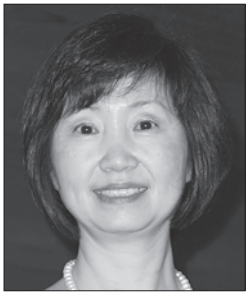
Special Lecture8

The Sunao Tawara Memorial Lecture

March 31, Sun., 9:40-10:30 【Room A】1F, Conference Center

Chair: **Yoshihiro Kubo** (National Institute for Physiological Sciences, Japan)

SL8 Mitochondria in fetal programming of metabolic syndrome-associated end organ dysfunctions in adults



Julie YH Chan[1)],
Yung-Mei Chao[1)], You-Lin Tain[2)]
[1]Institute for Translational Research in Biomedicine, Kaohsiung Chang Gung Memorial Hospital, Taiwan, [2]Department of Pediatric Nephrology, Kaohsing Chang Gung Memorial Hospital, Taiwan

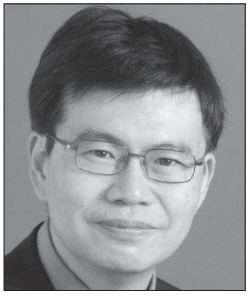
DAY 4

Special Lecture9

March 31, Sun., 9:40-10:30 【Room B】3F, Conference Center

Chair: **Yukari Ohki** (Kyorin University School of Medicine, Japan)

SL9 Modeling Human Neurological/Psychiatric Disorders using iPS cells and Transgenic Non-Human Primates



Hideyuki Okano
Department of Physiology, Keio University School of Medicine, Japan

Symposium60

March 31, Sun., 8:00-9:30 【Room C】3F, Conference Center

S60 Hibernation and Torpor in mammals

Chair: Yoshifumi Yamaguchi (Hokkaido University, Japan)
Co-Chair: Genshiro A Sunagawa (RIKEN Center for Biosystems Dynamics Research, Japan)

S60-1 Daily torpor in mice as a model of active hypometabolism

Genshiro A Sunagawa
Laboratory for Retinal Regeneration, RIKEN Center for Biosystems Dynamics Research, Japan

S60-2 Hypothalamic control of mouse daily torpor

Hiroshi Yamaguchi, Luis De Lecea
Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, USA

S60-3 Cold-inducible RNA-binding protein may participate in cold tolerance in hibernating hamsters

Yasutake Shimizu[1,2)], Yuuki Horii[1)], Hiroki Shimaoka[1)], Takahiko Shiina[1)]
[1]Department of Basic Veterinary Science, Laboratory of Physiology, The United Graduate School of Veterinary Sciences, Gifu University, Japan, [2]Center for Highly Advanced Integration of Nano and Life Sciences (G-CHAIN), Gifu University, Japan

S60-4 IPSCs from hibernators: a way to study hibernation-related cell protection mechanisms

Jingxing Ou, Wei Li
National Eye Institute, National Institute of Health, USA

S60-5 Systemic body remodelling preceding hibernation in a mammalian hibernator, Syrian hamster

Yoshifumi Yamaguchi[1)], Daisuke Anegawa[1,2)], Yuya Sato[1,2)], Yuichi Chayama[2)], Lisa Ando[2)], Shuji Shigenobu[3)], Yutaka Tamura[4)], Masayuki Miura[2)]
[1]Institute of Low Temperature Science, Hokkaido University, Japan, [2]Department of Genetics, Graduate School of Pharmaceutical Science, The University of Tokyo, Japan, [3]National Institute of Basic Biology, Japan, [4]Fukuyama University, Japan

Symposium61

March 31, Sun., 8:00-9:30 【Room D】4F, Conference Center

S61 The Social Brain: Recent Progress in Understanding Molecules and Networks of Social Behavior

Chair: Sonoko Ogawa (University of Tsukuba, Japan)
Co-Chair: Nandini Vasudevan (University of Reading, UK)

S61–1 Non-genomic action by gonadal steroids drives social behaviours
Nandini Vasudevan
School of Biological Sciences, University of Reading, UK

S61–2 Neuroendocrine Regulation of Neural Networks for Social Behavior
Sonoko Ogawa
Laboratory of Behavioral Neuroendocrinology, University of Tsukuba, Japan

S61–3 Serotonin interactions with the gonadotropin-inhibitory hormone system during social isolation
Tomoko Soga
Brain Research Institute, School of Medicine and Health Science, Monash University, Malaysia

S61–4 The Neurobiology of Pair Bonding in Monogamous Prairie Voles
Larry James Young[1,2)]
[1]Center for Social Neural Networks, University of Tsukuba, Japan, [2]Center for Translational Social Neuroscience, Department of Psychiatry and Behavioral Sciences, Emory University, USA

Symposium62

March 31, Sun., 8:00-9:30 【Room E】4F, Conference Center

S62 Integrative neural processing of sound information in the higher auditory centers

Chair: Munenori Ono (Kanazawa Medical University, Japan)
Co-Chair: Ling Qin (China Medical University, China)

S62-1 Excitatory and inhibitory neural circuits in the auditory midbrain
Munenori Ono
Department of Physiology, Kanazawa Medical University, Japan

S62-2 Characterization of the secondary auditory field in the mouse auditory cortex
Hiroaki Tsukano
Department of Neurophysiology, Brain Research Institute, Niigata University, Japan

S62-3 Acute restraint stress alters sound-evoked neural responses in the rat auditory cortex
Ma Lanlan, Jiaozhen Zhang, Ling Qin
Department of Physiology, China Medical University, China

S62-4 Sound representation of long-lasting sustained activity in rat auditory cortex
Tomoyo Isoguchi Shiramatsu, Hirokazu Takahashi
Research Center for Advanced Science and Technology, The University of Tokyo, Japan

Symposium63

March 31, Sun., 8:00-9:30 【Room F】5F, Conference Center

S63 Implication of tonic inhibition for Brain function

Chair: Bo-Eun Yoon (Dankook University, Korea)
Co-Chair: C. Justin Lee (Korea Institute of Science and Technology, Korea)

S63-1 Function of cerebellar tonic inhibition
Bo-Eun Yoon
Department of Molecular Biology, Dankook University, Korea

S63-2 Pathophysiological impact of diverse deregulation of tonic inhibition in Angelman syndrome
Kiyoshi Egawa[1)], Atsuo Fukuda[2)]
[1]Department of Pediatrics, Hokkaido University School of Medicine, Japan, [2]Department of Neurophysiology, Hamamatsu University School of Medicine, Japan

S63-3 Critical role of tonic GABA from reactive astrocytes in neurodegeneratve diseases
C Justin Lee
Institute for Basic Science, Korea

S63-4 Best1-mediated tonic GABA release alleviating seizure susceptibility in kainate-induced epilepsy
Jin Bong Park
Department of Physiology, College of Medicine, Chungnam National University, Korea

Symposium64

March 31, Sun., 8:00-9:30 【Room G】5F, Conference Center

S64 New insights into the cellular and molecular mechanisms of neurological diseases using experimental model systems

Chair: Ching-Yi Tsai (Chang Gung Memorial Hospital, Taiwan)
Co-Chair: Sujira Mukda (Mahidol University, Thailand)

