ concentration
 Hiroaki Miyazaki
 Department of Life Science, Setsunan University, Japan
- 2P-460** Structure of bound water in myofibril suspension: A role of ATP
 Tetsuo Ohno
 Department Molecular Physiology, The Jikei University School of Medicine, Japan
- 2P-461** mTORC2 signaling is critical for lysosomal activation by isorhamnetin treatment in J774.1
 Maiko Sakai¹, Kohta Ohnishi¹, Teppei Fukuda¹, Masashi Masuda¹, Naomi Abe-Kanoh², Hisami Yamanaka-Okumura¹, Yoshichika Kawai³, Yutaka Taketani¹
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- 2P-462** Novel RyR1 Inhibitors Identified by High-Throughput Screening Using ER Ca²⁺ Measurement
 Hiroyuki Matsukawa¹, Takashi Murayama¹, Takuya Kobayashi¹, Nagomi Kurebayashi¹, Mari Ishigami-Yuasa², Shuichi Mori², Hiroyuki Kagechika², Takashi Sakurai¹
¹Department of Pharmacology, Juntendo University School of Medicine, Japan, ²Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Japan
- 2P-463** Regulation of cell cycle by N⁶-methyladenosine modification in cancer cells
 Mayumi Hirayama^{1,2}, Fanyan Wei¹, Hideki Nakayama², Kazuhito Tomizawa¹
¹Department of Molecular Physiology, Faculty of Life Sciences, Kumamoto University, Japan, ²Department of Oral and Maxillofacial Surgery, Faculty of Life Sciences, Kumamoto University, Japan
- 2P-465** Inhibition of the frequency of airway ciliary beating by PDE1 activation in Down syndrome mouse
 Haruka Kogiso^{1,2}, Yukiko Ikeuchi^{1,2}, Saori Tanaka³, Shigekuni Hosogi¹, Chikao Shimamoto³, Matthieu Raveau⁴, Kazuhiro Yamakawa⁴, Takashi Nakahari⁵, Shinji Asano², Yoshinori Marunaka^{1,5,6}
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- 2P-466** Microscale liquid layer on the olfactory receptors affects on the vapor chemical detection
 Koji Sato
 Biofunctional Systems Construction Research Group, Exploratory Research Center on Life and Living Systems, Japan
- 2P-467** Differential effects of Fe²⁺ and Fe³⁺ on the proliferation and differentiation of osteoblasts
 Ketsaraporn Nammultriputtar^{1,2}, Kornkamon - Lertsuwan^{1,3}, Narattaphol Charoenphandhu^{1,2,4,5}
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- 2P-468** Synergistic effect of histone deacetylase inhibitors in intravesical instillation of bladder cancer
 Wen-Wei Sung^{1,2,3}, Chia-Ying Yu², Jr-Rou Sun², Shao-Chuan Wang^{1,2,3}, Wen-Jung Chen^{1,2,3}, Tzuo-Yi Hsieh^{1,2,3}, Sung-Lang Chen^{1,2,3}
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- 2P-469** Neferine selectively alters LPS-induced inflammatory responses in RAW 264.7 macrophages
Amnart Onsa-Ard¹, Jiraporn Tocharus², Chainarong Tocharus³, Apichart Suksamran⁴
¹Division of Biochemistry, Faculty of Medical Sciences, University of Phayao, Thailand, ²Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, ³Department of Anatomy, Faculty of Medicine, Chiang Mai University, Thailand, ⁴Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Ramkhamhaeng University, Thailand
- 2P-470** The influence of KATP channel abnormality on calcium handling of endoplasmic reticulum
Hiroki Takanari
Tokushima University Hospital, Japan
- 2P-471** Dinaciclib inhibits Aurora A expression and proliferation of prostate cancer cells
Ho Lin¹, Ting-Chieh Chang¹, Chang-Tze Ricky Yu³, Chun-Chi Wu², Mei-Chih Chen^{4,5}
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- 2P-472** Dose-response relationship of free radical scavenging activity of dexmedetomidine
Osamu Tokumaru¹, Kota Yoshida², Kazue Ogata³, Hiroki Takanari⁴, Shigekiyo Matsumoto³, Takaaki Kitano³
¹Faculty of Welfare and Health Sciences, Oita University, Japan, ²School of Medicine, Oita University Faculty of Medicine, ³Department of Anesthesiology, Oita University Faculty of Medicine, ⁴Clinical Research Center for Diabetes, Tokushima University Hospital
- 2P-473** Airway ciliary beating activated by enhanced Ca²⁺ signal in Hochu-ekki-to (TJ-41) treated mice
Yukiko Ikeuchi^{1,2}, Haruka Kogiso^{1,2}, Saori Tanaka⁴, Shigekuni Hosogi¹, Takashi Nakahara³, Shinji Asano², Yoshinori Marunaka^{1,3,5}
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- 2P-474** Influence of TRPC knockout on mouse pupillary sphincter
Toshiyuki Kaneko, Akira Takai
Department of Physiology, Asahikawa Medical University, Japan
- 2P-475** The inhibitory effects of microRNA-107 on p35/CDK5-regulated prostate cancer cell growth
Fang-Ling Liu¹, Wei-Hsiang Kao¹, Hsin-Yi Wang², Mei-Chih Chen^{3,4}, Ho Lin¹
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- 2P-476** The inhibitory effects of valproic acid on androgen receptor and prostate cancer cell growth
Cheng-En Hsieh¹, Hsiao-Han Kao¹, Mei-Chih Chen^{2,3}, Ching-Han Yu⁴, Ho Lin¹
¹Department of Life Sciences, National Chung Hsing University, Taiwan, ²Medical Research Center for Exosomes and Mitochondria Related Diseases, China Medical University Hospital, Taiwan, ³Department of Nursing, Asia University, Taiwan, ⁴Department of Medicine, Chung-Shan Medical University, Taiwan
- 2P-477** CDK5 promotes androgen receptor transactivation under Akt inhibition stress
Wei-Hsiang Kao¹, Mei-Chih Chen^{2,3}, Ho Lin¹
¹Department of Life Sciences, National Chung Hsing University, Taiwan, ²Medical Research Center for Exosomes and Mitochondria Related Diseases, China Medical University Hospital, Taiwan, ³Department of Nursing, Asia University, Taiwan
- 2P-478** CDK5 down-regulates p21 expression through inhibiting STAT3
Wan-Ling Liao¹, Jo-Hsin Wang¹, Pao-Hsuan Huang¹, Hsin-Yi Wang², Mei-Chih Chen^{3,4}, Ho Lin¹
¹Department of Life Sciences, National Chung Hsing University, Taiwan, ²Department of Nuclear Medicine, Taichung Veterans General Hospital, Taiwan, ³Medical Research Center for Exosomes and Mitochondria Related Diseases, China Medical University Hospital, Taiwan, ⁴Department of Nursing, Asia University, Taiwan
- 2P-479** Circadian rhythms in nicotinamide adenine dinucleotide concentration in mouse liver
Aya Shimada, Hiroki Nakamura, Daisuke Yarimizu, Masao Doi
Department of Pharmaceutical Sciences, Kyoto University, Japan
- 2P-480** Integrins are involved in mechano-electrical transduction in arterial baroreceptors
Haixia Huang¹, Haiyan Zhao², Ping Liu¹, Sitao Zhang¹, Fang Xin¹, Wei Wang¹
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- 2P-481** Vapor detection and discrimination with a panel of odorant receptors
