



ABSTRACT TOPICS – 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	Novel Insights in Vascular Pathophysiology (Isakson/Bagher)
1002-APS	Sex Differences in Obesity and Cardiovascular Disease (Belin de Chantemele/Loria)
1003-APS	Carl J. Wiggers Award Featured Topic (Heusch)
1004-APS	Inflammation and Immunity and Heart Disease (Halade/Thorpe)
1005-APS	Vascular-Mediated Mechanisms of Cognition and the Role of Exercise (Baynard)
1006-APS	Immune Cells Involved in Cardiovascular Disease (Mitchell/Madhur)
1007-APS	Kaley Lecture Featured Topic: The Complications of Diabetes and the Role of Inflammation: Mechanisms and Therapeutic Opportunities (Schmidt)
1008-APS	Cardiovascular Control after Spinal Cord Injury (Phillips/West)
1009-APS	Mitochondrial Physiology in Cardiovascular Disease (Calvert/Elrod)

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, insulin resistance and obesity
1022-APS	Endothelial cell biology
1023-APS	Endothelial derived factors
1024-APS	Extracellular matrix and cardiac remodeling
1025-APS	Genetics of cardiovascular disease
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 & 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 & 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
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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 Cellular Mechanisms of Stress and Inflammation (Bomberger/White)
- 1066-APS Ion Channels and Transporters in Health and Disease (Hamilton/Rodrigues)
- 1067-APS Mechanisms and Influences on Cell Signaling (Worrell)

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 New Insights into the Role of Hypothalamic Peptides in the Control of Appetite and Energy Balance (Blevins)
- 1091-APS Neuroglial Interactions in Health and Disease (Gulbransen)

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 Comparative Perspectives on Hypoxia Signaling and Tolerance (Scott)

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 Central and Peripheral Mechanisms Regulating Body Weight and Glucose Homeostasis (Zsombok)
- 1126-APS Brown Fat vs Skeletal Muscle as Metabolic Targets: Activation of Thermogenesis or Glucose Oxidation (Symonds)

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 The Integrated Physiological Response to Heat Stress in Vulnerable Populations. (Sawka)
- 1146-APS Exploiting Environmental Stressors to Improve Health and Performance (Minson/Romero)
- 1147-APS Impact of Dairy Based Nutritional Interventions on Cardiometabolic Health (Alexander/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

(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 Steve Hebert Lecture Featured Topic (Moeller)
- 1171-APS Hans Ussing Lecture Featured Topic (Klein)

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 Autophagy: Driver of Microbiome Composition and Intestinal Homeostasis (Theiss)
 1191-APS Cytoskeletal Proteins in GI and Liver Diseases (Snider/Toivola)

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 Physiological Adaptation to Hypoxia and High Altitudes (Iturriaga)

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 Satellite Cells: External and Systemic Influences (Brooks/Dupont-Versteegden)
 1241-APS The Hot Zone: Skeletal Muscle Changes Caused by Hyperthermia and Heat Stress (Selsby)

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 Ion Channel Modulation: Contributions to Autonomic Dysfunction in Cardiovascular and Metabolic Diseases (Chen/Toney)
- 1261-APS Neural Control of the Heart: New Tools, New Mechanisms (Chapleau)
- 1262-APS Circumventricular Organs: A Blood-Brain Interface for Modulation of Cardiovascular and Immune Function and Fluid and Electrolyte Balance (Yao)
- 1263-APS Epigenetic Modifications and Autonomic Regulation (Sriramula)
- 1264-APS NCAR Young Investigator Awards (Young/Sabharwal)

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 Novel Genetic Risk Factors and Early-Pregnancy Mechanisms Contributing to Preeclampsia (Grobe/Young)

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 Renal Section Young Investigator Award Featured Topic (Pochynyuk)

POSTERS:

(NOTE: Highest scoring abstracts for the Renal Poster topic categories will be selected for oral presentation in two additional featured topics focusing on Advances in Renal Physiology)

1350-APS Diabetic renal disease
 1351-APS Hormone and autacid 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 Central Neuromodulation in the Control of Breathing (Garcia/Mitchell)
 1371-APS Epigenetic Regulation of Lung Development, Injury, and Repair (Rogers/Tipple)
 1372-APS Organelle Dysfunction in Pulmonary Vascular Disease: Mitochondria, Endoplasmic Reticulum, Lysosomes and Beyond (Shimoda/Ryan)
 1373-APS Respiratory Control: Beyond the Diaphragm (Fuller/Turner)

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 (Osborne)

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 Neural and Hormonal Modulation of Fluid Balance and Ion Homeostasis in Health and Disease (Gao/Schiller)
- 1401-APS Stress and Physiological Responses Throughout Life (Pollock/Taylor)
- 1402-APS Hypertension and Sodium Homeostasis-Developing Concepts (Sandberg/Gohar)
- 1403-APS New Animal Models and Their Utility for WEH Research (Palygin/Pochynyuk)

POSTERS:

- 1405-APS Blood pressure and fluid volume regulation in pregnancy
- 1406-APS Developmental programming and cardio-renal 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