S64-1 Modulatory roles of Pnn in glial apoptosis induced by disrupted energy homeostasis during ischemia

Sujira Mukda
Research Center for Neuroscience, Institute of Molecular Biosciences, Mahidol University, Thailand

S64-2 Emerging the synaptopathology-based therapies in the environmental-toxin induced rat model of autism

Hui-Ching Lin
Department and Institute of Physiology, National Yang-Ming University, Taiwan

S64-3 The roles of microglial on the molecular mechanism of painful diabetic neuropathy in the rat

Idris Long[1)], Che Aishah Nazariah Ismail[2)], Che Badariah Ab Aziz[2)], Rapeah Suppian[1)]
[1]School of Health Sciences, Health Campus, Universiti Sains Malaysia, Malaysia, [2]School of Medical Sciences, Health Campus, Universiti Sains Malaysia, Malaysia

S64-4 Role of PI3K/Akt signaling in experimental brain stem death: Modulations by FLJ10540 and PTEN

Ching-Yi Tsai
Institute for Translational Research in Biomedicine, Chang Gung Memorial Hospital, Taiwan

Symposium65

March 31, Sun., 8:00-9:30 【Room H】5F, Conference Center

S65 Intervention factors of neuronal irregular development: from gut bacteria to mental situation via chemicals

Chair: Sachiko Yoshida (Toyohashi University of Technology, Japan)
Co-Chair: Yasunari Kanda (National Institute of Health Sciences (NIHS), Japan)

S65-1 Development of in vitro developmental neurotoxicity testing

Yasunari Kanda, Daiju Yamazaki
Division of Pharmacology, National Institute of Health Sciences (NIHS), Japan

S65-2 *Prenatal* maternal depression and stress on infant temperament at: A disaster research in the USA

Yoko Nomura[1,2,3,4,10], Kei Davey[5], Patricia Pehme[1,2], Jackie Finik[1,6], Wei Zhang[1,7], Melissa Haung[1,2], Jessica Buthmann[1,2], Kathryn Dana[1,2], Yasunari Kanda[8], Sachiko Yoshida[9], Kenji J Tsuchiya[10]

[1]Queens College, The City University of New York, USA, [2]Graduate Center, The City University of New York, USA, [3]Department of Psychiatry, Icahn School of Medicine at Mount Sinai, USA, [4]Advanced Science Research Center, Japan, [5]Bryn Mawr College, USA, [6]CUNY Graduate School of Public Health, USA, [7]New Jersey City University, USA, [8]Division of Pharmacology, National Institute of Health Sciences, Japan, [9]Department of Environmental and Life Sciences, Toyohashi University of Technology, Japan, [10]Department of Child and Adolescent Psychiatry, Hamamatsu University School of Medicine, Japan

S65-3 Language development is affected by maternal postpartum depression, not by unwanted pregnancy

Kenji J Tsuchiya[1,2], Sona Sanae Aoyagi[2], Yoko Nomura[1,3,4,5,6], Sachiko Yoshida[7], Tomoko Nishimura[1,2], Damee Choi[1,2], Taeko Harada[1,2], Toshiki Iwabuchi[1,2], Ryuji Nakahara[1], Akemi Okumura[1,8]

[1]Research Center for Child Mental Development, Hamamatsu University School of Medicine, Japan, [2]United Graduate School of Child Development, Hamamatsu University School of Medicine, Japan, [3]Department of Psychology, Queens College, City University of New York, USA, [4]Graduate Center, City University of New York, USA, [5]Department of Psychiatry, Icahn School of Medicine at Mount Sinai, USA, [6]Advanced Science Research Center, CUNY, USA, [7]Department of Environmental and Life Sciences, Toyohashi University of Technology, Japan, [8]Department of Child and Adolescent Psychiatry, Hamamatsu University School of Medicine, Japan

S65-4 Meconium microbiota is associated with maternal anxiety experienced during pregnancy

Jianzhong Hu[1], Jenny Ly[2], Wei Zhang[2], Yonglin Huang[2], Vivette Glover[4], Inga Peter[1], Yasmin L Hurd[5,6,7], Yoko Nomura[2,3,5]

[1]Department of Genetics and Genomic Sciences, Icahn School of Medicine at Mount Sinai, USA, [2]Department of Psychology, Queens College, City University of New York, USA, [3]Graduate Center, City University of New York, USA, [4]Institute of Reproductive and Developmental Biology, Imperial College London, UK, [5]Department of Psychiatry, Icahn School of Medicine at Mount Sinai, USA, [6]Department of Neuroscience, Icahn School of Medicine at Mount Sinai, USA, [7]Department of Pharmacological Sciences, Icahn School of Medicine at Mount Sinai, USA

S65-5 Developmental neurotoxicity and immune abnormality with chemicals and stress exposure on the rat

Sachiko Yoshida[1], Yukiko Fueta[2], Susumu Ueno[3], Yuko Sekino[4], Yoko Nomura[5], Yasunari Kanda[6]

[1]Department of Environmental and Life Sciences, Toyohashi University of Technology, Japan, [2]Department of Environmental Management and Control, School of Health Sciences, University of Occupational and Environmental Health, Japan, [3]Department of Occupational Toxicology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan, [4]Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan, [5]Department of Psychology, Queens College, City University of New York, USA, [6]Division of Pharmacology, National Institute of Health Sciences, Japan

Symposium66

March 31, Sun., 8:00-9:30 【Room I】5F, Conference Center

S66 Inflammation and Atherosclerosis

Chair: Yi Zhu (Tianjin Medical University, China)
Co-Chair: Ding Ai (Tianjin Medical University, China)

S66-1 Flow and Atherosclerosis - Roles of MicroRNAs
Jeng-Jiann Chiu
National Health Research Institutes, Taiwan

S66-2 Nectin-Like Molecules as Novel Regulators in Angiogenesis and Atherosclerosis
Yoshiyuki Rikitake
Laboratory of Medical Pharmaceutics, Kobe Pharmaceutical University, Japan

S66-3 YAP promotes angiogenesis via STAT3 in endothelial cells
Ding Ai
Department of Physiology, Tianjin Medical University, China

S66-4 Integrin-YAP/TAZ-JNK cascade mediates atheroprotective effect of unidirectional shear flow
Yi Zhu
Department of Physiology, Tianjin Medical University, China

Symposium67

March 31, Sun., 8:00-9:30 【Room J】2F, Exhibition Hall

S67 The potential roles of NMDAR in neurological and neuropsychiatric disorders: new findings and therapeutic targets

Chair: Wen-Sung Lai (National Taiwan University, Taiwan)
Co-Chair: Hisashi Mori (University of Toyama, Japan)

S67–1 Roles of D-serine, an endogenous co-agonist of NMDAR in psychiatric and neurodegenerative disorders

Hisashi Mori
Department of Molecular Neuroscience, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Japan

S67–2 The therapeutic potentials and underlying mechanism of sarcosine and RS-D7 in schizophrenia

Wen-Sung Lai[1,2,3)]
[1]Department of Psychology, National Taiwan University, Taiwan, [2]Graduate Institute of Brain and Mind Sciences, National Taiwan University, Taiwan, [3]Neurobiology and Cognitive Science Center, National Taiwan University, Taiwan

