President’s Symposium Series

Research Advances in Sex/Gender and Developmental Programming of Chronic Diseases
Organized by: Jane F. Reckelhoff, Univ. of Mississippi Med. Ctr.

SYMPOSIA
- Developmental Programming of Diseases
  Barbara Alexander
- Sex Differences in Physiology and Pathophysiology
  Minolfa Prieto
- Women’s Health Research
  Heddwen Brooks

Distinguished Lectures
- Physiology in Perspective: The Walter B. Cannon Memorial Award Lecture
  Michael Welsh
- Henry Pickering Bowditch Award Lecture
  Brant Isakson
- Robert M. Berne Distinguished Lectureship of the APS Cardiovascular Section
  Benjamin D. Levine
- Hugh Davson Distinguished Lectureship of the APS Cell and Molecular Physiology Section
  Jennifer Lippincott-Schwart
- Joseph Erlanger Distinguished Lectureship of the APS Central Nervous System Section
  Jeff Lichtman
- Joseph Erlanger Distinguished Lectureship of the APS Central Nervous System Section
  Jeff Lichtman
- August Krogh Distinguished Lectureship of the APS Comparative and Evolutionary Physiology Section
  Warren Burggren
- Solomon Berson Distinguished Lectureship of the APS Endocrinology and Metabolism Section
  Wolfgang Langhans
- Edward F. Adolph Distinguished Lectureship of the APS Environmental and Exercise Physiology Section
  Larry Kenney
- Horace W. Davenport Distinguished Lectureship of the APS Gastrointestinal and Liver Physiology Section
  John Wallace
- Carl Ludwig Distinguished Lectureship of the APS Neural Control and Autonomic Regulation Section
  Robin McAllen
- Carl W. Gottschalk Distinguished Lectureship of the APS Renal Section
  Paul Welling
- Julius H. Comroe, Jr. Distinguished Lectureship of the APS Respiration Section
  Peter Wagner
- History of Physiology Lecture
  Jack Rall
- Claude Bernard Distinguished Lectureship of the APS Teaching of Physiology Section
  Jeffrey D. Karpicke
- Ernest H. Starling Distinguished Lectureship of the APS Water and Electrolyte Homeostasis Section
  Peter Bie

Techniques and Technology Workshop Program
- Choosing the Right Diet for Your Animal Model
  Kay Lund and Denise Ney
- Using Ultrasound to Teach Cardiovascular Physiology and Anatomy
  Dee Silverthorn and Geoffrey Guttmann
Cardiovascular Section

**SYMPOSIA**
- **Adipose Tissue and the Cardiovascular System: Interactions with Sleep and Cardiometabolic Risk Factors**
  Naima Covassin and Maik Bollasch
- **Emerging Concepts in the Local Regulation of Blood Flow**
  Julie Freed and Dirk Duncker
- **Mathematical Modeling of Cardiac Excitability and Arrhythmias**
  Thomas Hund and Crystal Ripplinger
- **Mechanisms of Stiffening in Large and Small Vessels: From the Cytoskeleton to the Extracellular Matrix**
  Luis Martinez-Lemus
- **MiRNA Regulation of the Mitochondrion in Cardiovascular Disease**
  John Hollander and Dharendra Thapa
- **Ubiquitin and Ubiquitin-Like Proteins in Cardiovascular Physiology and Disease**
  Noah Weisleder and Xuejun Wang
- **Vascular Autophagy and Endothelial Cell Nitric Oxide Generation**
  David Symons and David Gutterman

