



# EB 2016

## TOPIC CATEGORIES – PHYSIOLOGY

### CARDIOVASCULAR SECTION

#### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1001-APS 2016 Gabor Kaley Lecture Featured Topic (Noursharg)
- 1002-APS Cardiopulmonary Effects of Environmental Stressors (Wold)
- 1003-APS Cerebrovascular Dysfunction and Reactive Nitrogen Species (Katakam/Pollock)
- 1004-APS Cooperation between Adaptive and Innate Immunity Post-Myocardial Infarction (DeLeon-Pennell/de Castro Bras)
- 1005-APS Endothelial Dysfunction in Diabetes (Dokken / Meininger)
- 1006-APS Metabolic Regulation of Cardiac Function in Diabetes: Epigenetics and Posttranslational Mechanisms (Wende/Chatham)
- 1007-APS New Approaches for Induction of Arteriogenesis (Roci)
- 1008-APS Sex Disparities in Cardiovascular Function and Remodeling (Goulopoulou)
- 1009-APS Wiggers Award Featured Topic (Meininger)

#### POSTERS:

- 1015-APS Angiogenesis and vascular growth
- 1016-APS Blood pressure regulation
- 1017-APS Cardiac electrophysiology
- 1018-APS Cardiac function and dynamics
- 1019-APS Control of cerebral circulation
- 1020-APS Control of coronary circulation
- 1021-APS Diabetes and insulin resistance
- 1022-APS Endothelial cell biology
- 1023-APS Endothelial derived factors
- 1024-APS Extracellular matrix and cardiac remodeling
- 1025-APS Gene expression and cardiovascular function
- 1026-APS Heart failure
- 1027-APS Hypertension
- 1028-APS Microcirculation
- 1029-APS Myocardial ischemia
- 1030-APS Myocardial metabolism
- 1031-APS Peripheral circulation
- 1032-APS Reactive oxygen species and cardiovascular injury
- 1033-APS Shock
- 1034-APS Vascular ion channels
- 1035-APS Vascular smooth muscle in health and disease

### THE MICROCIRCULATORY SOCIETY

#### POSTERS:

- 1040-APS Angiogenesis/microvascular remodeling/injury and repair
- 1041-APS Atherosclerosis/thrombosis/platelets
- 1042-APS Inflammation/leukocyte-endothelium interactions
- 1043-APS Instrumentation, methodology, and experimental models
- 1044-APS Ischemia-reperfusion/free radical biology
- 1045-APS Lymphatic and venular function
- 1046-APS Microvascular cell signaling pathways
- 1047-APS Microvascular development and aging
- 1048-APS Microvascular flow regulation/oxygen delivery/networks
- 1049-APS Microvascular mechanics/hemodynamics/rheology
- 1050-APS Microvascular pathophysiology-pharmacology, therapeutics and translational aspects
- 1051-APS Pericytes and stem cells
- 1052-APS Permeability/fluid and solute exchange/glycocalyx
- 1053-APS Tissue-microvessel interactions/extracellular matrix
- 1054-APS Vasomotor control: endothelium/smooth muscle/nerves

### BIOMEDICAL ENGINEERING SOCIETY

#### POSTERS:

- 1055-APS Mathematical models of organ systems, tissues or cells
- 1056-APS Mechanobiology
- 1057-APS Regenerative medicine
- 1058-APS Tissue engineering

### CELL & MOLECULAR PHYSIOLOGY SECTION

#### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1065-APS Cell Signaling: Proteins, Pathways, and Mechanisms (Rao/Rodrigues)
- 1066-APS Ion Channels and Transporters in Health and Disease (Kravtsov/Thai)
- 1067-APS Microbiota or Nutrition and Host Cell Signaling (Worrell/Butterworth)



## POSTERS:

- 1070-APS Ion channels, transporters and pumps in health and disease
- 1071-APS Signal transduction physiology: proteins, pathways and cells
- 1072-APS Oxidative stress, mitochondrial metabolism and redox changes in health and disease
- 1073-APS Apoptosis, cell stress and cell death
- 1074-APS Stem cells, cell growth, development, differentiation, and autophagy
- 1075-APS Cellular responses to inflammation
- 1076-APS Physiology and pathophysiology of barriers in endothelia, epithelia, and the blood brain barrier
- 1077-APS Cell migration, contractility, cytoskeleton, and adhesion
- 1078-APS Prokaryotic transport, metabolism, and cell signaling in nutrition, health, and disease
- 1079-APS Transporters for transmitters, nutrients, metabolites, and drugs
- 1080-APS pH homeostasis and acid-base transport
- 1081-APS Trafficking, membrane domains, polarity, and protein targeting
- 1082-APS Extracellular matrix, cell interactions, and tissue organization
- 1083-APS Cell volume, osmoregulation, and water transport
- 1084-APS Cell and molecular processes in cancer metastasis
- 1085-APS Cellular response to hypoxia
- 1086-APS Omic and systems biology approaches in neurodegenerative diseases
- 1087-APS Orai and STIM proteins in calcium signaling
- 1088-APS microRNAs in health and disease

## CENTRAL NERVOUS SYSTEM SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1090-APS Breathing Disturbances in Neurological Disorders (Moreira)
- 1091-APS Novel Mechanisms at the Level of the Solitary Tract Nucleus (NTS) (TBD)

### POSTERS:

- 1095-APS Astrocyte and neuroglial interactions
- 1096-APS Blood-brain barrier, brain blood flow and metabolism
- 1097-APS Brain development and aging
- 1098-APS Central nervous system: other
- 1099-APS Central regulation of body fluid homeostasis
- 1100-APS Central regulation of food intake and body weight
- 1101-APS Cognition and behavior
- 1102-APS Neuroendocrinology/neuroimmunology
- 1103-APS Neuroexcitability, neurotransmission and neuroplasticity
- 1104-APS Neuroinflammation/neuroprotection/ischemia
- 1105-APS Neurotransmission and signaling molecules

## COMPARATIVE & EVOLUTIONARY PHYSIOLOGY SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1110-APS Avian Osmoregulation: Unique Solutions, Unanswered Questions (Sweazea/Goldstein)

### POSTERS:

- 1115-APS Comparative cardiovascular and respiratory physiology
- 1116-APS Comparative metabolic physiology, biochemistry and endocrinology
- 1117-APS Comparative muscle physiology, locomotion and behavior
- 1118-APS Comparative osmotic, ionic, and acid-base regulation
- 1119-APS Comparative neurobiology
- 1120-APS Comparative nutritional physiology
- 1121-APS Other comparative and evolutionary physiology
- 1122-APS Scholander Award Competition

## ENDOCRINOLOGY & METABOLISM SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1125-APS Hormones and Reproduction (Samson)
- 1126-APS Metabolic Consequences of Exercise (Steiner/Yosten)

### POSTERS:

- 1130-APS Cardiovascular endocrinology, including renin-angiotensin-aldosterone
- 1131-APS Gestation, fetal, and neonatal biology, including mammary gland and lactation
- 1132-APS Mitochondrial function
- 1133-APS Neuroendocrinology, hypothalamus and pituitary
- 1134-APS Obesity and satiety
- 1135-APS Adipocyte function and metabolism
- 1136-APS Pancreatic hormones and diabetes
- 1137-APS Reproduction and sex hormones
- 1138-APS Stress and trauma including adrenal gland
- 1139-APS Exercise, muscle protein synthesis, and bone metabolism
- 1140-APS Nutrition and nutrient metabolism, including lipids, amino acids, and carbohydrates
- 1141-APS Translational endocrinology and metabolism

## ENVIRONMENTAL & EXERCISE PHYSIOLOGY SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1145-APS Hot, Cold, and Old: Aging and the Physiology of Thermal Stress (Schlader/Gagnon)
- 1146-APS Mechanisms Regulating Skeletal Muscle Mass (Bodine)
- 1147-APS Recovery from Exercise and Translating Post-Exercise Hypotension (Baynard)
- 1148-APS What Do Both Mitochondrial Protein Turnover and Mitochondrial Function Tell Us about Exercise and Aging? (Miller)