S67–3 The roles of NMDA receptors in regulating real-time motor control and parkinsonian motor behaviors

Ming-Kai Pan[1,2)]
[1]Department of Medical Research, National Taiwan University Hospital, Taiwan, [2]Department of Neurology, College of Medicine, National Taiwan University, Taiwan

S67–4 Novel mechanism of Ketamine's rapid action through the cytoplasmic domain of the NMDA receptor

Noboru Komiyama
Centre for Clinical Brain Sciences, University of Edinburgh, UK

Symposium68

March 31, Sun., 8:00-9:30 【Room K】2F, Exhibition Hall

S68 Pulmonary hypertension and inflammation: the interdependent processes triggered by each other

Chair: Xiaoqun Qin (Central South University, China)
Co-Chair: Qinghua Hu (Tongji Medical College, China)

S68-1 MicroRNA-9 drives the development of severe asthma by modulating the function of lung macrophages

Ming Yang
University of Newcastle, Australia

S68-2 Monocrotaline Induces Pulmonary Hypertension By Targeting the Extracellular Calcium-Sensing Receptor

Qinghua Hu
Department of Pathophysiology, Tongji Medical College, China

S68-3 Endothelial Cell Integrin β4 Knockout Attenuates LPS-Induced Murine Acute Lung Injury

Weiguo Chen, Zhigang Hong, Patrick Belvitch, Jeffrey R Jacobson
Department of Medicine, University of Illinois at Chicago, USA

S68-4 The regulation of pulmonary immunity and stress response by airway expressed adhesion molecules

Xiaoqun Qin, Chi Liu, Yang Xiang, Yurong Tan, Xiangping Qu, Huijun Liu
Department of Physiology, Xiangya School of Medicine, Central South University, China

Symposium69

March 31, Sun., 8:00-9:30 【Room L】3F, Exhibition Hall

S69 Optogenetics: Contributions to Physiology and Medicine Beyond Brain Circuit-Breaking

Chair: Hiromu Yawo (Tohoku University Graduate School of Life Sciences, Japan)
Co-Chair: George J. Augustine (Nanyang Technological University, Singapore)

S69-1 Using optogenetics to elucidate the function of pancreatic delta cells
George J. Augustine
Nanyang Technological University, Singapore

S69-2 Optical control of the genome
Moritoshi Sato
Graduate School of Arts and Sciences, The University of Tokyo, Japan

S69-3 Optogenetic study of cell polarity - a simple assay
Takao Nakata
Department of Cell Biology, Tokyo Medical and Dental University, Japan

S69-4 Glial optogenetics for understanding the cross talk between metabolism and information processing
Ko Matsui
Super-network Brain Physiology, Graduate School of Life Sciences, Tohoku University, Japan

S69-5 Organelle-optogenetics - direct manipulation of intracellular Ca^{2+} dynamics by light
Hiromu Yawo[1)], Toshifumi Asano[2)], Hiroyuki Igarashi[3)], Toru Ishizuka[1)]
[1]Department of Integrative Life Sciences Developmental Biology and Neurosciences, Tohoku University Graduate School of Life Sciences, Japan, [2]Department of Cell Biology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University (TMDU), Japan, [3]Department of Physiology and Pharmacology, Schulich School of Medicine and Dentistry, Robarts Research Institute, Western University, Canada

Symposium70

March 31, Sun., 8:00-9:30 【Room M】3F, Exhibition Hall

S70 Contribution of brain research to the understanding of the physiology, psychology and communication of acute and chronic pain

Chair: Mathieu Piché (Université du Québec à Trois-Rivières, Canada)
Co-Chair: Pierre Rainville (University of Montreal, Canada)

S70-1 Imaging pain in the human brain: classical debates revisited with new methods

Pierre Rainville[1,2)]
[1]Department of Stomatology, University of Montreal, Canada, [2]Centre de recherche, Institut universitaire de gériatrie de Montréal, Canada

S70-2 The cerebral correlates of pain decoding: from overexposure to other people's pain to empathy

Philip L. Jackson
School of Psychology, Laval University, Canada

S70-3 Improving cognitive pain inhibition using neuromodulation of the dorsolateral prefrontal cortex

Alice Wagenaar-Tison
Department of Chiropratic, Université du Québec à Trois-Rivières, Canada

S70-4 Influence of inflammation on cardiac responses to skeletal muscle stimulation

Nobuhiro Watanabe, Harumi Hotta
Department of Autonomic Neuroscience, Tokyo Metropolitan Institute of Gerontology, Japan

Symposium71 (Local Organizing Committee Symposium)

March 31, Sun., 10:30-12:30 【Room A】1F, Conference Center

S71 Toward understanding the neural basis of memory
(Co-organized by the Japan Neuroscience Society)

Organizers: Kazuhiro Nakamura (Nagoya University Graduate School of Medicine, Japan)
Michisuke Yuzaki (Nagoya University Graduate School of Medicine, Japan)
(Chair) Kaoru Inokuchi (University of Toyama, Japan)
(Chair) Naoki Matsuo (Osaka University, Japan)

S71–1 Robustness and Flexibility of Neuronal Ensembles in Memory
Naoki Matsuo
Graduate School of Medicine, Osaka University, Japan

S71–2 Association and identity of memory
Kaoru Inokuchi
Faculty of Medicine, University of Toyama, Japan

S71–3 Understanding Synaptic Basis of Learning and Memory
Bong-Kiun Kaang
School of Biological Sciences, Seoul National University, Korea

S71–4 Social memory engram in the hippocampus
Teruhiro Okuyama
Institute for Quantitative Biosciences (IQB), The University of Tokyo, Japan

S71–5 Hippocampal encoding of spatial information of self and other
Shigeyoshi Fujisawa
RIKEN Center for Brain Science, Japan

Symposium72 (International Scientific Program Committee Symposium)

March 31, Sun., 10:30-12:30 【Room B】3F, Conference Center

S72 Neurobiology of reward system in the Brain (ISPP, Iran)

Chairs: Abbas Haghparast (Shahid Beheshti University of Medical Sciences, Iran)
Abdolrahman Sarihi (Hamadan University of Medical Science, Iran)

S72-1 Effects of Stress on Brain Reward Centres and Circadian Rhythms

Dipesh Chaudhury
New York University Abu Dhabi (NYUAD), United Arab Emirates

S72-2 Roles of Parvalbumin interneurons in ventral hippocampus in social behavior and memory

Jing Liang[1,2)]
[1]Institute of Psychology, Chinese Academy of Sciences, China, [2]Department of Psychology, University of Chinese Academy of Sciences, China

S72-3 Brain Orexinergic System and Reward-related Behaviors

Abbas Haghparast
Neuroscience Research Center, Shahid Beheshti University of Medical Sciences, Iran

S72-4 Early detection and intervention on methamphetamine addiction: Towards biobehavioral markers

Yonghui Li
Institute of Psychology, Chinese Academy of Sciences, China

S72-5 Specificity in the Role of Different Metabotropic Glutamate Receptor Subtypes in Reward Circuitry

Abdolrahman Sarihi[1)], Nahid Roohi[1)], Negar Baharloui[1)], Mahsaneh Vatankhah[1)], Abass Haghparast[2)]
[1]Neurophysiology Research Center, Hamadan Uni. of Med. Sci., Iran, [2]Neuroscience Research Center, Shahid Beheshti University of Medical Sciences, Iran

Sponsored Symposium

Symposium73

March 31, Sun., 10:30-12:30 【Room C】3F, Conference Center

S73 New Twists in Understanding Taste

(Co-sponsored by AJINOMOTO CO., INC.)