Yosuke Fukutani^{1,2}, Hitoshi Kida^{2,3}, Joel D. Mainland⁴, Claire A. De March², Masaharu Kameda³, Masafumi Yohda¹, Hiroaki Matsunami²
¹Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Japan, ²Department of Molecular Genetics and Microbiology, Duke University Medical Center, USA, ³Department of Mechanical System Engineering, Tokyo University of Agriculture and Technology, Japan, ⁴Monell Chemical Senses Center, USA
- 2P-482** Metabolic alterations in cells transformed by oncogenic Lck kinase
Chao-Lan Yu^{1,2,3,4}, Szu-Yuan Chen², Mei-Ling Cheng^{1,2,3}, Pei-Ting Wu^{2,3}, Fu-Shin Chueh⁵, Shin-Yu Wu¹, Fu-Yu Chueh^{1,6}
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- 2P-483** Effects of chloride ion channel blocker on the adipogenic differentiation of rabbit ASCs
Kanae Ouchi^{1,2)}, Masao Miyake¹⁾, Susumu Yoshie¹⁾, Akihiro Hazama¹⁾
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- 2P-484** ITAM receptors regulate two frequency components in calcium oscillations during osteoclastogenesis
Hiroschi Kajiya¹⁾, Hiroyuki Okada²⁾, Shunichi Sudo¹⁾, Masashi Shin¹⁾, Fujio Okamoto¹⁾, Takeshi Miyamoto³⁾, Sakae Tanaka²⁾, Koji Okabe¹⁾
¹Department of Physiological Science and Molecular Biology, Fukuoka Dental College, Japan, ²Department of Orthopaedic Surgery, The University of Tokyo, Japan, ³Department of Orthopaedic Surgery, Keio University School of Medicine, Japan
- 2P-485** RNF20/BRE1a regulates proliferation and differentiation of GBM cancer stem-like cells
Kenny Daun¹⁾, Naoko Morimura¹⁾, Kazuhiko Nozaki²⁾, Kenji Tanigaki³⁾, Seiji Hitoshi¹⁾
¹Department of Integrative Physiology, Shiga University of Medical Science, Japan, ²Department of Neurosurgery, Shiga University of Medical Science, Japan, ³Research Institute Shiga Medical Center, Japan
- 2P-486** Analysis of the mechanism regulating intercellular transport of silencing RNA in *C. elegans*
Keita Yoshida, Sawako Yoshina, Yuji Suehiro, Shohei Mitani
Department of Physiology, Tokyo Women's Medical University School of Medicine, Japan
- 2P-487** Swallowing reflex-inducible stimulations in rats
Izumi Ujihara, Suzuro Hitomi, Kentaro Ono
Division of physiology, Kyushu Dental University, Japan
- 2P-488** Intracellular Ca²⁺ source for SK channels in cartwheel cells of the mouse dorsal cochlear nucleus
Tomohiko Irie
Division of Pharmacology, National Institute of Health Sciences, Japan
- 2P-489** Investigation into functions and molecular mechanisms of hesperetin on human cancer cells
Yukari Ogawa¹⁾, Akiyoshi Shiroto¹⁾, Kenta Suzuki¹⁾, Masami Nishina²⁾, Shu-ichi Watanabe³⁾, Kazunori Yoshimura^{1,3)}
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- 2P-490** STARD10 promotes lipid droplet formation cooperatively with LPCAT1
Masanori Ito, Taichiro Tomida, Yoshinori Mikami, Daisuke Ohshima, Satomi Adachi-Akahane
Department of Physiology, Faculty of Medicine, Toho University, Japan
- 2P-491** ATP dependent H⁺transport in endoplasmic reticulum membrane
Yoshimichi Murata, Yoshio Maruyama
Department of Physiology, Graduate school of Medicine, Tohoku University, Japan
- 2P-492** Highly localized pH sensing on the outer membrane of cells using surface enhanced Raman spectroscopy

Leonardo Puppulin¹), Shigekuni Hosogi^{1,2}), Hideo Tanaka³),
Yoshinori Marunaka^{1,4,5})

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2P-493 High-level of homocysteine alters cell viability of endothelial cell and Müller cell

Yih-Jing Lee¹), Yi-Ching Chen^{1,2}), Hsin-Jen Hsieh^{1,2}), Chia-Ying Ke¹),
Ni Tien¹), Po-Kang Lin^{3,4})

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2P-494 Expression of Mechanosensitive Ion Channel in Osteoblasts
Sayoko Nagai¹), Asuka Higashikawa²), Sadao Ooyama²), Maki Kimura²),
Yoshiyuki Shibukawa²), Akira Katakura¹)

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2P-495 Exploratory search for therapeutic target genes to cure MELAS using CRISPR activation

Hitomi Kaneko, Takeshi Chujo, Fan-Yan Wei, Kazuhito Tomizawa

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2P-496 The effect of benzodiazepine on proliferation and survivals of CNS cells

Tomonori Furukawa¹), Shuji Shimoyama^{1,2}), Yoshiki Ogata¹), Shinya Ueno^{1,2})

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★ **2P-497** The impact of DNA methyltransferase 3A in erythrocytic differentiation
(Y-34)

Eric Chang-Yi Lin, Po-Shu Tu, Hsiao-Wen Chen, Yuan-I Chang

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2P-498 Calcium response in human synovial cells induced by shear stress in normal and rheumatoid arthritis

Yu Okumura^{1,2}), Keiji Asada³), Miyako Takaki¹)

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2P-499 Relationship between dehydration and amount of drinking water before shifts : a preliminary study

Ryutaro Kase, Yuji L Tanaka, Hisayoshi Sugawara, Erina Matsushima, Masatoshi Komiyama, Ayumi Amemiya

- ★ **2P-500** (Y-35) **Hearing status of Rickshaw's drivers in Karachi, Pakistan assessed by Pure tone audiometry**
Muhammad Adnan Kanpurwala^{1,2)}, Furqan Mirza³⁾
¹Department of Physiology, Karachi Institute of Medical Sciences, Pakistan, ²Department of Physiology, University of Karachi, ³Department of Health Management, Institute of Business Management
- 2P-501** **A corticohypothalamic neural pathway that drives sympathetic responses to psychological stress**
Naoya Kataoka, Keisuke Nakajima, Kazuhiro Nakamura
Department of Integrative Physiology, Nagoya University Graduate School of Medicine, Japan
- 2P-502** **Expanded plasma volume after a bout of exercise increases erythropoietin secretion to hypoxia**
Kazunobu Okazaki^{1,2)}, Ryosuke Takeda¹⁾, Daiki Imai^{1,2)}, Eriko Kawai²⁾, Akemi Ota²⁾, Kosuke Saho²⁾, Emiko Morita^{2,3)}, Yuta Suzuki^{1,2)}, Kazushige Goto³⁾, Hisayo Yokoyama^{1,2)}
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- 2P-503** **The effect of aging on event-related potentials during mild-hyperthermia**
Akemi Ota^{1,2)}, Ryosuke Takeda³⁾, Daiki Imai^{2,3)}, Eriko Kawai²⁾, Kosuke Saho²⁾, Emiko Morita²⁾, Yuta Suzuki^{2,3)}, Hisayo Yokoyama^{2,3)}, Kazunobu Okazaki^{2,3)}
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- 2P-504** **Thermosensory changes in heat resistant tadpoles of Ryukyu kajika frogs inhabiting hot springs**
Shigeru Saito^{1,2,3)}, Claire T. Saito^{1,2)}, Takeshi Igawa⁴⁾, Shohei Komaki⁵⁾, Makoto Tominaga^{1,2,3)}
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- 2P-505** **Influence of combined stimulus of cold, hypoxia and dehydration status on thermoregulation in rats**
Tadashi Uno, Tatsuya Hasegawa, Masahiro Horiuchi
Division of Human Environmental Science, Mount Fuji Research Institute, Japan
- 2P-506** **Possible central mechanism of acquired heat tolerance in exercise-trained rats**
Kentaro Matsuzaki¹⁾, Masanori Katakura²⁾, Naotoshi Sugimoto³⁾, Eri Sumiyoshi¹⁾, Toshiko Hara¹⁾, Osamu Shido¹⁾
¹Department of Environmental Physiology, Faculty of Medicine, Shimane University, Japan, ²Department of Nutritional Physiology, Faculty of Pharmaceutical Sciences, Josai University, Japan, ³Department of Physiology, Graduate School of Medical Science, Kanazawa University, Japan

