

# FAOPS2019 Abstract Topics

## CATEGORY NAME

I. Locomotion	I-1. Muscle excitation and contraction
	I-2. Muscle & molecular motors
	I-3. Muscle disease: injury and repair
	I-4. Motor training and neuroplasticity
	I-5. Motor behavior and programming
	I-6. Cell Biomechanics
	I-7. Biomechanics and bioengineering
	I-8. Motor Control of Locomotion
	I-9. Locomotion; others
II. Exercise	II-1. Molecular & integrative physiology of exercise
	II-2. The physiological bases of exercise for health
	II-3. Exercise; others
III. Cardiovascular & Respiratory Systems	III-1. Cardiac: Cardiac electrophysiology and E-C coupling
	III-2. Cardiac: Computational physiology & pathophysiology of the heart
	III-3. Cardiac: Cardiac remodeling and heart failure
	III-4. Cardiac: Cardiac hypertrophy & ischemia
	III-5. Cardiac: Signal transduction in cardiac myocytes
	III-6. Cardiac: Cardiac energetics and mechanics
	III-7. Cardiac: Heart; others
	III-8. Lungs: Computational physiology & pathophysiology of the lungs
	III-9. Lungs: Airway remodeling and alveolar gas exchange
	III-10. Lungs: Pulmonary circulation
	III-11. Lungs: Lung; others
	III-12. Vascular system & microcirculation: Gas biology in the vascular system
	III-13. Vascular system & microcirculation: Local control of blood flow and regulation of vascular tone
	III-14. Vascular system & microcirculation: Integrative biology of the vascular wall (vascular integrity)
	III-15. Vascular system & microcirculation: Angiogenesis, vascular injury, vascular remodeling and inflammation
	III-16. Vascular system & microcirculation: Coronary circulation
	III-17. Vascular system & microcirculation: Circulation; others
IV. Endocrine, Reproduction & Development	IV-1. Appetite, nutrition and energy expenditure
	IV-2. Adipose tissue and metabolic signaling
	IV-3. Glucose metabolism and insulin signaling
	IV-4. Steroid hormones
	IV-5. Endocrine; others
	IV-6. The placenta, fetal growth and development
	IV-7. Environmental, hormonal, gonadal and brain interactions
	IV-8. Reproduction; others
	IV-9. Developmental origins of adult health and disease
	IV-10. Epigenetics, early development and reproduction
	IV-11. Development; others
V. Neurobiology & Neuroscience	V-1. Neural development and repair
	V-2. Synapse & neural cellular communication
	V-3. Neural cell signalling
	V-4. Neuron-glia interactions/functions of glia
	V-5. Brain circuits
	V-6. Imaging of brain
	V-7. Learning, memory & neuronal plasticity
	V-8. Higher order brain functions
	V-9. Neurologic and psychiatric diseases
	V-10. Somatosensory & Pain
	V-11. Autonomic Physiology
	V-12. Brain-machine interface
	V-13. Neurobiology & neuroscience; others
VI. Epithelial transport, Secretion & Absorption	VI-1. Epithelial: Enteric immune system
	VI-2. Epithelial: Organic solute transporters (amino acids, peptides, glucose, etc)
	VI-3. Epithelial: Epithelial Ca <sup>2+</sup> transports: pumps, transporters and channels
	VI-4. Epithelial: Epithelial transports of Na <sup>+</sup> , K <sup>+</sup> , Cl <sup>-</sup> , bicarbonate and phosphates
	VI-5. Epithelial: CFTR—the link between physiology and pathology
	VI-6. Epithelial: Regulatory mechanisms of epithelial transport (cell signalling, kinase cascades, scaffolding proteins, trafficking, and posttranslational processing)
	VI-7. Epithelial: Ca <sup>2+</sup> signaling in secretory cells
	VI-8. Epithelial: New models of epithelial function (e.g. choroid plexus and model organisms)
	VI-9. Epithelial: Epithelial tissues; others
	VI-10. G-I tract: Growth and differentiation of gastrointestinal system
	VI-11. G-I tract: Gastro-intestinal motility control
	VI-12. G-I tract: Acid secretion (ion channels, pumps, cell signal, trafficking and targeting)
	VI-13. G-I tract: Nutritional Sciences
	VI-14. G-I tract: Microbiome
	VI-15. G-I tract: G-I tract; others
	VI-16. Renal: Transport of ion, amino acids and other small molecules in renal tubular epithelium
	VI-17. Renal: Role of local factors and sensors in regulation of renal transport
	VI-18. Renal: Regulation of glomerular filtration
	VI-19. Renal: Kidney; others
VII. Molecular & Cellular Biology	VII-1. Ion Channels
	VII-2. Cell Signaling
	VII-3. Ca <sup>2+</sup> signaling
	VII-4. Receptors and sensors
	VII-5. Transporters
	VII-6. Membrane targeting and protein sorting
	VII-7. Protein-protein, protein-lipid interactions
	VII-8. Single molecule physiology
	VII-9. Organelle Physiology (e.g. mitochondria and nucleus)
	VII-10. Cell shape and migration
	VII-11. Cell death
	VII-12. Exo- and endocytosis
	VII-13. Cell cycle and proliferation
	VII-14. RNA interference
	VII-15. In vitro & in vivo imaging
	VII-16. Molecular & cellular biology; others
VIII. Evolution, Adaptation & Environment	VIII-1. New physiology from field and lab studies of wild animals
	VIII-2. Ecophysiology and the future of life on earth: climate change and its consequences
	VIII-3. Astrophysiology and space travel
	VIII-4. Environmental stresses
	VIII-5. Environmental cues and temperature regulation
	VIII-6. Time cues and biological clocks
	VIII-7. Comparative physiology and model organisms
	VIII-8. Evolution, adaptation & environment; others
IX. Genomics & Biodiversity	IX-1. Stem cells and regeneration
	IX-2. "Omics": transcriptomics, proteomics, metabolomics, physiomics and informatics
	IX-3. Genomes to physiology
	IX-4. Genomics & biodiversity; others
X. Education	X-1. Effective IT in education
	X-2. Effective student lab practice
	X-3. Problem-based learning in physiology education
	X-4. Evidence-based education
	X-5. Education; others
XI. Physiome	XI-1. Computational physiology
	XI-2. Computational biology
	XI-3. Bioengineering
	XI-4. Multi-scale modeling
	XI-5. Physiome; others
XII. Alternative Medicine	XII-1. Acupuncture & Moxibustion
	XII-2. Aromatherapy
	XII-3. Herbal Medicine
	XII-4. Manual therapy
	XII-5. Energy Therapy
	XII-6. Alternative Medicine; others