Chairs: Yuzo Ninomiya (Kyushu University, Japan)
Robert F. Margolskee (Monell Chemical Senses Center, USA)

S73-1 Gingival solitary chemosensory cells serve as immune sentinels to protect against periodontitis

Robert F. Margolskee
Monell Chemical Senses Center, USA

S73-2 Structural basis of amino acid-perception by T1r taste receptors

Atsuko Yamashita
Division of Pharmaceutical Sciences, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan

S73-3 Ion channel synapses of the taste bud

Akiyuki Taruno[1,2], Zhongming Ma[3], Makoto Ohmoto[4], Mizuho A. Kido[5], Michael G. Tordoff[4], Ichiro Matsumoto[4], J. Kevin Foskett[3]
[1]Department of Molecular Cell Physiology, Kyoto Prefectural University of Medicine, Japan, [2]JST, PRESTO, Japan, [3]Department of Physiology, University of Pennsylvania, USA, [4]Monell Chemical Senses Center, USA, [5]Department of Anatomy and Physiology, Saga University, Japan

S73-4 Novel taste sensory pathways for sugars and fatty acids in the mouse periphery

Yuzo Ninomiya[1,2], Keiko Yasumatsu[1], Shusuke Iwata[1], Ryusuke Yoshida[3]
[1]Division of Sensory Physiology, R&D Center for Five-Sense Devices, Kyushu University, Japan, [2]Monell Chemical Senses Center, USA, [3]Department of Oral Physiology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan

Symposium74 (International Scientific Program Committee Symposium)

March 31, Sun., 10:30-12:30 【Room D】4F, Conference Center

S74 The consequences of preterm birth, intrauterine growth restriction and hypoxia-ischemia (PSNZ, New Zealand)

Chair: Laura Bennet (The University of Auckland, New Zealand)

S74-1 Therapeutic potential of recombinan thuman erythropoietin for hypoxic-ischaemic encephalopathy

Simerdeep Kaur Dhillon, Guido Wassink, Christopher A Lear, Joanne O Davidson, Alistair J Gunn, Laura Bennet
The University of Auckland, New Zealand

S74-2 A vessel's a vessel, no matter how small: microvascular tone regulation in the preterm neonate

Rebecca Maree Dyson[1,2], Ian MR Wright[3], Max J Berry[1,2]
[1]Department of Paediatrics & Child Health, University of Otago Wellington, New Zealand, [2]Centre for Translational Physiology, University of Otago Wellington, New Zealand, [3]Illawarra Health and Medical Research Institute, University of Wollongong, Australia

S74-3 High prevalence, low severity problems with neurodevelopment after common complications of pregnancy

Julia B Pitcher, Jago M Van Dam
Robinson Research Institute, Adelaide Medical School, University of Adelaide, Australia

S74-4 Longer half-life phosphodiesterase 5 inhibitor, tadalafil therapy for fetal growth restriction

Tomoaki Ikeda
Department of Obstetrics and Gynecology, Mie University Graduate School of Medicine, Japan

Symposium75

March 31, Sun., 10:30-12:30 【Room E】4F, Conference Center

S75 Ca^{2+}-permeable channels of excitable and non-excitable cells in health and disease

Chair: Masayuki X Mori (Kyoto University, Japan)

S75-1 Ca-secretion coupling at mammalian CNS synapses

Takeshi Sakaba

Graduate School of Brain Science, Doshisha University, Japan

S75-2 CELF1 mediates connexin 43 mRNA degradation in dilated cardiomyopathy

Guey-Shin Wang[1)], Kuei-Ting Chang[1)], Ching-Feng Cheng[2,3)], Pei-Chih King[1)]

[1]Institute of Biomedical Sciences, Academia Sinica, Taiwan, [2]Department of Medical Research, Tzu Chi General Hospital, Taiwan, [3]Department of Pediatrics, Tzu Chi University, Taiwan

S75-3 Fine tuning of neuronal $Ca_V1.3$ channels functions by alternative splicing and A-to RNA editing

Hua Huang, Tuck Wah Soong

Department of Physiology, National University of Singapore, Singapore

S75-4 Glomerular disease-associated mutations impair Ca^{2+}-dependent inactivation of TRPC6 channels

Masayuki X Mori[1)], Onur K Polat[1)], Yasuo Mori[1)], Masatoshi Uno[2)], Hidehito Tochio[2)]

[1]Department of Synthetic Chemistry and Biological Chemistry, Kyoto University, Japan, [2]Department of Biophysics, Kyoto University, Japan

S75-5 Structural basis of regulation of the endolysosomal calcium channel TRPML3

Jian Yang[1,3)], Minghui Li[1)], Xiaoyuan Zhou[2)], Deyuan Su[1)], Huan Li[3)], Xueming Li[2)]

[1]Biological Sciences, Columbia University, USA, [2]School of Life Sciences, Tsinghua University, China, [3]Kunming Institute of Zoology, China

Symposium76 (International Scientific Program Committee Symposium)

March 31, Sun., 10:30-12:30 【Room F】5F, Conference Center

S76 Physiome for organ function (KPS, Korea)

Chairs: Eun Bo Shim (Kangwon National University, Korea)
Chae-Hun Leem (University of Ulsan College of Medicine/Asan Medical Center, Korea)

S76-1 Image-based modeling of flow and transport processes at organ level

Vartan Kurtcuoglu
Institute of Physiology, University of Zurich, Switzerland

S76-2 In silico screening system for drug-induced arrhythmogenic risk

Seiryo Sugiura[1)], Jun-Ichi Okada[1)], Takashi Yoshinaga[2)], Junko Kurokawa[3)], Takumi Washio[1)], Tetushi Furukawa[4)], Kohei Sawada[2)], Toshiaki Hisada[1)]
[1]UT-Heart Inc., Japan, [2]Eisai Co., Ltd., Japan, [3]University of Shizuoka, Japan, [4]Tokyo Medical and Dental University, Japan

S76-3 Model based interpretation of diabetes and prediabetes

Chaehun Leem, Young Boum Lee, Jeong Hoon Lee, Ki Hwan Hong, Pham Duc Duong
Department of Physiology University of Ulsan College of Medicine/Asan Medical Center, Korea

S76-4 A virtual stenosis method to predict plaque progression in coronary arteries

Eun Bo Shim[1)], Kyung Eun Lee[1)], Eun Seok Shin[2)]
[1]Department of Mechanical and Biomedical Engineering, Kangwon National University, Korea, [2]Department of Cardiology, School of Medicine, University of Ulsan, Korea

Symposium77 (International Scientific Program Committee Symposium)

