Agenda

**Evening: Wednesday, Sept. 21**

7 to 7:15 p.m.  Welcome Remarks  
L. Bruce Gladden, Ph.D., FACSM  
ACSM Past-President, 2021-22  
Scott K. Powers, Ph.D., FACSM  
Chair, IPE Program Committee

7:15 to 8 p.m.  **Keynote Lecture | To Endure is Everything: New Discoveries in the Science of Endurance Exercise**  
Andrew M. Jones, Ph.D., FACSM  
University of Exeter  
Exeter, U.K.

8 to 9:30 p.m.  Social

**Meeting Day 1: Thursday, Sept. 22**

8 to 9:20 a.m.  **Symposium | Cardiovascular Physiology**  
High Dietary Salt and Altered Neurovascular Control: Exercise Blood Pressure, Women’s Health and Novel Therapeutic Targets  
Session Chair: Austin Robinson, Ph.D.

Introduction  
Austin Robinson, Ph.D.  
Auburn University  
Auburn, Alabama

The Effects of Dietary Salt on Blood Pressure Responses to Acute Aerobic Exercise  
Matthew C. Babcock, Ph.D.  
University of Colorado at Denver  
Denver, Colorado

Salt Intake and Sympathetic Neural Control in Women  
Qi Fu, M.D., Ph.D.  
University of Texas Southwestern Medical Center  
Dallas, Texas

Novel Mechanisms of Autophagy-Mediated Vascular Protection  
Cameron McCarthy, Ph.D.  
University of South Carolina School of Medicine  
Columbia, South Carolina

9:20 to 9:30 a.m.  Break
**9:30 to 10:50 a.m. Symposium | Skeletal Muscle Hypertrophy**

Skeletal Muscle Hypertrophy

Session Chair: Michael Roberts, Ph.D.

Introduction

Michael Roberts, Ph.D.
Auburn University
Auburn, Alabama

Integrin Signaling in Skeletal Muscle Hypertrophy

Marni Boppart, Ph.D., FACSM
University of Illinois at Urbana-Champaign
Urbana, Illinois

Intracellular Hypertrophic Signaling

Troy Hornberger, Ph.D.
University of Wisconsin-Madison
Madison, Wisconsin

Regional Loading Changes with Muscle Contractions

Martino Franchi, Ph.D.
University of Padua
Padua, Italy

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**9:30 to 10:50 a.m. Symposium | Physical Activity and Health**

Physical Activity and Cancer Survivorship

Session Chair: NiCole R. Keith, Ph.D., FACSM

Introduction

NiCole R. Keith, Ph.D., FACSM
Indiana University-Purdue University
Indianapolis, Indiana

Effects of Exercise on Clinically Relevant Biomarkers of Inflammation on Adult Survivors of Cancer

Kathryn H. Schmitz, Ph.D., MPH, FACSM
Penn State Cancer Institute
Hershey, Pennsylvania

The Role of Exercise Oncology in Precision Medicine

Lee Jones, Ph.D.
Memorial Sloan Kettering Cancer Center
New York, New York

Exercise as a Therapeutic Strategy for Cancer — Biological Mechanisms and Clinical Outcomes

Allison Betof-Warner, M.D., Ph.D.
Memorial Sloan Kettering Cancer Center
New York, New York

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**10:50 to 11:10 a.m. Break**

**11:10 to Noon Keynote Lecture | