

List of Academic Sessions

Plenary Lectures

- PL1 **Olfaction and Stress** 3/28 (Thr) 17:30-18:30 Room A
Linda Buck (Fred Hutchinson Cancer Research Center, USA)
- PL2 **Natural Products as Probes of the Pain Pathway: From Physiology to Atomic Structure** 3/29 (Fri) 8:50-9:50 Room A
David Julius (Department of Biochemistry and Biophysics, The University of California, San Francisco, USA)
- PL3 **Looking Back on 30 Years of Autophagy research -dynamic equilibrium of the cell-** 3/30 (Sat) 8:50-9:50 Room A
Yoshinori Ohsumi (Institute of Innovative Research, Tokyo Institute of Technology (IIR), Japan)

Special Lectures

3/29 (Fri) 17:20-18:10

- SL1 **(The Susumu Hagiwara Memorial Lecture)** Room A
Beyond memory circuit: Origins of metamemory and retrospection in the primate
Yasushi Miyashita (RIKEN Center for Brain Science, Japan)
- SL2 **Signaling by Mitochondrial Flashes** Room B
Heping (Peace) Cheng (Peking University, China)
- SL3 **Tentonin 3, a Mechanosensitive Channel with Baroreceptor Function** Room C
Uhtaek Oh (Brain Science Institute, KIST, Korea)
- SL4 **Finding Instructional Balance Using the Educational Triangle** Room D
Robert Graham Carroll (Office of Medical Education, Brody School of Medicine, East Carolina University, USA)

3/30 (Sat) 17:20-18:10

- SL5 **Toward the Mysteries of Sleep** Room B
Masashi Yanagisawa (International Institute for Integrative Sleep Medicine (WPI-IIS), University of Tsukuba, Japan)
- SL6 **The Beauty of Physiological Mechanisms in Skeletal Muscle Function and Fatigue** Room C
Graham Douglas Lamb (Department of Physiology, La Trobe University, Australia)
- SL7 **The importance of understanding fetal physiology for detecting brain injury before birth** Room F
Laura Bennet (Department of Physiology, The University of Auckland, New Zealand)

3/31 (Sun) 9:40-10:30

- SL8 **(The Sunao Tawara Memorial Lecture)**
Mitochondria in fetal programming of metabolic syndrome-associated end organ dysfunctions in adults Room A
Julie YH Chan (Institute for Translational Research in Biomedicine, Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- SL9 **Modeling Human Neurological/Psychiatric Disorders using iPSC cells and Transgenic Non-Human Primates** Room B
Hideyuki Okano (Department of Physiology, Keio University School of Medicine, Japan)

PSJ and JSPFSM co-organized Special Guest Talk

Towards the Summit with Sport Science

3/30 (Sat) 18:20-19:10

Room A

Symposia

3/29 (Fri) 10:00-12:00

S1	Molecular mechanisms of aging	Room A
S2	Thermal biology: A new world of life science (whole day symposium) part I	Room B
S3	Gastrointestinal microbiome and immunophysiology (CPS, Taiwan)	Room C
S4	Teaching physiology; International perspectives (whole day symposium) part I	Room D
S5	New Translational Insights on Cardiopulmonary Remodeling	Room E
S6	Facilitation of Recovery of Motor Function After Paralysis	Room F
S7	From synaptic and network plasticity to behavior (CAPS, China)	Room G
S8	Biophysical mechanisms underlying nano-vibrations of the sensory epithelium in hearing organs	Room H
S9	Metabolic syndrome and bone metabolism (TPS, Thailand)	Room I
S10	Neural circuit basis of behavioral physiology	Room J
S11	Advances in the mastication and swallowing physiology to prepare for an aging society	Room K
S12	New insights into baroreflex function for cerebral and cardiovascular regulation: Implications for human health and disease	Room L
S13	The role of the sympathetic nerves in health and disease	Room M

3/29 (Fri) 15:10-17:10

S14	Advances in understanding cerebellar LTD and motor learning: Masao Ito Symposium	Room A
S15	Thermal biology: A new world of life science (whole day symposium) part II	Room B
S16	Gastrointestinal Control of Energy Metabolism (CAPS, China)	Room C
S17	Teaching physiology; International perspectives (whole day symposium) part II	Room D
S18	Dynamics of membrane trafficking and intracellular signaling	Room E
S19	Mitochondrial Physiology and Pathophysiology (KPS, Korea)	Room F
S20	Adaptation mechanisms to external or internal environmental changes of respiratory system	Room G
S21	New Paradigm in Physiology and Pathophysiology of Coagulationfibrinolysis System	Room H
S22	Proton signalings and proton-related functions	Room I
S23	Glia and Neurological Diseases: from Physiological to Pathological Roles of Astrocytes and Microglia	Room J
S24	Complexity and Diversity of Motility Regulation in Smooth Muscle	Room K
S25	Calcium signaling in heart disease	Room L

3/29 (Fri) 18:30-20:00

S26	Synaptic remodeling and beyond in health and disease	Room A
S27	Regulation of cell functions by phosphoinositides	Room B
S28	Molecular evidences Link Physical Exercise to Cardiovascular Improvement	Room C
S29	New insights into central mechanisms underlying hypertension	Room D
S30	Substance abuse and addiction ~ From basic science to regulatory science	Room E
S31	Genomics of Sports and Exercise	Room F
S32	Membrane transporters related to diseases and drug development	Room G
S33	New insights into Endocrinology and Metabolism	Room H

- S34 **Life Style Related Diseases in Asia: Underlying Mechanisms, Functions and Behavioural Transitions** Room I
- S35 **Frontiers in Ca²⁺ release research in skeletal muscle: 50th anniversary from discovery of Ca²⁺-induced Ca²⁺ release** Room J

3/30 (Sat) 10:00-12:00

- S36 **Inter-tissue communications underlying metabolic and feeding control in living body (whole day symposium) part I** Room A
- S37 **Primate researches in Asian regions** Room B
- S38 **Cutting-edge research topics on skeletal muscle plasticity in health and diseases** Room C
- S39 **Cutting-Edge Optical Imaging of Neuronal Circuits and Synapses** Room D
- S40 **Social communication through sensory information** Room E
- S41 **Leveraging novel techniques to research and translate synaptic transmission and plasticity (ISPP, Iran)** Room F
- S42 **(Sponsored Symposium)*10:00~11:30**
Physiological function of royal jelly contributing to healthy longevity - The effectiveness on Locomotive syndrome, Menopausal disorders, Infectious diseases - Room G
- S43 **TRP channels and inflammation/fibrosis** Room H
- S44 **Cutting-edge approaches to long-lasting questions and novel aspects of inward rectifier K⁺ channels -- A quarter-century anniversary of cDNA isolation (ISPP, Israel)** Room I
- S45 **New molecular insights into the synaptic tagging and capture hypothesis** Room J
- S46 **Plasticity of inhibitory signaling in Epilepsy: New Physiological Mechanisms** Room K

3/30 (Sat) 13:30-15:00

- S47 **(Sponsored Symposium)**
New Frontiers in Regenerative Medicine of Renal Function Room F

3/30 (Sat) 15:10-17:10

- S48 **Inter-tissue communications underlying metabolic and feeding control in living body (whole day symposium) part II** Room A
- S49 **Frontiers in pain physiology - from detection to the survival behavior (under the auspices of Japanese Association for Study of Pain)** Room B
- S50 **Maternal influences on offspring development (AuPS, Australia)** Room C
- S51 **Cutting-edge Research in Neural Network Dynamics** Room D
- S52 **Sports and Brain** Room E
- S53 **Dynamic signaling of axon and presynaptic terminals revealed by direct recordings** Room F
- S54 **Ca²⁺ signaling in health and disease** Room G
- S55 **Brain pathways linking between emotion, behaviour and autonomic responses** Room H
- S56 **Optical neuroscience: reading and manipulating neural computation behind cognition, memory, and behavior** Room I
- S57 **Alternative GPCR and G-protein signaling in cardiovascular disease and therapy** Room J
- S58 **Zinc physiology and pathophysiology** Room K
- S59 **Contribution of microglia in health and disease of the brain** Room M

3/31 (Sun) 8:00-9:30

- S60 **Hibernation and Torpor in mammals** Room C
- S61 **The Social Brain: Recent Progress in Understanding Molecules and Networks of Social Behavior** Room D
- S62 **Integrative neural processing of sound information in the higher auditory centers** Room E

S63	Implication of tonic inhibition for Brain function	Room F
S64	New insights into the cellular and molecular mechanisms of neurological diseases using experimental model systems	Room G
S65	Intervention factors of neuronal irregular development: from gut bacteria to mental situation via chemicals	Room H
S66	Inflammation and Atherosclerosis	Room I
S67	The potential roles of NMDAR in neurological and neuropsychiatric disorders: new findings and therapeutic targets	Room J
S68	Pulmonary hypertension and inflammation: the interdependent processes triggered by each other	Room K
S69	Optogenetics: Contributions to Physiology and Medicine Beyond Brain Circuit-Breaking	Room L
S70	Contribution of brain research to the understanding of the physiology, psychology and communication of acute and chronic pain	Room M

3/31 (Sun) 10:30-12:30

S71	Toward understanding the neural basis of memory	Room A
S72	Neurobiology of reward system in the Brain (ISPP, Iran)	Room B
S73	(Sponsored Symposium)New Twists in Understanding Taste	Room C
S74	The consequences of preterm birth, intrauterine growth restriction and hypoxia-ischemia (PSNZ, New Zealand)	Room D
S75	Ca ²⁺ -permeable channels of excitable and non-excitable cells in health and disease	Room E
S76	Physiome for organ function (KPS, Korea)	Room F
S77	Advances in the role of adipocyte in health and disease (CPS, Taiwan)	Room G
S78	"Ins" and "outs" of smooth muscle	Room H

3/31 (Sun) 10:30-12:00

S79	Mechanomedicine	Room I
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3/31 (Sun) 10:30-12:30

S80	Daily /adaptable Yin-Yang transitions in diverse physiological processes coordinated by multi-cellular Chrono-molecular signal	Room J
S81	Mechanisms of systemic beauty and health	Room K
S82	Amygdala Neuronal Circuits in Adaptive Behaviors	Room L
S83	Neurobiology of obesity and its metabolic comorbidities	Room M

Symposium by the PSJ Committee on the Promotion of Gender Equality

MLS	Seeking Gender Equality in Science. A comparison of issues and initiatives in Japan and New Zealand	3/29 (Fri) 12:20-13:20	Room M
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Tutorial for Physiologists

T	Practical Approaches to Protein Structural Information	3/31 (Sun) 8:00-9:10	Room B
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Poster Sessions

3/29 (Fri) 13:20-15:00 (discussion core time)

1F, Exhibition Hall

PSJ Awards
Skeletal muscle & locomotion (1)
Exercise (1)
Circulation & Respiration: Cardiac Physiology (1)
Circulation & Respiration: Lung Physiology (1)
Circulation & Respiration: Vascular Physiology (1)
Endocrine, Reproduction & Development (1)
Neuroscience: Synapse & neural cellular communication (1)
Neuroscience: Neural cell signalling
Neuroscience: Brain circuits
Neuroscience: Learning, memory & neuronal plasticity (1)
Neuroscience: Higher order brain functions
Neuroscience: Neurologic and psychiatric diseases (1)
Neuroscience: Somatosensory & Pain (1)
Neuroscience: Autonomic Physiology (1)
Neuroscience: Brain-machine interface
Neuroscience: Others (1)
Epithelial transport, Secretion & Absorption: Epithelium (1)
Epithelial transport, Secretion & Absorption: G-I Tract (1)
Epithelial transport, Secretion & Absorption: Renal Physiology (1)
Molecular & Cellular Biology: Channels & Transporters (1)
Molecular & Cellular Biology: Cellular Physiology (1)
Adaptation, Environment & Evolution (1)
Physiome
Alternative Medicine (1)

3/30 (Sat) 13:20-15:00 (discussion core time)

PSJ Awards
Skeletal muscle & locomotion (2)
Exercise (2)
Circulation & Respiration: Cardiac Physiology (2)
Circulation & Respiration: Lung Physiology (2)
Circulation & Respiration: Vascular Physiology (2)
Endocrine, Reproduction & Development (2)
Neuroscience: Neural development and repair
Neuroscience: Synapse & neural cellular communication (2)
Neuroscience: Neuron-glia interactions/functions of glia
Neuroscience: Imaging of brain
Neuroscience: Learning, memory & neuronal plasticity (2)
Neuroscience: Neurologic and psychiatric diseases (2)
Neuroscience: Somatosensory & Pain (2)
Neuroscience: Autonomic physiology (2)
Neuroscience: Others (2)
Epithelial transport, Secretion & Absorption: Epithelium (2)
Epithelial transport, Secretion & Absorption: G-I tract (2)
Epithelial transport, Secretion & Absorption: Renal Physiology (2)
Molecular & Cellular Biology: Channels & Transporters (2)
Molecular & Cellular Biology: Cellular Physiology (2)
Adaptation, Environment & Evolution (2)
Genomics & Biodiversity
Education
Alternative Medicine (2)

Poster Sessions (Special Sessions for Awardees)

3/31 (Sun) 8:00-13:00 (Viewing time)

1F, Exhibition Hall

Young Scientist Travel Awards and Masao Ito Memorial Awards

The Journal of General Physiology (JGP) Poster Awards

PSJ Awards

Luncheon Seminars

3/29 (Fri) 12:20-13:20

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| LS1 | Structural Analysis of membrane proteins by Cryo-EM | Room B |
| LS2 | - Visualize Cellular Function - Application of DOJINDO Reagents | Room C |
| LS3 | Physiological role of brain glycogen in rats with prolonged exercise-induced central fatigue: Usefulness of metabolomics study | Room D |
| LS4 | Absorption of Rare Sugars in the Small Intestine | Room G |
| LS5 | Functional imaging of marmoset visual cortex | Room I |

3/30 (Sat) 12:20-13:20

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| LS6 | Plasmalogen: The effects on Alzheimer's disease and its mechanism | Room A |
| LS7 | Frailty and Ninjin'yoeito | Room B |
| LS8 | Imaging intracellular temperature using fluorescence lifetime imaging microscopy (FLIM) reveals novel thermal signaling | Room C |
| LS9 | ABIS Luncheon Event: Neurophysiological Sciences Assisted by Imaging Support Network | Room D |

3/30 (Sat) 12:20-13:05

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| LS10 | The effects of Bedding based on Physiology of sleep | Room H |
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Technical Workshops

3/29 (Fri) 12:20-13:20

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| TW1 | Cutting edge of clinical rehabilitation for the paresis to reduce the burden on patients; Repetitive Facilitative Exercise combined with vibratory, electrical, magnetic stimulation and Robotics | Room F |
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3/30 (Sat) 12:20-13:20

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| TW2 | How to take advantage of new tools and techniques with Narishige products | Room G |
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GAKUSAI (interdisciplinary) Seminar

3/29 (Fri) 12:20-13:20

Room H

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| I | Future Medicine and Innovation for Agriculture and Fisheries Opened by Low-temperature Plasma Sciences | |
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