**FEATURED TOPICS**
- **Cardiovascular Control after Spinal Cord Injury**
  Aaron A Phillips and Christopher R West
- **Carl J. Wiggers Award Featured Topic**
  Gerd F. Heusch
- **Immune Cells Involved in Cardiovascular Disease**
  Brett Mitchell and Meena Madhur
- **Inflammation and Immunity and Heart Disease**
  Ganesh Halade and Edward Thorp
- **Kaley Lecture Featured Topic: The Complications of Diabetes and the Role of Inflammation: Mechanisms and Therapeutic Opportunities**
  Ann Marie Schmidt
- **Mitochondrial Physiology in Cardiovascular Disease**
  John W. Calvert and John W. Elrod
- **Sex Differences in Obesity and Cardiovascular Disease**
  Eric J. Belin de Chantemele and Anaïla S Loria
- **Vascular-Mediated Mechanisms of Cognition and the Role of Exercise**
  Tracy Baynard

Careers in Physiology Committee

**SYMPOSIUM**
- **The Many Facets of a Teaching Career**
  Clintoria R. Williams and Josef Brandauer

Cell and Molecular Physiology Section

**SYMPOSIA**
- **Glia Cell Development, Migration, and Pathophysiology**
  Kenneth Gagnon and Harald Sontheimer
- **Multi-omics to Study the Cellular Pathophysiology of Neurodegenerative Diseases**
  Sanjay Pimplikar and Li-Huei Tsai
- **Transport Proteins and Cellular Signaling in Choroid Plexus Epithelia**
  Bonnie Blazer-Yost and Jeppe Praetorius
- **Omnics Approaches to Understanding Muscle Biology**
  Jatin George Burniston and Yi-Wen Chen

**FEATURED TOPICS**
- **Cellular Mechanisms of Stress and Inflammation**
  Jennifer Bomberger and Carl White
- **Ion Channels and Transporters in Health and Disease**
  Kirk Hamilton and Ely Rodrigues
- **Mechanisms and Influences on Cell Signaling**
  Roger T. Worrell
Central Nervous System Section

**SYMPOSIA**
- Role of CNS Osmosensory Networks in the Regulation of Cardiovascular Function in Health and Disease. Javier E Stern and Melina Pires da Silva
- Non-motor Dysfunctions in Parkinson's Disease. R Alberto Travagli

**FEATURED TOPICS**
- New Insights Into the Role of Hypothalamic Peptides in the Control of Appetite and Energy Balance. James Blevins
- Neuroglial Interactions in Health and Disease. Brian Gulbransen

**MINISYMPOSIUM**
- CNS Erlanger Minisymposium

Communications Committee

**SYMPOSIUM**
- New Models of Science Communication: Increasing Reproducibility and Transparency. Anne R Crecelius and Jorge M Serrador

Comparative & Evolutionary Physiology Section

**SYMPOSIA**
- Consequences of Physiological Stressors on the Development and Function of the Cardiovascular System. Todd Gillis
- Developmental Programming of Vertebrate Health and Disease by Hypoxia. Gina Galli

**FEATURED TOPICS**
- CEPS Trainee-Driven Featured Topic
- Comparative Perspectives on Hypoxia Signaling and Tolerance. Graham Scott

Education Committee

**REFRESHER COURSE**
- Curricular Innovation in Sex and Gender Based Medical Physiology Education. Karie Scrogin and Jennifer Sasser

Endocrinology and Metabolism Section

**SYMPOSIA**
- Central GLP-1 Receptors in the Regulation of Energy Homeostasis. Wolfgang Langhans
- Fighting the Fat: Lifestyle Approaches to Protect Against Adipose Tissue and Liver Dysfunction. David Wright
- Novel Imaging Technologies in Reproductive Physiology. Liliya M. Yamaleyeva and Sarah H. Lindsey
- Sleep, Circadian Clocks and Metabolism. Eve Van Cauter and Willis K. Samson
- Stressing the Beta Cell: The Good and The Bad. John Corbett

**FEATURED TOPICS**
- Brown Fat vs Skeletal Muscle as Metabolic Targets: Activation of Thermogenesis or Glucose Oxidation. Michael Symonds
- Central and Peripheral Mechanisms Regulating Body Weight and Glucose Homeostasis. Andrea Zsombok
Environmental and Exercise Physiology Section