March 31, Sun., 10:30-12:30 【Room G】5F, Conference Center

S77 Advances in the role of adipocyte in health and disease (CPS, Taiwan)

Chair: Po-Shiuan Hsieh (National Defense Medical Center, Taiwan)

S77–1 Physiological Role and Therapeutic Potential of Thermogenic Fat

Yu-Hua Tseng

Joslin Diabetes Center, Harvard Medical School, USA

S77–2 Adipose tissue stiffness in the development of metabolic diseases

Yau-Sheng Tsai[1)], Ann Huang[2)], Yi-Shiuan Lin[2)], Yu-Wei Chiou[2)], Hsi-Hui Lin[2)], Ming-Jer Tang[2)]

[1]Institute of Clinical Medicine, National Cheng Kung University, Taiwan, [2]Department of Physiology, National Cheng Kung University, Taiwan

S77–3 Modulation of adipokine biosynthesis and secretion in adipocytes

Juu-Chin Lu[1,2)], Yu-Ting Chiang[1)], Chia-Yun Lu[1)], Ying-Yu Wu[1)]

[1]Department of Physiology and Pharmacology, Chang Gung University, Taiwan, [2]Division of Endocrinology and Metabolism, Department of Internal Medicine, Chang Gung Memorial Hospital, Taiwan

S77–4 Novel structures and functions of adiponectin receptors

Toshimasa Yamauchi

Department of Diabetes and Metabolic Diseases, The University of Tokyo, Japan

Symposium78

March 31, Sun., 10:30-12:30 【Room H】5F, Conference Center

S78 "Ins" and "outs" of smooth muscle

Chair: Hikaru Hashitani (Nagoya City University, Japan)
Co-Chair: Dirk Ferdinand van Helden (University of Newcastle, Australia)

S78-1 Novel mechanism of electrical rhythmicity in smooth muscle

Nick John Spencer
College of Medicine and Public Health, Flinders University, Australia

S78-2 Regulation of spontaneous contractile activity of the bladder muscularis mucosa

Russ Chess-Williams, Christian Moro
Centre for Urology Research, Bond University, Australia

S78-3 Regulation and dysregulation of airway smooth muscle contractility

Jane Elizabeth Bourke
[1]Biomedicine Discovery Institute, Department of Pharmacology, Monash University, Australia

S78-4 New insights into understanding labour contractions in women

Helena C. Parkington[1)], Mary A. Tonta[1)], Ranga I. Siriwardhana[1)], Penelope J. Sheehan[2)], Harold A. Coleman[1)], Shaun P. Brennecke[3)]
[1]Department of Physiology, Monash University, Australia, [2]The Royal Women's Hospital, Australia, [3]Department of Obstetrics and Gynecology, The University of Melbourne, Australia

S78-5 Regulatory mechanisms underlying the contractility of intra-organ microvasculature

Hikaru Hashitani, Retsu Mitsui
Department of Cell Physiology, Nagoya City University, Japan

Symposium79 (Local Organizing Committee Symposium)

March 31, Sun., 10:30-12:00 【Room I】5F, Conference Center

S79 Mechanomedicine

(Co-sponsored by Grant-in-Aid for Scientific Research (S): Mechanomedicine)

Chairs: Keiji Naruse (Okayama University, Japan)
Hyoung kyu Kim (Inje University, Korea)

S79-1 Plasma membranes can act as mechanosensors in vascular endothelial cells

Kimiko Yamamoto[1)], Joji Ando[2)]
[1]The University of Tokyo, Japan, [2]Dokkyo Medical University, Japan

S79-2 Wall stretch-induced anti-contractile signaling via smooth muscle expressed eNOS in pulmonary artery

Sung Joon Kim, Hae Jin Kim
Department of Physiology, Ischemic/Hypoxic Disease Institute, Seoul National University College of Medicine, Korea

S79-3 Analysis of nanoscale vibrations in the inner ear by advanced vibrometries

Hiroshi Hibino[1,2)], Takeru Ota[1,2)], Samuel Choi[2,3)], Fumiaki Nin[1,2)]
[1]Department of Molecular Physiology, Niigata University School of Medicine, Japan, [2]AMED-CREST, AMED, Japan, [3]Department of Electrical and Electronics Engineering, Niigata University, Japan

S79-4 Mechano-property of tendon/ligament and its application to regenerative medicine

Hiroshi Asahara[1,2)]
[1]Tokyo Medical and Dental University, Japan, [2]The Scripps Research Institute, Japan

Symposium80

March 31, Sun., 10:30-12:30 【Room J】2F, Exhibition Hall

S80 Daily /adaptable Yin-Yang transitions in diverse physiological processes coordinated by multi-cellular Chrono-molecular signal

Chair: Masaaki Ikeda (Saitama Medical University, Japan)
Co-Chair: Teruya Tamaru (Toho University School of Medicine, Japan)

S80-1 Cellular and molecular basis of chronotherapy for cancer

Masaaki Ikeda[1)], Megumi Kumagai[1)], Yasutsuna Sasaki[4)], Yoshihiro Nakajima[3)], Ken-Ichi Fujita[2)]

[1]Department of Physiology, Faculty of Medicine, Saitama Medical University, Japan, [2]Cancer Cell Biology, School of Pharmacy, Showa University, Japan, [3]Cellular Imaging Research Group, AIST Health Research Institute, Japan, [4]Department of Oncology, School of Medicine, Showa University, Japan

S80-2 Initial protein events synchronizing cellular clocks to elicit environmental stress adaptation

Teruya Tamaru[1)], Genki Kawamura[2)], Hikari Yoshitane[3)], Yoshitaka Fukada[3)], Takeaki Ozawa[2)], Ken Takamatsu[1)]

[1]Department of Physiology, Toho University School of Medicine, Japan, [2]Department of Chemistry, School of Science, The University of Tokyo, Japan, [3]Department of Biological Sciences, School of Science, The University of Tokyo, Japan

S80-3 Dysregulation of Hepatic SREBP1c-CRY1 Axis Promotes Hyperglycemia in Obese Animals

Jae Bum Kim, Ye Young Kim, Hagoon Jang, Yong Keun Jeon

Center for Adipose Tissue Remodeling, Institute of Molecular Biology and Genetics, School of Biological Sciences, Seoul National University, Korea

S80-4 Mechanism of circadian regulation of memory in mice

Kimiko Shimizu, Erika Nakatsuji, Yodai Kobayashi, Yoshitaka Fukada

Department of Biological Sciences, The University of Tokyo, Japan

S80-5 Good times, bad times …. Impact of the circadian clock on health and disease

Gijsbertus Van Der Horst

Department of Molecular Genetics, Erasmus University Medical Center, The Netherlands

Symposium81

March 31, Sun., 10:30-12:30 【Room K】2F, Exhibition Hall

S81 Mechanisms of systemic beauty and health

Chair: Motohiro Nishida (ExCELLS, National Institutes of Natural Sciences, Japan)
Co-Chair: Jin Han (Inje University, Korea)

S81-1 How to use the natural products?: Inhibition of UV-induced melanogenesis by targeting ion channels

Joo Hyun Nam[1,2)]