- 2P-507** Estimation of basal body temperature from breast skin temperature during sleep
Shuri Marui, Kei Nagashima
Faculty of Human Sciences, Waseda University, Japan
- 2P-508** Wearable patch-type sensors for core temperature monitoring by a modified dual-heat-flux method
Ken Tokizawa¹, Tatsuo Oka¹, Hirofumi Tsuchimoto², Toru Shimuta²
¹National Institute of Occupational Safety and Health, Japan, ²Murata Manufacturing Co., Ltd,
- 2P-509** Operant behaviors affected by warm ambient temperature are task-dependent and hippocampus involved
Ruey-Ming Liao^{1,2,3}, Shuo-Fu Chen^{1,2}, Chuen-Yu Chuang^{1,2}, Chih-Chang Chao^{2,3}
¹Department of Psychology, National Cheng-Chi University, Taiwan, ²Institute of Neuroscience, National Cheng-Chi University, Taiwan, ³Center for Mind, Brain and Learning, National Cheng-Chi University, Taiwan
- 2P-510** The effect of environmental temperature on spontaneous exercise in mice
Yuta Mausda¹, Shuri Marui², Ken Tokizawa³, Issei Kato¹, Kei Nagashima²
¹Department of Human sciences, Waseda University, Japan, ²Faculty of Human Sciences, Waseda University, Japan, ³National Institute of Occupational Safety and Health, Japan
- 2P-511** Function of polyunsaturated fatty acid in thermoregulation
Takuto Suito, Kohjiro Nagao, Naoto Juni, Masato Umeda
Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Japan
- 2P-512** Cold induced sleep-related sympathovagal imbalance and sleep fragmentation in rats
Cheng-Han Wu^{1,2}, Terry B.J. Kuo^{1,2,3,5,6}, Chieh-Wen Chen^{1,2}, Yu-Syuan Liou^{1,2}, Kuan-Liang Kuo^{4,7}, Cheng-Hung Chung^{1,2}, Yu-Ting Lin^{1,2}, Cheryl C.H. Yang^{1,2,3,5}
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- 2P-513** A mouse model that can evaluate fever and hyperalgesia due to peripheral inflammation
Hiromu Kitagawa¹, Takae Ibuki², Kiyoshi Matsumura¹
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- 2P-514** Induction of long-term torpor by enhancing the adenosine receptor signal via PPARs activation
Miho Sato-Hashimoto, Hiroshi Ohnishi
Department of Laboratory Sciences, Gunma University Graduate School of Health Sciences, Japan

- 2P-515** Involvement of the vagus nerve in autonomic thermoregulation responses induced by TRPM8 agonist
Noriyuki Mori^{1,2)}, Tomomi Urata²⁾, Tsutomu Fukuwatari²⁾
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- 2P-516** *Aurelia Aurita* venom evoke hyperpolarization and SOCS1 expression in toad urothelium membrane
Yang Wang^{1,2)}, Han Wang¹⁾, Linghua Piao¹⁾, Tong He¹⁾, Lingfeng Gao¹⁾
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- 2P-517** Withdrawn
- 2P-518** Seasonal differences in cardiac autonomic nervous activity during exercise in obese men
Maki Sato^{1,2)}, Hisaki Hayashi¹⁾, Tatsunori Ikemoto³⁾, Takahiro Ushida³⁾, Dominika Kanikowska⁴⁾, Satoshi Iwase¹⁾, Motohiko Sato¹⁾
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Genomics & Biodiversity

- 2P-519** PAI-1 is crucial in osteoblastic differentiation of mesenchymal stem cells
Yoshimasa Takafuji, Kohei Tatsumi, Masayoshi Ishida, Naoyuki Kawao, Kiyotaka Okada, Osamu Matsuo, Hiroshi Kaji
Department of Physiology and Regenerative Medicine Kindai University Faculty of Medicine, Japan
- 2P-520** Regenerative capacity of stem cells in the skeletal muscle: Comparison between human, mouse and pig
Tetsuro Tamaki¹⁾, Ippei Yamato²⁾, Shuichi Soeda¹⁾, Yoshiyasu Uchiyama³⁾
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- ★ **2P-521** (Y-37) Alpha-5 integrin mediates simvastatin-induced osteogenesis of bone marrow mesenchymal stem cells
Pei Lin Shao¹⁾, Shun Cheng Wu^{2,3)}, Zih Yin Lin^{2,3)}, Chau Zen Wang^{2,3)}, Chung-Hwan Chen²⁾, Mei-Ling Ho^{2,3)}
¹Department of Nursing, Asia University, Taiwan, ²Orthopaedic Research Center, College of Medicine, Kaohsiung Medical University, Taiwan, ³Department of Physiology, College of Medicine, Kaohsiung Medical University, Taiwan
- 2P-522** Molecular network search for *bcl-7* related factors
Luna Izuhara¹⁾, Sawako Yoshina¹⁾, Sayaka Higuchi²⁾, Yuji Suehiro¹⁾, Shohei Mitani^{1,2)}
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- 2P-523** Platelet-rich plasma supplementation increase CD34 hematopoietic stem cell proliferation in vitro
 Imelda Rosalyn Sianipar¹, Beryl Alodia², Yosafat L Prasetyadi², Retno Wahyu Nurhayati³, Gita Pratama^{4,5}, Radiana Dhewayani Antarianto^{6,7}
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- 2P-524** Identifying heterogeneity of ground state pluripotency in mouse embryonic stem cells
 Kyoji Horie, Junko Yoshida
 Department of Physiology II, Nara Medical University, Japan
- 2P-525** Bioactive Ligands-Based Neuronal Reprogramming of Human Dedifferentiated Fat Cells
 Rei Nakano^{1,2}, Yoshiyuki Shibukawa³, Koichiro Kano⁴, Taro Matsumoto⁵, Hiroshi Sugiya²
¹Laboratory for Cellular Function Conversion Technology, RIKEN Center for Integrative Medical Sciences (IMS), Japan, ²Laboratory of Veterinary Biochemistry, College of Bioresource Sciences, Nihon University, ³Department of Physiology, Tokyo Dental College, ⁴Laboratory of Cell and Tissue Biology, College of Bioresource Sciences, Nihon University, ⁵Department of Functional Morphology, Division of Cell Regeneration and Transplantation, Nihon University School of Medicine
- 2P-526** Determining Deubiquitinating Enzymes Regulating Adipose Derived Mesenchymal Stem Cells Senescence
 Dong Hyeon Lee¹, Soonchul Lee²
¹Department of Physiology, CHA University School of Medicine, Republic of Korea, ²Department of Orthopaedic Surgery, CHA Bundang Medical Center, CHA University School of Medicine, Republic of Korea
- 2P-527** Grafted hypothalamic Neurons from Mouse ES Cells survived in hypothalamus or pituitary
 Miho Kawata¹, Yu Kodani¹, Hidetaka Suga², Yoko Kaneko¹, Akira Nakashima¹, Hiroshi Nagasaki¹
¹Department of Physiology, School of Medicine, Fujita Health University, Japan, ²Department of Endocrinology and Diabetes, Nagoya University Graduate School of Medicine
- 2P-528** Effects of beta 3-adrenergic receptor gene Trp64Arg mutation on high-fat sweet food preference
 Kei Watanabe¹, Guang Hong², Kanako Tominami¹, Kazushi Hirose¹, Yuki Watabe¹, Youhei Hayashi³, Tada-Aki Kudo¹
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- ★ **2P-529** Vitamin D Receptor Polymorphism Fok1 and Chest X-ray in Tuberculosis Patients of Batak Ethnic
 (Y-38)
 Debby Mirani Lubis¹, Seri Rayani Bangun², Yahwardiah Siregar²,

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²Biomedical Science, University of North Sumatera, ³Pulmonology Department, University of North Sumatera

Education

- 2P-530** Quick eating elevates blood glucose level, a practice for registered dietitians students
Masaru Ishimatsu, Junko Machidori, Kanako Nanashima, Haruka Suzuki, Kazue Kuno
Faculty of Health and Nutrition Sciences, Nishikyushu University, Japan
- 2P-531** Design and Application of Blended Learning in the Teaching Reform of Medical Functional Experiments
Ran Chen, Xiaofang Fan, Ping Wang, Feng Xue, Jianshe Ma, Yongsheng Gong
School of Basic Medical Sciences, Wenzhou Medical University, China
- 2P-532** Active learning on topics related to physiology by the first year medical students
Eriko Daikoku
Department of Physiology, Osaka Medical College, Japan
- 2P-533** Do 1st-year medical students' knowledge, attitudes & physical activity affect their physical fitness?
Yhusi Karina Riskawati¹⁾, Narulita Septi Ailina²⁾, Saptadi Yulianto³⁾, Christyaji Indradmojo⁴⁾
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- 2P-534** Multiple intelligence and its relationship with academic achievements of medical students
Nirmala Limbu¹⁾, Nidesh Sapkota²⁾, Priza Subedi¹⁾
¹Department of Basic & Clinical Physiology, B. P. Koirala Institute of Health Sciences, Nepal, ²Department of Psychiatry, B. P. Koirala Institute of Health Sciences, Nepal
- ★ **2P-535** (Y-39) Flipped classroom in Faculty of Medicine Universitas Indonesia: a personal experience
Sophie Yolanda
Department of Medical Physiology, Faculty of Medicine Universitas Indonesia, Indonesia
- 2P-536** Withdrawn
- 2P-537** Across-instructor divergence in scoring on practice reports in the orthoptics education with rubrics
Haruo Toda, Hokuto Ubukata, Noriaki Murata, Fumiatsu Maeda, Haruki Abe
Department of Orthoptics and Visual Sciences, Niigata University of Health and Welfare, Japan
- 2P-538** The relationship between anemia, dietary habits and subjective symptoms of females

Noriko Takahashi
Showagakuin Junior College, Japan

- 2P-539** Comparison of two models which explain negative feedback at a junior college
Masato Shibuya^{1,2}, Kaname Higuchi^{1,2}, Kei Tajima^{1,2}, Mieka Inagaki^{1,2}
¹Department of Physiology, Kagawa Nutrition Junior College, Japan, ²Life Science Education Sharing Group

Alternative Medicine (2)