SYMPOSIA
- Blood Doping: Physiology, Pharmacology and Detection Challenges
  Larry Bowers
- Cerebral Function of Permanent Residents of High Altitude: Problems and Solutions
  John B West and Tatum S. Simonson
- Exercise Training Versus Metformin for the Treatment of Cardiometabolic Diseases
  William G Schrage and Nathan Jenkins
- Patent Foramen Ovale: The Hole Story of Environmental and Exercise Physiology
  John Halliwill and Andrew Lovering
- SIRT1 in Muscle Health and Disease
  Vladimir Ljubicic

FEATURED TOPICS
- The Integrated Physiological Response to Heat Stress in Vulnerable Populations
  Michael Sawka
- Exploiting Environmental Stressors to Improve Health and Performance
  Christopher T. Minson and Steven A. Romero
- Impact of Dairy Based Nutritional Interventions on Cardiometabolic Health
  Lacy Alexander and Benjamin F. Miller

Epithelial Transport Group

SYMPOSIUM
- MicroRNAs in Kidney and Epithelial Transport Physiology, Development and Disease
  Johannes Loffing and Hui Cai

FEATURED TOPICS
- Hans Ussing Lecture Featured Topic
  Janet Klein

- New Insights into Renal Transport: Application of Genetic Models
  Timo Rieg and Robert Fenton
- Steve Hebert Lecture Featured Topic
  Hanne B. Moeller

SPECIAL SESSION
- Pre-EB Meeting of the Epithelial Transport Group Young Investigators Symposium

Gastrointestinal and Liver Physiology Section

SYMPOSIA
- Environmental, Microenvironmental and Nanoenvironmental Factors Which Drive Liver Disease Pathogenesis and Progression
  Michele T Pritchard
- Posttranscriptional Regulation of Intestinal Homeostasis: Stem Cells to Cancer
  Kathryn (Kate) Hamilton and Priya Chatterji

FEATURED TOPICS
- Autophagy: Driver of Microbiome Composition and intestinal Homeostasis
  Arianne L Theiss
- Cytoskeletal Proteins in GI and Liver Diseases
  Natasha T Snider and Diana Toivola

SPECIAL SESSION
- John Forte Session of the GIL Session

History of Physiology Group

SYMPOSIUM
- Twenty Years of Physiological Genomics
  David L. Mattson
Hypoxia Group

**SYMPOSIUM**
- Intermittent Hypoxia: Molecular, Integrative, and Clinical Implications
  Anna Svatikova and Ann Schreihofer

**FEATURED TOPIC**
- Physiological Adaptation to Hypoxia and High Altitudes
  Rodrigo Iturriaga

Integrative Physiology Symposium Series

- Engineering for Health: Integrating Engineering and Physiology to Combat Disease
  Gina L.C. Yosten

- Exercise Intolerance in Metabolic, Pulmonary and Cardiovascular Diseases: Did We Forget the Brain?
  Patrice Brassard and Damian Bailey

Muscle Biology Group

**SYMPOSIUM**
- The Role of Ribosome Biogenesis in Skeletal Muscle Hypertrophy
  John J. McCarthy

**FEATURED TOPICS**
- Satellite Cells: External and Systemic Influences
  Naomi Brooks and Esther Dupont-Versteegden

- The Hot Zone: Skeletal Muscle Changes Caused by Hyperthermia and Heat Stress
  Josh Selsby

Neural Control and Autonomic Regulation Section

**SYMPOSIA**
- Brain Secrets Revealed by Optogenetics/Chemogenetics Approaches
  Kamal Rahmouni and Annette De Kloet

**FEATURED TOPIC**
- Cardiac Sensory Afferents: The Cornerstone for Autonomic Reflex Processing in Health and Disease
  Kalyanam Shivkumar and Hanjun Wang

**FEATURED TOPIC**
- Circumventricular Organs: a Blood-Brain Interface for Modulation of Cardiovascular and Immune Function and Fluid and Electrolyte Balance
  Song Yao