### POSTERS:

- 1150-APS Acute exercise responses
- 1151-APS Altitude and hypoxia
- 1152-APS Cardiac responses to exercise
- 1153-APS Exercise training responses
- 1154-APS Exercise, health and disease
- 1155-APS Fluid balance, blood volume regulation and trauma
- 1156-APS Metabolism and energetics of muscle and related tissues
- 1157-APS Muscle atrophy and hypertrophy
- 1158-APS Muscle plasticity and gene regulation/expression
- 1159-APS Neural control of the circulation during exercise
- 1160-APS Ergogenics and detection
- 1161-APS Reduced gravity and hyperbaric environments
- 1162-APS Respiratory responses to exercise
- 1163-APS Responses of bone and connective tissue to exercise and inactivity
- 1164-APS Signaling with muscle among cells, tissues and organs
- 1165-APS Temperature regulation and biological timekeeping
- 1166-APS Vascular responses to exercise and environmental stress
- 1167-APS Exercise and nutrition

## EPITHELIAL TRANSPORT GROUP

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1170-APS Epithelial Physiology and Transport I (Ussing Lecture)
- 1171-APS Epithelial Physiology and Transport II (Hebert Lecture)

### POSTERS:

- 1175-APS Epithelial physiology and transport: CFTR
- 1176-APS Epithelial physiology and transport: channels
- 1177-APS Epithelial physiology and transport: ENaC
- 1178-APS Epithelial physiology and transport: exosomes
- 1179-APS Epithelial physiology and transport: ion and electrolyte transport
- 1180-APS Epithelial physiology and transport: microbiome

- 1181-APS Epithelial physiology and transport: miscellaneous transporters and channels
- 1182-APS Epithelial physiology and transport: paracellular transport
- 1183-APS Epithelial physiology and transport: solute transport
- 1184-APS Epithelial physiology and transport: tight junctions
- 1185-APS Epithelial physiology and transport: water transport

## GASTROINTESTINAL & LIVER PHYSIOLOGY SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1190-APS Chronic Liver Diseases Modulated by Transcriptional and Translational Mechanisms (Wang)
- 1191-APS Innate Immune Functions of Epithelial Cells (Frey)

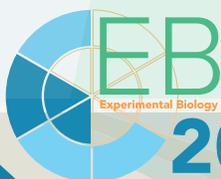
### POSTERS:

- 1195-APS Alcoholic and nonalcoholic fatty liver diseases
- 1196-APS Barrier function and repair
- 1197-APS Effects of diet and metabolites on mucosal immunology
- 1198-APS Effects of diet on GI and liver physiology
- 1199-APS Gastric physiology and pathophysiology
- 1200-APS Gastrointestinal cancer and metastasis
- 1201-APS Gastrointestinal development
- 1202-APS Gastrointestinal motility
- 1203-APS Gastrointestinal nutrient sensors
- 1204-APS GI hormones, peptides and receptors
- 1205-APS GI and liver epithelial junctions
- 1206-APS GI and liver stem cells
- 1207-APS Growth factors, proliferation, differentiation and apoptosis
- 1208-APS Immunology and microbiology of the gut
- 1209-APS Intestinal inflammation and pathophysiology
- 1210-APS Liver physiology and pathophysiology
- 1211-APS Metal ion transport
- 1212-APS Metabolic disease: GI and liver function
- 1213-APS Microbes and nutrition
- 1214-APS Microbiome of the GI tract
- 1215-APS Nuclear receptors in the liver and GI tract
- 1216-APS Nutrient metabolism in the gut
- 1217-APS Pancreatic physiology and pathophysiology
- 1218-APS Prebiotics, probiotics and gut function

## HISTORY OF PHYSIOLOGY GROUP

### POSTERS:

- 1220-APS History of Physiology



## HYPOXIA GROUP

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1225-APS Chemical Control of Autonomic Function in Health and Disease (Semenza/Ramirez)

### POSTERS:

1230-APS Carotid body structure and function  
1231-APS Gene transcription and translation in hypoxia  
1232-APS Hypoxia and ion channels, transmitters, and second messengers  
1233-APS Intermittent hypoxia/oxidative stress  
1234-APS Pathophysiology of hypoxia  
1235-APS Responses to acute or chronic hypoxia exposure and altitude  
1236-APS Integrated physiology and hypoxia

## MUSCLE BIOLOGY GROUP

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1240-APS Muscle Dysfunction in Diabetes: Cause(s) or Effect(s)? (Brozinick)  
1241-APS Skeletal Muscle Peroxisomal-Mitochondrial Interactions in Health and Disease (Cortright/Noland)

### POSTERS:

1245-APS Aging and muscle function  
1246-APS Calcium and muscle contractility  
1247-APS Calcium homeostasis  
1248-APS Cardiac muscle, physiology  
1249-APS Contractile and regulatory proteins  
1250-APS Excitation-contraction coupling mechanisms  
1251-APS Heat shock proteins and muscle function  
1252-APS Muscle chemistry and metabolism  
1253-APS Skeletal muscle, physiology  
1254-APS Smooth muscle, physiology/pharmacology

## NEURAL CONTROL & AUTONOMIC REGULATION SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1260-APS NCAR Young Investigator Awards  
1261-APS The Mind Matters: Psychology as an Overlooked Variable in Autonomic Physiology  
1262-APS Neural Control of Inflammation-Mediated Hypertension  
1263-APS Vagal-Respiratory Coupling and its Implications in Health and Disease  
1264-APS Actions and Interactions of Baroreflexes, Chemoreflexes and Metaboreflexes in Autonomic Regulation and Heart Disease

### POSTERS:

1270-APS Sympathetic regulation in heart failure  
1271-APS Sympathetic regulation in hypertension  
1272-APS Sympathetic regulation in diabetes and obesity  
1273-APS Differences in autonomic regulation in aging or sex  
1274-APS Autonomic circuitry in thermoregulation or metabolism  
1275-APS Sympathetic control of the circulation  
1276-APS Arterial baroreflex function and blood pressure regulation  
1277-APS Chemoreflex function and autonomic regulation  
1278-APS Sympathetic and parasympathetic regulation in disease  
1279-APS Autonomic balance: sympathetic and parasympathetic  
1280-APS Central regulation of autonomic control: hypothalamus  
1281-APS Central regulation of autonomic control: brain stem  
1282-APS Central regulation of autonomic control: CNS  
1283-APS Inflammation and autonomic regulation  
1284-APS Autonomic and respiratory interactions  
1285-APS Autonomic regulation of neuroendocrine function  
1286-APS Autonomic regulation of body fluid volume  
1287-APS Autonomic adjustments to behavioral stress  
1288-APS Autonomic adjustments to exercise  
1289-APS Enteric nervous system regulation  
1290-APS Autonomic control and autoregulation of the cerebral circulation

## PHYSIOLOGICAL GENOMICS GROUP

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1295-APS Environmental Regulators on Microbiome-Mediated Immunity and Inflammation: Genetic and Epigenetic Implications (Claycombe/Meydani)

### POSTERS:

1300-APS Systems biology, computational modeling, and bioinformatics  
1301-APS Genetically-engineered model organisms  
1302-APS Genetics, genomics, gene expression, and epigenetics  
1303-APS Ion transport: genes and function  
1304-APS Non-coding RNA: miRNA, siRNA, and long ncRNA  
1305-APS Genetics/genomics of exercise, obesity, and diabetes  
1306-APS Genetics/genomics of cardiovascular and kidney disease  
1307-APS Renin-angiotensin system: genes and function  
1308-APS Functional genomics: transcriptomics, proteomics and metabolomics  
1309-APS Vascular disease: genes and function  
1340-APS Translational genomics: from model organisms to humans

