

EB2019 Topic Category List for PHYSIOLOGY

Cardiovascular Section

FEATURED TOPICS:

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

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| 1001-APS | Cardiac ECM niche in health and disease (Dixon/Griffiths) |
| 1002-APS | Kaley Award Featured Topic (Kubes) |
| 1003-APS | Wiggers Award Featured Topic (Chien) |
| 1004-APS | Cardiac and Peripheral Vasculopathies: Emerging Biomarkers, Imaging and Treatments (LeBlanc/Kaufman) |
| 1005-APS | Inflammation and Leukocyte Biology in Cardiovascular Disease (Halade/de Castro Bras) |
| 1006-APS | Cardiovascular Metabolism in Diabetes (Hill/Harmancey) |
| 1007-APS | Cardiovascular Section Young Investigator Competition (Faulkner/Dorrance) |
| 1008-APS | Aging, Exercise, and Heart Failure: Common Connections and New Targets (Emter/Wrann) |

POSTERS:

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|----------|--|
| 1015-APS | Blood pressure regulation |
| 1016-APS | Cardiac electrophysiology |
| 1017-APS | Cardiac function and dynamics |
| 1018-APS | Cardioprotection |
| 1019-APS | Diabetes, insulin resistance and obesity |
| 1020-APS | Endothelial cell biology in health and disease |
| 1021-APS | Heart failure |
| 1022-APS | Hypertension |
| 1023-APS | Myocardial ischemia |
| 1024-APS | Vascular ion channels |
| 1025-APS | Cerebral circulation |
| 1026-APS | Coronary circulation |

The Microcirculatory Society

POSTERS:

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|----------|--|
| 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 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
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

1060-APS pH Homeostasis and Acid-Base Transport (Parker/Romero)
1061-APS Ion Channels, Solute and Molecular Transporters In Health and Disease (Baines)

1062-APS Molecular Mechanisms of Cellular Signaling and Transduction (Blazer-Yost/Teal)

POSTERS:

1065-APS Ion channels, transporters and pumps in health and disease
1066-APS Aquaporins and other water transporters
1067-APS Nutrient and metabolite transporters
1068-APS Neurotransmitter and drug transporters
1069-APS pH homeostasis and acid-base transport
1070-APS Cell volume regulation
1071-APS Endothelial and epithelial barrier function
1072-APS Choroid plexus and blood brain barrier
1073-APS Signal transduction mechanisms and regulation
1074-APS Nutritional influences on cell signaling
1075-APS Microbiome influences on cell signaling
1076-APS Orai and STIM proteins in calcium signaling
1077-APS Exosomes, ectosomes and microvesicles
1078-APS microRNAs in health and disease
1079-APS Extracellular matrix and cytoskeleton
1080-APS Oxidative stress, redox changes and mitochondrial metabolism
1081-APS Inflammation: cellular responses
1082-APS Hypoxia: cellular responses
1083-APS Protein trafficking, targeting, membrane domains, and cell polarity
1085-APS Cell migration, adhesion, contractility and excitability
1086-APS Stem cells, cell growth, development, differentiation and autophagy
1087-APS Apoptosis, cell stress and cell death
1088-APS Cancer proliferation and metastasis: cell and molecular processes
1089-APS Cell physiology: emerging topics, concepts and methods

Central Nervous System Section

FEATURED TOPICS:

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

1095-APS Effects of Diet on Emotion and Motivated Behavior (Silberman)
1096-APS New Advances in CNS Physiology (Wainford)

POSTERS:

1097-APS	Astrocyte and neuroglial interactions
1098-APS	Blood-brain barrier, brain blood flow and metabolism
1099-APS	Brain development and aging
1100-APS	Central nervous system: other
1101-APS	Central regulation of body fluid homeostasis
1102-APS	Central regulation of food intake and body weight
1103-APS	Cognition and behavior
1104-APS	Neuroendocrinology/neuroimmunology
1105-APS	Neuroexcitability, neurotransmission and neuroplasticity
1106-APS	Neuroinflammation/neuroprotection/ischemia
1107-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

1110-APS	Comparative and Evolutionary Physiology Section Trainee Featured Topic (Crossley)
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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 digestive 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

1125-APS	Sex specific differences in obesity induced hypertension (Barnes/Primeaux)
1126-APS	Noncoding RNAs: Emerging Functions in Metabolism and Diseases (Wang/Zhang)

POSTERS:

1127-APS	Cardiovascular endocrinology, including renin-angiotensin-aldosterone
1128-APS	Gestation, fetal, and neonatal biology, including mammary gland and lactation
1129-APS	Mitochondrial function in endocrinology and metabolism
1130-APS	Neuroendocrinology, hypothalamus and pituitary
1131-APS	Obesity and satiety
1132-APS	Adipocyte function and metabolism
1133-APS	Pancreatic hormones and diabetes
1134-APS	Reproduction and sex hormones
1135-APS	Stress and trauma including adrenal gland
1136-APS	Exercise, muscle protein synthesis, and bone metabolism

- 1137-APS Nutrition and Nutrient Metabolism, including lipids, amino acids, and carbohydrates
- 1138-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

- 1140-APS Examining Physiological Mechanisms Using Environmental Stressors (Johnson/Schlader)
- 1141-APS EEP Impact Award Featured Topic: Modulation of Systemic and Tissue Metabolism via Differences in Activity and Fitness (Morris/Rector)
- 1142-APS Mechanisms Underlying the Greater Propensity for Cardiovascular Disease in Populations with Elevated Risk (Keller/Brothers)

POSTERS:

- 1145-APS Acute exercise responses
- 1146-APS Altitude and hypoxia
- 1147-APS Cardiac responses to exercise
- 1148-APS Exercise training responses
- 1149-APS Exercise, health and disease
- 1150-APS Fluid balance, blood volume regulation and trauma
- 1151-APS Metabolism and energetics of muscle and related tissues
- 1152-APS Muscle atrophy and hypertrophy
- 1153-APS Muscle plasticity and gene regulation/expression
- 1154-APS Neural control of the circulation during exercise
- 1155-APS Ergogenics and Detection
- 1156-APS Reduced gravity and hyperbaric environments
- 1157-APS Respiratory responses to exercise
- 1158-APS Responses of bone and connective tissue to exercise and inactivity
- 1159-APS Signaling with muscle among cells, tissues and organs
- 1160-APS Temperature regulation and biological timekeeping
- 1161-APS Vascular responses to exercise and environmental stress
- 1162-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

- 1165-APS Hans Ussing Lecture Featured Topic (McDonough)
- 1166-APS Steve Hebert Lecture Featured Topic (Keely)

POSTERS:

- 1170-APS In vitro and in vivo epithelial transport in lung
- 1171-APS In vitro and in vivo epithelial transport in intestine
- 1172-APS In vitro and in vivo epithelial transport in kidney

Gastrointestinal & Liver Physiology Section

FEATURED TOPICS:

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

- 1175-APS Gastrointestinal and Liver Physiology and Disease (Zachos)

1176-APS Control of cellular organelle function, metabolism, and injury in liver and intestinal diseases (Li)

POSTERS:

1180-APS Alcoholic and nonalcoholic fatty liver diseases
1181-APS Barrier function and repair
1182-APS Effects of diet and metabolites on mucosal immunology
1183-APS Effects of diet on GI and liver physiology
1184-APS Gastric physiology and pathophysiology
1185-APS Gastrointestinal cancer and metastasis
1186-APS Gastrointestinal development
1187-APS Gastrointestinal motility
1188-APS Gastrointestinal nutrient sensors
1189-APS GI hormones, peptides and receptors
1190-APS GI and liver epithelial junctions
1191-APS GI and liver stem cells
1192-APS Growth factors, proliferation, differentiation and apoptosis
1193-APS Immunology and microbiology of the gut
1194-APS Intestinal inflammation and pathophysiology
1195-APS Liver physiology and pathophysiology
1196-APS Metal ion transport
1197-APS Metabolic disease: GI and liver function
1198-APS Microbes and nutrition
1199-APS Microbiome of the GI tract
1200-APS Nuclear receptors in the liver and GI tract
1201-APS Nutrient metabolism in the gut
1202-APS Pancreatic physiology and pathophysiology
1203-APS Prebiotics, probiotics and gut function

History of Physiology Group

POSTERS:

1205-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

1210-APS Hypoxia: Hot Topics in Hypoxia

POSTERS:

1211-APS Carotid body structure and function
1212-APS Gene transcription and translation in hypoxia
1213-APS Hypoxia and ion channels, transmitters, and second messengers
1214-APS Intermittent hypoxia/oxidative stress
1215-APS Pathophysiology of hypoxia
1216-APS Responses to acute or chronic hypoxia exposure and altitude
1217-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

1220-APS	Hot topics in muscle biology (Wang/Mitch)
POSTERS:	
1224-APS	Contractile processes
1225-APS	Cardiac muscle; physiology and metabolism in health and disease
1226-APS	Skeletal muscle; physiology, pathology and metabolism in health and disease
1227-APS	Smooth muscle; physiology, pathology and metabolism in health and disease
1228-APS	Aging and nutritional regulation of muscle atrophy; sarcopenia and muscle regeneration
1229-APS	Regulation of cardiac and skeletal muscle contraction
1230-APS	Role of exosomes in muscle metabolism
1231-APS	Muscle fatigue and regulation of EC coupling

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

1235-APS Autonomic Anti-inflammatory Mechanisms: Which Branch Trumps? (Mathis)

1236-APS Autonomic Function in Normal and Preeclamptic Pregnancies (Stachenfeld)

1237-APS Regulation of Muscle Sympathetic Outflow during Exercise (Floras/Millar)

1238-APS NCAR Young Investigator Awards Featured Topic

POSTERS:

1245-APS	Cellular and molecular basis of autonomic control
1246-APS	Sympathetic regulation in heart failure
1247-APS	Sympathetic regulation in hypertension
1248-APS	Sympathetic regulation in diabetes and obesity
1249-APS	Differences in autonomic regulation in aging or sex
1250-APS	Autonomic circuitry in thermoregulation or metabolism
1251-APS	Sympathetic control of the circulation
1252-APS	Arterial baroreflex function and blood pressure regulation
1253-APS	Chemoreflex function and autonomic regulation
1254-APS	Sympathetic and parasympathetic regulation in disease
1255-APS	Autonomic balance: sympathetic and parasympathetic
1256-APS	Central regulation of autonomic control: Hypothalamus
1257-APS	Central regulation of autonomic control: Brain stem
1258-APS	Central regulation of autonomic control: CNS
1259-APS	Inflammation, immune system and autonomic regulation
1260-APS	Autonomic and respiratory interactions
1261-APS	Autonomic regulation of neuroendocrine and fluid volume
1262-APS	Autonomic adjustments to behavioral stress
1263-APS	Autonomic adjustments to exercise
1264-APS	Enteric nervous system, digestion and metabolic function
1265-APS	Autonomic control of cerebral and coronary blood flow

Nutrition Physiology Interest Group

FEATURED TOPICS:

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

1270-APS Hot topics in Nutrition (Thalacker-Mercer/Borsheim)

POSTERS:

1271-APS Macronutrient (protein, carbohydrates and lipids) regulation of health and chronic disease

1272-APS Micronutrient (vitamins and minerals) regulation of health and chronic disease

1273-APS The role of bioactive components in health

1274-APS Metabolic programming

1275-APS Nutrient regulation of the microbiome

1276-APS Dietary regulation of body composition

1277-APS Nutrition and hunger control

1278-APS Nutrition through the lifecycle

Physiological Omics Group

POSTERS:

1280-APS Systems biology, computational modeling, and bioinformatics

1281-APS Genetically-engineered model organisms

1282-APS Genetics, genomics, gene expression, and epigenetics

1283-APS Ion transport: genes and function

1284-APS Non-coding RNA: miRNA, siRNA, and long ncRNA

1285-APS Genetics/genomics of exercise, obesity, and diabetes

1286-APS Genetics/genomics of cardiovascular and kidney disease

1287-APS Renin-angiotensin system: genes and function

1288-APS Functional genomics: transcriptomics, proteomics and metabolomics

1289-APS Vascular disease: genes and function

1290-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)