[1]Department of Physiology, Dongguk University College of Medicine, Korea, [2]Channelopathy Research Center, Dongguk University College of Medicine, Korea

S81-2 PKCβII facilitates desmoglein internalization in *Rpgrip1l* mutant mice and pemphigus

Yeun Ja Choi[1)], Li Li[2)], Ning Yang[3)], Xuming Mao[4)], Kenneth R Shroyer[3)], Peter J Koch[5)], Yusuf A Hannun[6)], Richard A Clark[7)], Jiang Chen[3,7)]

[1]Department of Biopharmaceutical Engineering, Dongguk University Korea, [2]Department of Dermatology, Peking Union Medical College Hospital, China, [3]Department of Pathology, Stony Brook University, USA, [4]Department of Dermatology, University of Pennsylvania, USA, [5]Department of Dermatology and Center for Regenerative Medicine and Stem Cell Biology, University of Colorado, USA, [6]Department of Medicine, Stony Brook University, USA, [7]Department of Dermatology, Stony Brook University, USA

S81-3 Chiral amino acid analysis using 2D/3D-HPLC for the screening of functional molecules and biomarkers

Kenji Hamase

Graduate School of Pharmaceutical Sciences, Kyushu University, Japan

S81-4 Transport system of amino acids

Shushi Nagamori

Nara Medical University, Japan

S81-5 Importance of receptor-activated Ca^{2+} influx in wound healing

Takuro Numaga-Tomita[1,2,3)], James W Putney, Jr[5)], Motohiro Nishida[1,2,3,4)]

[1]Department of Creative Research, Exploratory Research Center on Life and Living Systems: ExCELLS, National Institutes of Natural Sciences, Japan, [2]National Institute for Physiological Sciences (NIPS), National Institutes of Natural Sciences, Japan, [3]School of Life Sciences, SOKENDAI, Japan, [4]Graduate School of Pharmaceutical Sciences, Kyushu University, Japan, [5]National Institute of Environmental Health Sciences, National Institutes of Health, USA

Symposium82

March 31, Sun., 10:30-12:30 【Room L】3F, Exhibition Hall

S82 Amygdala Neuronal Circuits in Adaptive Behaviors

Chair: Ayako M Watabe (Jikei University School of Medicine, Japan)
Co-Chair: Pankaj Sah (The University of Queensland, Australia)

S82-1 Neural Circuits Between the Central Amygdala and Basal Forebrain mediate Anxiety behaviours

Pankaj Sah, Ya-Jie Sun, Lei Qian, Li Xu
Queensland Brain Institute, The University of Queensland, Australia

S82-2 Neuronal circuits underlying the regulation of aversive valence in mice

Ayako M Watabe
Institute of Clinical Medicine and Research, Jikei University School of Medicine, Japan

S82-3 Brain circuits for triggering and reversing emotional memories

Joshua Johansen
RIKEN Center for Brain Science, Japan

S82-4 Exploring molecular pathways involved in central amygdala-dependent control of emotional behaviors

Sayaka Takemoto-Kimura[1,2)]
[1]Neurosciencel, RIEM, Nagoya University, Japan, [2]PRESTO-JST, Japan

Symposium83

March 31, Sun., 10:30-12:30 【Room M】3F, Exhibition Hall

S83 Neurobiology of obesity and its metabolic comorbidities

Chair: Makoto Fukuda (Baylor College of Medicine, USA)
Co-Chair: Toshihiko Yada (Kansai Electric Power Medical Research Institute, Japan)

S83-1 Postprandial hormones regulate feeding and glucose metabolism via interacting with vagal afferents

Yusaku Iwasaki[1)], Toshihiko Yada[2,3)]

[1]Graduate School of Life and Environmental Sciences, Kyoto Prefectural University, Japan, [2]Center for Integrative Physiology, Kansai Electric Power Medical Research Institute, Japan, [3]System Physiology, Graduate School of Medicine, Kobe University, Japan

S83-2 Disruption of Steroid Receptor Coactivator-1 Signaling is Associated with Obesity

Yong Xu, Yongjie Yang, Liangru Zhu

Department of Pediatrics, Baylor College of Medicine, USA

S83-3 Central and peripheral mechanisms underlying glucocorticoid-increased adiposity

Feifan Guo

Shanghai Institute of Nutrition and Health(SINH), Chinese Academy of Sciences, China

S83-4 Gut hormone GIP drives hypothalamic pathogenesis of obesity via Epac-Rap1 signaling

Makoto Fukuda

Baylor College of Medicine, USA

S83-5 Neurohormonal mechanism for circadian feeding rhythm that prevents obesity

Toshihiko Yada[1,2)], Masanori Nakata[3)]

[1]Center for Integrative Physiology, Kansai Electric Power Medical Research Institute, Japan, [2]System Physiology, Graduate School of Medicine, Kobe University, Japan, [3]Physiology, Wakayama Prefectural Medical University, Japan

Tutorial for Physiologists

March 31, Sun., 8:00-9:10 【Room B】3F, Conference Center

T Practical Approaches to Protein Structural Information

Organizer: Yuichiro Fujiwara (Kagawa University, Japan)

Lecturers: Takushi Shimomura
National Institute for Physiological Suiences, Japan

1. Displaying protein structures
2. Analysis of structural information

Katsumasa Irie
Nagoya University, Japan

1. Making homology model
2. Making ligand binding model
3. Analysis ligand binding mode

In this tutorial, the audiences will learn how to process structure files using the softwares:
Pymol, Ligplot+ and SWISS-MODEL (web-based).
Main analyses are following;
–Making homology model
–Structural alignment
–Investigating protein-ligand integration
A carry-on of your laptop computer is recommended.
For more information and file download, see http://www.nips.ac.jp/faops2019/tutorial_html
No pre-registration is required.

Poster (Special Sessions for Awardees)

March 31, Sun., 8:00-13:00 (Viewing time) 1F, Exhibition Hall

Young Scientist Travel Awards

Y-01 Effect of Swimming Exercise to Cardiac PGC-1α and HIF-1α Gene Expression in Mice

Nova Sylviana[1,2)], Hanna Goenawan[1,2)], Ronny Lesmana[1,2)], Badai Batara Tiksnadi[3)], Hasrayati Agustina[4)], Bethy S Hernowo[4)], Vita Murniati Tarawan[1)], Unang Supratman[2)], Ambrosius Purba[1)], Setiawan Setiawan[1,2)]

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

Y-02 Respiratory Muscle Training (RMT), Aerobic Fitness and Performance in Sri Lankan Rowers

Dilani Priyashanthi Perera[1)], Anoja Ariyasinghe[2)], Anula Kariyawasam[2)]

[1]Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka, [2]Department of Physiology, Faculty of Medicine, University of Peradeniya, Sri Lanka

Y-03 Factors affecting oxygen pulse in a healthy Thai population

Tichanon Promsrisuk, Napatr Sriraksa, Ratchaniporn Kongsui

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

Y-04 Mitochondrial fusion promoter attenuates left ventricular dysfunction in pre-diabetic rats Masao Ito Memorial Awards

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)]

[1]Cardiac Electrophysiology Research and Training Center, Faculty of Medicine, Chiang Mai University, Thailand, [2]Center of Excellence in Cardiac Electrophysiology Research, Chiang Mai University, Thailand, [3]Cardiac Electrophysiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, [4]Department of Oral Biology and Diagnostic Sciences, Faculty of Dentistry, Chiang Mai University, Thailand

Y-05 Crossbridge thermodynamics in right heart failure

Masao Ito Memorial Awards

June-Chiew Han[1)], Toan Pham[1)], Kenneth Tran[1)], Andrew J. Taberner[1,2)], Denis S. Loiselle[1,3)]

[1]Auckland Bioengineering Institute, The University of Auckland, New Zealand, [2]Department of Engineering Science, The University of Auckland, New Zealand, [3]Department of Physiology, The University of Auckland, New Zealand

Y-06 LysoPC plays a crucial role in cholesterol-induced nonobese MS cardiomyopathy Masao Ito Memorial Awards

Jiung-Pang Huang, Li-Man Hung

Department of Biomedical Sciences, Chang Gung University,Taiwan

Y-07 Inhibition of $p16^{INK4a}$ protects against myocardial ischemia/reperfusion injury

Zhou Qiulian, Bei Yihua, Meng Xiangmin, Xiao Junjie

Institute of Cardiovascular Sciences, School of Life Science, Shanghai University, China

Y–09 Influence of Tobacco smoking on carboxyhaemglobin levels and blood lipid levels

Prasanna Herath[1)], Savithri Wimalasekera[2)], Thamara Amarasekara[3)]
[1]Department of Nursing and Midwifery, Faculty of Allied Health Sciences , General Sir John Kotelawala Defence University, Sri Lanka, [2]Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka, [3]Department of Allied Health Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

Y–10 FUNDC2 regulates platelet activation through AKT/GSK-3β/cGMP axis Masao Ito Memorial Awards

Qi Ma[1)], Weilin Zhang[2)], Heping Cheng[1)], Junling Liu[3)], Quan Chen[2)]
[1]Institute of Molecular Medicine, Peking University, China, [2]Institute of Zoology, Chinese Academy of Sciences, Beijing, China, [3]School of Medicine, Shanghai Jiao Tong University, China

Y–11 Genistein and running exercise modulates HDAC3 and the fibrosis markers in OVX rats with NASH

Namthip Witayavanitkul[1)], Duangporn Werawatganon[1)],
Naruemon Klaikeaw[2)], Prasong Siriviriyakul[1)]
[1]Department of Physiology, Faculty of Medicine, Chulalongkorn University, Thailand, [2]Department of Pathology, Faculty of Medicine, Chulalongkorn University, Thailand

Y–12 The influence of central leptin signalling upon Obesity-induced hypertension Masao Ito Memorial Awards

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

Y–13 FKBP51 defect is resistant to diet induced obesity, inflammation and insulin resistance Masao Ito Memorial Awards

Luen-Kui Chen[1)], Chi-Chang Juan[1,2,3)]
[1]Institute of Physiology, School of Medicine, National Yang-Ming University, [2]Department of Medical Research, Taipei Veterans General Hospital, [3]Department of Education and Research, Taipei City Hospital, Taiwan

Y–14 Effect of Dapagliflozin on Glucose Metabolism and Renal and Hepatic PEPCK Expression in Obese Rats

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

Y–15 Correlation of median nerve parameters with TSH values in hypothyroid patients

Shital Gupta[1)], Rita Khadka[1)], Dilip Thakur[1)], Bishnu Hari Poudel[1)],
Kishun Deo Mehta[2)], Robin Maskey[3)]
[1]Department of Basic & Clinical Physiology, B.P.Koirala Institute of Health Science, Nepal, [2]Department of Biochemistry, B.P.Koirala Institute of Health Science, Nepal, [3]Department of Internal Medicine, B.P.Koirala Institute of Health Sciences, Nepal

Y–16 Overexpression of Anthrax toxin receptor 2 (ANTXR2) promotes early development of endometriosis Masao Ito Memorial Awards

Shih-Chieh Lin[1)], Hsiu-Chi Lee[2)], Ching-Ting Hsu[1)], Yi-Han Huang[1)],
Wan-Ning Li[2)], Pei-Ling Hsu[1)], Meng-Hsing Wu[3)], Shaw-Jenq Tsai[1)]
[1]Department of Physiology, College of Medicine, National Cheng Kung University,

Taiwan, [2]Institute of Basic Medical Sciences, College of Medicine, National Cheng Kung University, [3]Department of Obstetrics & Gynecology, College of Medicine, National Cheng Kung University and Hospital

Y–17 TRPA1 channel is critical for gliotransmitter release from astrocyte by eliciting calcium entry

Jung Moo Lee[1,2)], Soo-Jin Oh[2,3)], Wuhyun Koh[2,4)], Changjoon Justin Lee[1,2)]

[1]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, [2]Center for Glia-Neuron Interaction, Korea Institute of Science and Technology (KIST), Republic of Korea, [3]Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology, Republic of Korea, [4]Division of Bio-Medical Science & Technology, KIST School, Korea University of Science and Technology, Republic of Korea

Y–18 Molecular profiling of the subthalamic nucleus

Jiwon Kim[1,2)], Hyungju Jeon[1)], Hojin Lee[1,2)], Linqing Feng[1)], Jinhyun Kim[1,2)]

[1]Center for Functional Connectomics, Korea Institute of Science and Technology (KIST), Korea, [2]Division of Bio-Medical Science & Technology, KIST-School, University of Science and Technology (UST), Republic of Korea

Y–19 Characterization of a novel and potent neuronal Kv7/M opener SCR2682 for anti-epilepsy

Yani Liu[1)], Fan Zhang[2)], Feng Tang[3)], Bo Liang[3)], Huanming Chen[3)], Ge Jin[4)], Qi Sun[5)], Hailin Zhang[2)], Kewei Wang[1)]

[1]Department of Pharmacology, School of Pharmacy, Qingdao University, China, [2]Department of Pharmacology, Hebei Medical University, China, [3]Medicinal Chemistry, Simcere Pharmaceuticals, China, [4]Department of Pharmacology, Shenyang Medical College, China, [5]Department of Medicinal Chemistry, School of Pharmaceutical Sciences, Peking University, China

Y–20 Molecular mechanism of dopamine-induced itch in mice

Youngin Choi[1)], Pyungsun Cho[1,2)], Hankyu Lee[1)], Sungjun Jung[1)]

[1]Department of Biomedical Science , Hanyang University, Korea, [2]Department of Physiology, Korea University, Republic of Korea

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

Y–22 Altered electrical responsiveness of CA1 pyramidal neurons in a *valproic acid rat model* of autism

Mona Rahdar, Razieh Hajisoltani, Shima Davoudi, Narges Hosseinmardi, Mahyar Janahmadi

Neuroscience Research Center and Dept. of Physiology, Medical School, Shahid Beheshti University of Medical Sciences, Iran

Y–23 Lumbrokinase improves neurological deficit by preventing endoplasmic reticulum stress

Yi Hsin Wang[1)], Hsing Hui Su[2)], Jiuan Miaw Liao[3)], Shiang Suo Huang[4)]