**FEATURED TOPIC**
- Epigenetic Modifications and Autonomic Regulation
  Srinivas Sriramula

**FEATURED TOPIC**
- Ion Channel Modulation: Contributions to Autonomic Dysfunction in Cardiovascular and Metabolic Diseases
  Qinghui Chen and Glenn Toney

**FEATURED TOPIC**
- NCAR Young Investigator Awards
  Colin Young and Rasna Sabharwal

**MINISYMPOSIUM**
- Ludwig Minisymposium

**AWARD SESSION**
- DATA NCARnation

Nutrition Physiology Interest Group

**SYMPOSIUM**
- From Cancer-Causing Villain to Health-Promoting Hero: Taking a U-turn on Dietary Nitrite and Nitrate?
  Carl Keen and Alexandria Hast

www.experimentalbiology.org
Physiological Genomics Group

**SYMPOSIUM**
- Single Cell Analysis and Genomic Approaches
  Hilary Coller

**FEATURED TOPIC**
- Novel Genetic Risk Factors and Early-Pregnancy Mechanisms Contributing to Preeclampsia
  Justin L Grobe and Colin N Young

**AWARD SESSION**
- Trainee Highlights in Physiological Genomics

**SPECIAL SESSION**
- Fourth Annual Physiological Genomics Group Conference

Physiologists in Industry Committee

**SYMPOSIUM**
- Nitric Oxide Pathway Modulation for Therapeutic Intervention and Exercise Enhancement
  John Mattson

Publications Committee

**SYMPOSIUM**
- Publishing 101: How to Get Your Work Published and Avoid Ethical Minefields
  Curt Sigmund and Rita Scheman

Renal Section

**SYMPOSIA**
- Regulation of Glomeruli Physiological Function: Podocytes and Beyond
  Daria Ilatovskaya and Jochen Reiser
- Mining Protein-Protein Interactions to Study Renal Transporter Regulation
  Guangping Chen and Dennis Brown
- New Insights into the Regulation of Renal Blood Flow in Health and Disease
  Aaron Polichnowski and Jan Williams

**FEATURED TOPICS**
- Advances in Renal Physiology I
  Pablo Ortiz
- Advances in Renal Physiology II
  Edward Inscho
- Renal Section Young Investigator Award Featured Topic
  Oleh Pochynyuk

Respiration Section

**SYMPOSIA**
- Embracing the Heterogeneity of Lung Injury: A Bedside to Bench to Bedside Perspective
  Steven Dudek and Ciara Shaver
- Mechanisms Preserving Breathing Stability
  Jyoti Watters and Kendra Braegelmann
- The Emerging Role of Lipids in Lung Physiology and Disease
  Wolfgang M. Kuebler and Elephteria Letsiou
- Ventilatory Control and Function Following Perinatal Insults
  E. Fiona Baily and Ann Revill

**FEATURED TOPICS**
- Central Neuromodulation in the Control of Breathing
  Alfredo J Garcia and Gordon Mitchell
- Epigenetic Regulation of Lung Development, Injury, and Repair
  Lynette Kay Rogers and Trent E. Tipple
- Organelle Dysfunction in Pulmonary Vascular Disease: Mitochondria, Endoplasmic Reticulum, Lysosomes and Beyond
  Larissa Shimoda and John Ryan
- Respiratory Control: Beyond the Diaphragm
  David D Fuller and Sara M. Turner
Science Policy Committee

SYMPOSIUM

› Why Scientific Rigor Matters and Ways to Improve It
  Roy L Sutliff

Sex/Gender Research Interest Group

SYMPOSIUM

› Sex Differences in Diabetes, Obesity and Blood Pressure Control
  Heddwen Brooks

Teaching of Physiology Section

SYMPOSIA

› Examining the Changing Landscape of Course Delivery and Student Learning
  Patricia A. Halpin and Chaya Gopalan