1295-APS Advances in Renal Physiology I (Ellison)

1296-APS Advances in Renal Physiology II (Layton)

1297-APS Renal Section Young Investigator Award Featured Topic: At the Nexus of Circadian Biology and Renal Physiology (Gumz)

POSTERS:

(NOTE: Highest scoring abstracts from the Renal Poster topic categories will be selected for oral

1300-APS Acute kidney injury

1301-APS Renal complications of polycystic disease

1302-APS Diabetic kidney disease

1303-APS Hormone and autacid effects on the kidney

1304-APS Immune cells and inflammation impact on kidney function and hypertension

1305-APS Kidney in hypertension

1306-APS Nutrition, exercise and metabolic syndrome in renal function

1307-APS Omics and systems biology of renal function and disease

1308-APS	Oxidative stress and hypoxia in the kidney
1309-APS	Renal hemodynamics, glomerular filtration, and the renal vasculature
1310-APS	Renal ion transport, transporter regulation, and trafficking
1311-APS	Renal pathology, toxicology
1312-APS	Renal translational physiology
1313-APS	Renal water transport, urea transport, and countercurrent mechanisms
1314-APS	Sex differences in renal function and disease

Respiration Section

FEATURED TOPICS:

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

1320-APS	Sex and Gender in Respiratory Physiology (Silveyra/Prakash)
1321-APS	Mapping The Lung: Leveraging Emerging Technologies To Better Understand Pulmonary Disease (Beers/Bastarache)
1322-APS	Emerging Therapeutics for Respiratory Dysfunction (Turner/Falk)
1323-APS	Perinatal Reprogramming of Respiratory Control (Huxtable/Baker)

POSTERS:

1325-APS	Control of breathing: connectivity, neuromodulation and neurotransmission
1326-APS	Control of breathing: chemoreception
1327-APS	Control of breathing: development
1328-APS	Control of breathing: integrated responses
1329-APS	Control of breathing: respiratory motoneurons and muscles
1330-APS	Control of breathing: respiratory plasticity
1331-APS	Control of breathing: rhythm generation and Patterning
1332-APS	Lung physiology: airway epithelial cell biology
1333-APS	Lung physiology: airway responsiveness and smooth muscle cell biology
1334-APS	Lung physiology: alveolar epithelial cell biology
1335-APS	Lung physiology: biomechanics, surfactant and gas exchange
1336-APS	Lung physiology: development and plasticity
1337-APS	Lung physiology: endothelial cell biology
1338-APS	Lung physiology: fluid balance
1339-APS	Lung physiology: pulmonary hypertension
1340-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

1345-APS	Innovative techniques for teaching health sciences to increase retention and mastery learning (Harrison-Bernard/Jones)
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POSTERS:

1346-APS	Teaching, Learning and Testing in the Biological and Biomedical Sciences
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Water & Electrolyte Homeostasis Section

FEATURED TOPICS:

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

- 1350-APS Effect of diet on metabolism, cardiovascular and renal physiology and pathophysiology
- 1351-APS Therapeutic and adverse effects of pharmacological agents on integrative physiology and pathophysiology
- 1352-APS Hormones and receptors in homeostatic control of physiology and during allostasis in pathophysiology
- 1353-APS Environmental and epigenetic contributions to disease origin
- POSTERS:**
- 1354-APS Blood pressure and fluid volume regulation in pregnancy
- 1355-APS Developmental programming and cardio-renal function in adults
- 1356-APS Cardiovascular and renal mechanisms in diabetes and metabolic syndrome
- 1357-APS Renin-angiotensin-aldosterone system in regulation of blood pressure and renal function
- 1358-APS Sex differences in blood pressure and fluid volume homeostasis
- 1359-APS Translational physiology in water and electrolyte homeostasis research

Total Abstracts Submitted