

# 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-1 $\alpha$  and HIF-1 $\alpha$  Gene Expression in Mice  
Nova Sylviana<sup>1,2</sup>), Hanna Goenawan<sup>1,2</sup>), Ronny Lesmana<sup>1,2</sup>),  
Badai Batara Tiksnadi<sup>3</sup>), Hasrayati Agustina<sup>4</sup>), Bethy S Hernowo<sup>4</sup>),  
Vita Murniati Tarawan<sup>1</sup>), Unang Supratman<sup>2</sup>), Ambrosius Purba<sup>1</sup>),  
Setiawan Setiawan<sup>1,2</sup>)  
<sup>1</sup>Department Biomedical Sciences, Faculty Medicine, Padjadjaran University, Bandung, Indonesia, <sup>2</sup>Laboratorium Central, Universitas Padjadjaran, Indonesia, <sup>3</sup>Department of Cardiology and Vascular Medicine, Universitas Padjadjaran-Hasan Sadikin Hospital, Indonesia, <sup>4</sup>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<sup>1</sup>), Anoja Ariyasinghe<sup>2</sup>), Anula Kariyawasam<sup>2</sup>)  
<sup>1</sup>Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka, <sup>2</sup>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<sup>1,2,3</sup>), Siripong Palee<sup>1,2,3</sup>), Nattayaporn Apaijai<sup>1,2,3</sup>),  
Thidarat Jaiwongkam<sup>1,2,3</sup>), Sasiwan Kerdphoo<sup>1,2,3</sup>),  
Siriporn C Chattipakorn<sup>1,2,4</sup>), Nipon Chattipakorn<sup>1,2,3</sup>)  
<sup>1</sup>Cardiac Electrophysiology Research and Training Center, Faculty of Medicine, Chiang Mai University, Thailand, <sup>2</sup>Center of Excellence in Cardiac Electrophysiology Research, Chiang Mai University, Thailand, <sup>3</sup>Cardiac Electrophysiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, <sup>4</sup>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<sup>1</sup>), Toan Pham<sup>1</sup>), Kenneth Tran<sup>1</sup>), Andrew J. Taberner<sup>1,2</sup>),  
Denis S. Loiselle<sup>1,3</sup>)  
<sup>1</sup>Auckland Bioengineering Institute, The University of Auckland, New Zealand, <sup>2</sup>Department of Engineering Science, The University of Auckland, New Zealand, <sup>3</sup>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<sup>INK4a</sup> protects against myocardial ischemia/reperfusion injury  
Zhou Qiulian, Bei Yihua, Meng Xiangmin, Xiao Junjie

DAY 4

**Y-09** Influence of Tobacco smoking on carboxyhaemoglobin levels and blood lipid levels

Prasanna Herath<sup>1</sup>), Savithri Wimalasekera<sup>2</sup>), Thamara Amarasekara<sup>3</sup>)

<sup>1</sup>Department of Nursing and Midwifery, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka, <sup>2</sup>Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka, <sup>3</sup>Department of Allied Health Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

**Y-10** FUNDC2 regulates platelet activation through AKT/GSK-3 $\beta$ /cGMP axis [Masao Ito Memorial Awards](#)

Qi Ma<sup>1</sup>), Weilin Zhang<sup>2</sup>), Heping Cheng<sup>1</sup>), Junling Liu<sup>3</sup>), Quan Chen<sup>2</sup>)

<sup>1</sup>Institute of Molecular Medicine, Peking University, China, <sup>2</sup>Institute of Zoology, Chinese Academy of Sciences, Beijing, China, <sup>3</sup>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<sup>1</sup>), Duangporn Werawatganon<sup>1</sup>), Naruemon Klaikeaw<sup>2</sup>), Prasong Siriviriyakul<sup>1</sup>)

<sup>1</sup>Department of Physiology, Faculty of Medicine, Chulalongkorn University, Thailand, <sup>2</sup>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<sup>1</sup>), Chi-Chang Juan<sup>1,2,3</sup>)

<sup>1</sup>Institute of Physiology, School of Medicine, National Yang-Ming University, <sup>2</sup>Department of Medical Research, Taipei Veterans General Hospital, <sup>3</sup>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<sup>1</sup>), Rita Khadka<sup>1</sup>), Dilip Thakur<sup>1</sup>), Bishnu Hari Poudel<sup>1</sup>), Kishun Deo Mehta<sup>2</sup>), Robin Maskey<sup>3</sup>)