› Inclusive Practices for Diverse Student Populations
  Kathryn M.S. Johnson

FEATURED TOPIC

› Innovation in Teaching: Abstract Driven
  David Lee Osborne

Trainee Advisory Committee

SYMPOSIUM

› Kick Start Your Funding: Looking Beyond NIH and NSF
  Jennifer Steiner and Kristi Streeter

Translational Physiology Interest Group

SYMPOSIA

› Leptin Beyond Appetite Regulation
  Prachi Singh and Paul Cohen

› Peptides and Metabolites in Cardiovascular Disease
  Lisandra E. de Castro Brás and Ganesh V. Halade

› Vasodilation in Human Microvessels: From Bed to Bench and Back
  Petra Kleinbongard and Karima Ait-Aissa

FEATURED TOPIC

› Translation Physiology Showcase: Focus on Sex differences in Obesity and Blood Pressure, Developmental Programming, and Women’s Health
Water and Electrolyte Homeostasis Section

LECTURE
WEH New Investigator Award Lecture

SYMPOSIA
Hydration and Vasopressin Beyond the Kidney
Lawrence E. Armstrong
Sodium Homeostasis in Metabolic Syndrome: Sorting out New and Old Players
Carolyn Ecelbarger and Swasti Tiwari
Mechanisms of Hypertension Risk
Carmen De Miguel and Justine Abais-Battad

FEATURED TOPICS
Neural and Hormonal Modulation of Fluid Balance and Ion Homeostasis in Health and Disease
Juan Gao and Alicia Schiller
New Animal Models and Their Utility for WEH Research
Oleg Palygin and Oleh Pochynyuk
Hypertension and Sodium Homeostasis-Developing Concepts
Kathryn Sandberg and Eman Gohar
Stress and Physiological Responses Throughout Life
Jennifer Pollock and Erin Taylor

AWARD SESSION
WEH Trainee Award Finalists and Data Diuresis

Women in Physiology Committee

SYMPOSIUM
Women in Physiology Committee Symposium 2017: Choosing the Right Lab and Personnel for Your Career
Karen L Edelblum and Brandi Wynne

American College of Sports Medicine (ACSM)

SYMPOSIUM
A Roadmap for the Future of Exercise Science: Key Research Directions
Claude Bouchard

American Federation for Medical Research (AFMR)

SYMPOSIA
New Insights into Insulin Resistance-Molecular Mechanisms and Therapeutic Implications
Sharma Prabhakar and Meredith Hawkins

Small GTPases: Basic Science to Translational Research
Yutong Zhao and Anna Birukova

American Society for Human Genetics (ASHG)

COSPONSORED SYMPOSIUM
Atttaching Physiology to the Genome: Spotlight on Cardiovascular Genetics
Guillaume Lettre and Bina Joe
Microcirculatory Society (MCS)

LECTURE
› MCS Landis Award Lecture

SYMPOSIA
› Depression and Its Effects on Microvascular Function and Vascular Adaptation
  Paul Chantler and Mark Olfert
› Investigating Microvascular Physiology and Pathophysiology using Novel Techniques
  Karen Y Stokes and Felicity N.E. Gavins
› President’s Symposium: (Not) Lost in Translation: Bridging the Gaps between Microcirculatory Basic Science and Clinical Science
  William M Chillian

Pan-American Societies (SFiB)

SYMPOSIUM
› Pan-American Symposium
  TBD

The Physiological Society-UK (PHYSOC)

SYMPOSIUM
› Sexual Dimorphism, Plasticity and Genomic Diversity of the Paraventricular Nucleus
  Willis Samson and Gina Yosten
› The Modulation of Aging through Altered Proteostasis
  Benjamin Mille

COSPONSORED SYMPOSIUM
› Investigating Microvascular Physiology and Pathophysiology using Novel Techniques
  Karen Y Stokes and Felicity N.E. Gavins
› President’s Symposium: (Not) Lost in Translation: Bridging the Gaps between Microcirculatory Basic Science and Clinical Science
  William M Chillian