## RENAL SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1345-APS Novel Signaling and Transport Mechanisms in the Collecting Duct (Prieto-Carrasquero/Peti-Peterdi)
- 1400-APS Cross-Talk between Salt and Other Factors in Hypertension (Li)

### POSTERS:

- 1350-APS Diabetic renal disease
- 1351-APS Hormone and autacoid effects on the kidney
- 1352-APS Oxidative stress and hypoxia in the kidney
- 1353-APS Renal epithelial acid-base mechanisms
- 1354-APS Renal hemodynamics, glomerular filtration, and the renal vasculature
- 1355-APS Renal transport, trafficking, and regulation
- 1356-APS Kidney in hypertension
- 1357-APS Renal pathology, toxicology
- 1358-APS Renal water transport, urea transport, and countercurrent mechanisms
- 1359-APS Sex differences in renal function and disease
- 1360-APS Aging and renal function
- 1361-APS Nutrition, exercise and metabolic syndrome in renal function
- 1362-APS Omics and systems biology of renal function and disease
- 1363-APS Renal translational physiology
- 1364-APS Acute kidney injury
- 1365-APS Immune cells and inflammation impact on kidney function and hypertension
- 1366-APS Cilia in renal function

## RESPIRATION SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1370-APS Environmental Exposures, Oxidative Stress, and Lung Disease (Waters/Chatterjee)
- 1371-APS Inflammation and Its Influence on Lung Function and Respiratory Control (Wilson/Wilson)
- 1372-APS Intermittent Hypoxia: Respiratory and Cardiovascular Control and Beyond (Solomon/Fields)
- 1373-APS Redundancy and Plasticity in Respiratory Control (Bavis/Nichols)

### POSTERS:

- 1375-APS Control of breathing: connectivity, neuromodulation and neurotransmission
- 1376-APS Control of breathing: chemoreception
- 1377-APS Control of breathing: development
- 1378-APS Control of breathing: integrated responses

- 1379-APS Control of breathing: respiratory motoneurons and muscles
- 1380-APS Control of breathing: respiratory plasticity
- 1381-APS Control of breathing: rhythm generation
- 1382-APS Lung physiology: airway epithelial cell biology
- 1383-APS Lung physiology: airway responsiveness and smooth muscle cell biology
- 1384-APS Lung physiology: alveolar epithelial cell biology
- 1385-APS Lung physiology: biomechanics, surfactant and gas exchange
- 1386-APS Lung physiology: development and plasticity
- 1387-APS Lung physiology: endothelial cell biology
- 1388-APS Lung physiology: fluid balance
- 1389-APS Lung physiology: pulmonary hypertension
- 1390-APS Lung physiology: vascular smooth muscle cell biology, vascular regulation, and hypoxia

## TEACHING OF PHYSIOLOGY SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1395-APS Innovations in Teaching Physiology (Golden)

### POSTERS:

- 8100-EB Computers in research and teaching
- 8200-EB Teaching, learning and testing in the biological and biomedical sciences

## WATER & ELECTROLYTE HOMEOSTASIS SECTION

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1400-APS Cross-Talk between Salt and Other Factors in Hypertension (Li)
- 1401-APS Hypertension: Developing Concepts (O'Connor/Ho)
- 1402-APS Neural and Hormonal Modulation of Fluid Balance and Ion Homeostasis in Health and Disease (Banek/Lob)
- 1403-APS Origins of Adult Cardiovascular and Metabolic Disease (Loria/Gillis)

### POSTERS:

- 1405-APS Blood pressure and fluid volume regulation in pregnancy
- 1406-APS Developmental programming and cardiorenal function in adults
- 1407-APS Cardiovascular and renal mechanisms in diabetes and metabolic syndrome
- 1408-APS Renin-angiotensin-aldosterone system in regulation of blood pressure and renal function
- 1409-APS Sex differences in blood pressure and fluid volume homeostasis
- 1410-APS Translational physiology in water and electrolyte homeostasis research