<sup>1</sup>Department of Basic & Clinical Physiology, B.P.Koirala Institute of Health Science, Nepal, <sup>2</sup>Department of Biochemistry, B.P.Koirala Institute of Health Science, Nepal, <sup>3</sup>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<sup>1</sup>), Hsiu-Chi Lee<sup>2</sup>), Ching-Ting Hsu<sup>1</sup>), Yi-Han Huang<sup>1</sup>), Wan-Ning Li<sup>2</sup>), Pei-Ling Hsu<sup>1</sup>), Meng-Hsing Wu<sup>3</sup>), Shaw-Jenq Tsai<sup>1</sup>)

<sup>1</sup>Department of Physiology, College of Medicine, National Cheng Kung University,

Taiwan, <sup>2</sup>Institute of Basic Medical Sciences, College of Medicine, National Cheng Kung University, <sup>3</sup>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<sup>1,2</sup>, Soo-Jin Oh<sup>2,3</sup>, Wuhyun Koh<sup>2,4</sup>, Changjoon Justin Lee<sup>1,2</sup>

<sup>1</sup>KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, <sup>2</sup>Center for Glia-Neuron Interaction, Korea Institute of Science and Technology (KIST), Republic of Korea, <sup>3</sup>Convergence Research Center for Diagnosis, Treatment and Care System of Dementia, Korea Institute of Science and Technology, Republic of Korea, <sup>4</sup>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<sup>1,2</sup>, Hyungju Jeon<sup>1</sup>, Hojin Lee<sup>1,2</sup>, Linqing Feng<sup>1</sup>, Jinhyun Kim<sup>1,2</sup>

<sup>1</sup>Center for Functional Connectomics, Korea Institute of Science and Technology (KIST), Korea, <sup>2</sup>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<sup>1</sup>, Fan Zhang<sup>2</sup>, Feng Tang<sup>3</sup>, Bo Liang<sup>3</sup>, Huanming Chen<sup>3</sup>, Ge Jin<sup>4</sup>, Qi Sun<sup>5</sup>, Hailin Zhang<sup>2</sup>, Kewei Wang<sup>1</sup>

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

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

Youngin Choi<sup>1</sup>, Pyungsun Cho<sup>1,2</sup>, Hankyu Lee<sup>1</sup>, Sungjun Jung<sup>1</sup>

<sup>1</sup>Department of Biomedical Science, Hanyang University, Korea, <sup>2</sup>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<sup>1</sup>, Hsing Hui Su<sup>2</sup>, Juan Miaw Liao<sup>3</sup>, Shiang Suo Huang<sup>4</sup>

<sup>1</sup>Institute of Medicine, Chung Shan Medical University, Taiwan, <sup>2</sup>Department and Institute of Pharmacology, School of Medicine, National Yang-Ming University, Taiwan, <sup>3</sup>Department of Physiology, Chung Shan Medical University and Chung Shan Medical University Hospital, Taiwan, <sup>4</sup>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<sup>1,2</sup>, Chayodom Maneechote<sup>1,2,3</sup>, Nattayaporn Apaijai<sup>1,2</sup>, Thidarat Jaiwongkam<sup>1,2</sup>, Sasiwan Kerdphoo<sup>1,2</sup>, Nipon Chattipakorn<sup>1,2,3</sup>, Siriporn C Chattipakorn<sup>1,2,4</sup>  
<sup>1</sup>Cardiac Electrophysiology Research and Training Center, Faculty of Medicine, Chiang Mai University, Thailand, <sup>2</sup>Center of Excellence in Cardiac Electrophysiology Research, Chiang Mai University, Thailand, <sup>3</sup>Cardiac Electrophysiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, <sup>4</sup>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<sup>1</sup>, Wachirasek Peerapanyasut<sup>2</sup>, Sirinart Kumfu<sup>3</sup>, Nipon Chattipakorn<sup>3</sup>, Orawan Wongmekiat<sup>2</sup>  
<sup>1</sup>Division of Physiology, School of Medical Sciences, University of Phayao, Thailand, <sup>2</sup>Renal Physiology Unit, Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand, <sup>3</sup>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<sup>+</sup> current **Masao Ito Memorial Awards**  
Kim Hyun-Ji<sup>1,3</sup>, Bok-Geon Kim<sup>2,3</sup>, Chang-Seok Ki<sup>4</sup>, Jong-Sun Kang<sup>2,3</sup>, Hana Cho<sup>1,3</sup>  
<sup>1</sup>Department of physiology, University of Sungkyunkwan, Korea, <sup>2</sup>Department of Molecular and Cellular Biology, Sungkyunkwan University School of Medicine, Republic of Korea, <sup>3</sup>Single Cell Network Research Center, Sungkyunkwan University School of Medicine, Republic of Korea, <sup>4</sup>Department of Laboratory Medicine and Genetics, Samsung Medical Center, Sungkyunkwan 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<sup>1,2,3</sup>), Jea Kwon<sup>1,2,4</sup>), Joungha Won<sup>1,2,5</sup>), Heeyoung An<sup>1,2,4</sup>),  
Minwoo Wendy Jang<sup>1,2,4</sup>), Junsung Woo<sup>1,2</sup>), Je Sun Lee<sup>6</sup>), Min Gu Park<sup>1,2,4</sup>),  
Soo-Jin Oh<sup>1,2,7</sup>), Changjoon Justin Lee<sup>1,2,3</sup>).