- 2P-540** A new criterion for inclusion/exclusion from acupuncture treatment with blood pressure balance
Mayumi Watanabe, Zaigen Oh
Faculty of Health Sciences, Kansai University of Health Science, Japan
- ★ **2P-541** The Anti-depressive and the Involvement of ERK Pathway of Electroacupuncture on Depression Model
(Y-40)
Shao-Yuan Li¹, Pei-Jing Rong^{1,2}, Xiao Guo¹
¹Institute of Acu-Moxi, China Academy of Chinese Medical Sciences, China, ²Guangzhou University of Chinese Medicine
- 2P-542** Vasorelaxant induced by cucurbitacin B 3-oxime 22,24-dihydroisoxazole in rat thoracic aorta
Chainarong Tocharus¹, Pimchanok Mungmuang¹, Jiraporn Tocharus², Parichat Suebsakwong³, Apichart Suksamran³
¹Department of Anatomy, Chiang Mai University, Thailand, ²Department of Physiology, Chiang Mai University, Thailand, ³Department of Chemistry and Center of Excellence for Innovation in Chemistry, Ramkhamhaeng University
- 2P-543** Pomegranate Juice Protects Rat Skeletal Muscle from Ischemia/Reperfusion Induced-Oxidative Stress
Kusuma Ruamthum, Rungrudee Srisawat
School of Preclinic, Institute of Science, Suranaree University of Technology, Thailand
- 2P-544** *Ex-vivo* investigation on the anti-coagulation effect of a Chinese medicinal herb
Ellie SM Chu, Ly Ho, Ricky Wk Wu
School of Medical and Health Sciences, Tung Wah College, China
- 2P-545** Nutmeg Extract Increases Skeletal Muscle Mass in Ageing Rats and Inhibition of Autophagy
Yuni Susanti Pratiwi^{1,2}, Ronny Lesmana^{1,2}, Hanna Goenawan^{1,2}, Nova Sylviana^{1,2}, Setiawan Setiawan^{1,2}, Vita Murniati Tarawan^{1,2}, Keri Lestari³, Rizky Abdullah³, Lazuardhi Dwipa³, Ambrosius Purba^{1,2}, Unang Supratman^{2,4}
¹Division of Physiology, Department Basic Medical Science, Faculty of Medicine Universitas Padjadjaran, Indonesia, ²Central Laboratory, Universitas Padjadjaran, ³Faculty of Pharmacy, Universitas Padjadjaran, ⁴Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, ⁵Department of Internal Medicine, Faculty of Medicine-Hasan Sadikin Hospital, Universitas Padjadjaran
- 2P-546** Analgesic effect of isoliquiritigenin on oral ulcer-induced pain by blocking of Na_v channels
Yuichi Miyamura^{1,2}, Suzuro Hitomi¹, Izumi Ujihara¹, Kiyoshi Terawaki³, Yuji Omiya³, Yasuhiro Morimoto², Kentaro Ono¹

¹Division of Physiology, Kyushu Dental University, Japan , ²Division of Dentomaxillofac Radiology, Kyushu Dental University, Japan , ³Tsumura Kampo Research Laboratories, Kampo Research & Development Div, Tsumura & Co., Japan

- 2P-547** *Flos Magnoliae* suppresses CD4+ T lymphocyte activation via store-operated calcium entry
Joo Hyun Nam^{1,2)}, Hyun Jong Kim^{1,2)}, Yu Ran Nam^{1,2)}, Woo Kyung Kim^{2,3)}
¹Department of Physiology, Dongguk University, South Korea, ²Channelopathy Research Center, Dongguk University College of Medicine, South Korea, ³Department of Internal Medicine, Dongguk University College of Medicine, South Korea
- ★ **2P-549** (Y-41) Malaysian Tualang Honey Protects Endothelial Barrier Integrity from Insults by Hydrogen Peroxide
Yoke Keong Yong¹⁾, Kogilavane Devasvaran¹⁾, Jun Jie Tan²⁾
¹Department of Human Anatomy, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Malaysia, ²Advance Medical and Dental Institute, Universiti Sains Malaysia, Malaysia
- 2P-550** Acetophenone dimers from *Acronychia pendunculata* induce an apoptotic effect on human leukaemia cells
Takuya Matsui¹⁾, Chihiro Ito²⁾, Tian-Shung Wu³⁾, Masataka Itoigawa⁴⁾
¹Department of Physiology, Aichi Medical University, Japan, ²Faculty of Pharmacy, Meijo University, Japan, ³Department of Chemistry, National Cheng Kung University, Taiwan, ⁴School of Sports and Health Science, Tokai Gakuen University, Japan
- 2P-551** Purple rice husk extract preserves mitochondrial integrity and reduces diabetic kidney injury
Orawan Wongmekiat¹⁾, Narissara Lailerd²⁾, Anongporn Kobroob³⁾, Wachirasek Peerapanyasut¹⁾
¹Renal Physiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, ²Nutrition and Exercise Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, ³Division of Physiology, School of Medical Science, University of Phayao, Thailand
- 2P-552** Addition of hexachlorocyclohexane provokes insulin resistance in 3T3-L1 mature adipocytes
Amire Alimu, Junetsu Ogasawara, Takahiko Yoshida
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