[1]Institute of Medicine, Chung Shan Medical University, Taiwan, [2]Department and Institute of Pharmacology, School of Medicine, National Yang-Ming University, Taiwan, [3]Department of Physiology, Chung Shan Medical University and Chung Shan Medical University Hospital, Taiwan, [4]Department of Pharmacology and Institute of Medicine, Chung Shan Medical University, and Department of Pharmacy, Chung Shan Medical University Hospital, Taiwan

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

Y–25 Mesenchymal stem cell conditioned medium therapy modulates neuroinflammatory symptoms

Vida Nazemian, Jalal Zaringhalam
Physiology Department, Shahid Beheshti University of Medical Sciences

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

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)]
[1]Cardiac Electrophysiology Research and Training Center, Faculty of Medicine, Chiang Mai University, Thailand, [2]Center of Excellence in Cardiac Electrophysiology Research, Chiang Mai University, Thailand, [3]Cardiac Electrophysiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, [4]Department of Oral Biology and Diagnostic Sciences, Faculty of Dentistry, Chiang Mai University, Thailand

Y–28 Protective effects of dapagliflozin and atorvastatin on renal function in insulin-resistant rats

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

Y–29 Melatonin activates sirtuin 3 to protect the kidney from long-term consequences of bisphenol A

Anongporn Kobroob[1)], Wachirasek Peerapanyasut[2)], Sirinart Kumfu[3)], Nipon Chattipakorn[3)], Orawan Wongmekiat[2)]
[1]Division of Physiology, School of Medical Sciences, University of Phayao, Thailand, [2]Renal Physiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, [3]Cardiac Electrophysiology Research and Training Center, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand

Y–30 Protein arginine methyltransferase 1-dependent regulation of slow delayed rectifier K^+ current Masao Ito Memorial Awards

Kim Hyun-Ji[1,3)], Bok-Geon Kim[2,3)], Chang-Seok Ki[4)], Jong-Sun Kang[2,3)], Hana Cho[1,3)]
[1]Department of physiology, University of Sungkyunkwan, Korea, [2]Department of Molecular and Cellular Biology, Sungkyunkwan University School of Medicin, Republic of Korea, [3]Single Cell Network Research Center, Sungkyunkwan University School of Medicine, Republic of Korea, [4]Department of Laboratory Medicine and Genetics, Samsung Medical Center, Sunkyunkwan University School of Medicine, Republic of Korea

Y–31 TTYH family encodes the pore-forming subunits of the volume-regulated anion channel in the brain Masao Ito Memorial Awards

Han Youne-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 Lee[6], Min Gu Park[1,2,4], Soo-Jin Oh[1,2,7], Changjoon Justin Lee[1,2,3],

[1]Center for Neural Science and Functional Connectomics, Korea Institute of Science and Technology (KIST), Korea, [2]Center for Glia-Neuron Interaction, Korea Institute of Science and Technology (KIST), Republic of Korea, [3]Department of Neuroscience, Division of Bio-Medical Science & Technology, KIST School, Korea University of Science and Technology, Republic of Korea, [4]KU-KIST, Graduate School of Converging Science and Technology, Korea University, Republic of Korea, [5]Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea, [6]Molecular Neurobiology Laboratory, Dept. of Structure and Function of Neural Network, Korea Brain Research Institute, Republic of Korea, [7]Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology (KIST), Republic of Korea

Y-32 The Arginine in the side portal determines the physiological $[pH]_o$ sensing of TALK1

Tsai Wen-Hao[1,2], Shi-Bing Yang[1]

[1]Institute of Biomedical Science, Academia Sinica, Taiwan , [2] Taiwan International Graduate Program-Molecular Medicine, National Yang-Ming University Taiwan

Y-33 Circadian gene Clock post-transcriptionally regulates mitochondrial morphology and functions Masao Ito Memorial Awards

Xu Lirong[1], Qianyun Cheng[1], Bingxuan Hua[3], Tingting Cai[1], Jiaxin Lin[1], Gongsheng Yuan[1], Zuoqin Yan[3], Xiaobo Li[1], Ning Sun[1], Chao Lu[1,2], Ruizhe Qian[1,2]

[1]Department of Physiology and Pathophysiology, School of Basic Medical Sciences, Fudan University, China , [2]Basic Research Institute for Aging and Medicine, School of Basic Medical Sciences, Fudan University, China, [3]Department of Orthopedics, Zhongshan Hospital, Fudan University,China

Y-34 The impact of DNA methyltransferase 3A in erythrocytic differentiation

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

Department of physiology, National Yang-Ming University, Taiwan

Y-35 Hearing status of Rickshaw's drivers in Karachi, Pakistan assessed by Pure tone audiometry

Muhammad Adnan Kanpurwala[1,2], Furqan Mirza[3]

[1]Department of Physiology, Karachi Institute of Medical Sciences, Pakistan, [2]Department of Physiology, University of Karachi, [3]Department of Health Management, Institute of Business Management

Y-36 Life-span Interventions Exhibit a Sex specific Strehler? Mildvan Inverse Relationship

Jie Shen

College of Life Information Science & Instrument Engineering, Hangzhou Dianzi University, China

Y-37 Alpha-5 integrin mediates simvastatin-induced osteogenesis of bone marrow mesenchymal stem cells

Pei Lin Shao[1], Shun Cheng Wu[2,3], Zih Yin Lin[2,3], Chau Zen Wang[2,3], Chung-Hwan Chen[2], Mei-Ling Ho[2,3]

[1]Department of Nursing, Asia University, Taiwan, [2]Orthopaedic Research Center, College of Medicine, Kaohsiung Medical University, Taiwan, [3]Department of Physiology, College of Medicine, Kaohsiung Medical University, Taiwan

Y-38 Vitamin D Receptor Polymorphism Fok1 and Chest X-ray in Tuberculosis Patients of Batak Ethnic

Debby Mirani Lubis[1)], Seri Rayani Bangun[2)], Yahwardiah Siregar[2)], Bintang YM Sinaga[3)]

[1]Department of Physiology, University of Muhammadiyah Sumatera Utara, Indonesia, [2]Biomedical Science, University of North Sumatera, [3]Pulmonology Department, University of North Sumatera

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

Y-40 The Anti-depressive and the Involvement of ERK Pathway of Electroacupuncture on Depression Model

Shao-Yuan Li[1)], Pei-Jing Rong[1,2)], Xiao Guo[1)]

[1]Institute of Acu.-Moxi., China Academy of Chinese Medical Sciences, China, [2]Guangzhou University of Chinese Medicine

Y-41 Malaysian Tualang Honey Protects Endothelial Barrier Integrity from Insults by Hydrogen Peroxide

Yoke Keong Yong[1)], Kogilavanee Devasvaran[1)], Jun Jie Tan[2)]

[1]Department of Human Anatomy, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Malaysia., [2]Advance Medical and Dental Institute, Universiti Sains Malaysia, Malaysia

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JGP Poster Awards

The Journal of General Physiology (JGP) poster awardees have poster presentation. **See p.26**

PSJ Awards

See p.96~97 for each presentation.