<sup>1</sup>Center for Neural Science and Functional Connectomics, Korea Institute of Science and Technology (KIST), Korea, <sup>2</sup>Center for Glia-Neuron Interaction, Korea Institute of Science and Technology (KIST), Republic of Korea, <sup>3</sup>Department of Neuroscience, Division of Bio-Medical Science & Technology, KIST School, Korea University of Science and Technology, Republic of Korea, <sup>4</sup>KU-KIST, Graduate School of Converging Science and Technology, Korea University, Republic of Korea, <sup>5</sup>Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea, <sup>6</sup>Molecular Neurobiology Laboratory, Dept. of Structure and Function of Neural Network, Korea Brain Research Institute, Republic of Korea, <sup>7</sup>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]<sub>i</sub> sensing of TALK1**

Tsai Wen-Hao<sup>1,2</sup>), Shi-Bing Yang<sup>1</sup>)

<sup>1</sup>Institute of Biomedical Science, Academia Sinica, Taiwan , <sup>2</sup>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<sup>1</sup>), Qianyun Cheng<sup>1</sup>), Bingxuan Hua<sup>3</sup>), Tingting Cai<sup>1</sup>), Jiaxin Lin<sup>1</sup>),  
Gongsheng Yuan<sup>1</sup>), Zuoqin Yan<sup>3</sup>), Xiaobo Li<sup>1</sup>), Ning Sun<sup>1</sup>), Chao Lu<sup>1,2</sup>),  
Ruizhe Qian<sup>1,2</sup>)

<sup>1</sup>Department of Physiology and Pathophysiology, School of Basic Medical Sciences, Fudan University, China , <sup>2</sup>Basic Research Institute for Aging and Medicine, School of Basic Medical Sciences, Fudan University, China, <sup>3</sup>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<sup>1,2</sup>), Furqan Mirza<sup>3</sup>)

<sup>1</sup>Department of Physiology, Karachi Institute of Medical Sciences, Pakistan, <sup>2</sup>Department of Basic Medical Sciences, University of Karachi, <sup>3</sup>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<sup>1</sup>), Shun Cheng Wu<sup>2,3</sup>), Zih Yin Lin<sup>2,3</sup>), Chau Zen Wang<sup>2,3</sup>),  
Chung-Hwan Chen<sup>2</sup>), Mei-Ling Ho<sup>2,3</sup>)

<sup>1</sup>Department of Nursing, Asia University, Taiwan, <sup>2</sup>Orthopaedic Research Center, College of Medicine, Kaohsiung Medical University, Taiwan, <sup>3</sup>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<sup>1</sup>, Seri Rayani Bangun<sup>2</sup>, Yahwardiah Siregar<sup>2</sup>, Bintang YM Sinaga<sup>3</sup>  
<sup>1</sup>Department of Physiology, University of Muhammadiyah Sumatera Utara, Indonesia, <sup>2</sup>Biomedical Science, University of North Sumatera, <sup>3</sup>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<sup>1</sup>, Pei-Jing Rong<sup>1,2</sup>, Xiao Guo<sup>1</sup>  
<sup>1</sup>Institute of Acu.-Moxi., China Academy of Chinese Medical Sciences, China, <sup>2</sup>Guangzhou University of Chinese Medicine
- Y-41** Malaysian Tualang Honey Protects Endothelial Barrier Integrity from Insults by Hydrogen Peroxide  
Yoke Keong Yong<sup>1</sup>, Kogilavane Devasvaran<sup>1</sup>, Jun Jie Tan<sup>2</sup>  
<sup>1</sup>Department of Human Anatomy, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Malaysia, <sup>2</sup>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

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#### **PSJ Awards**

See p.96-97 for each presentation.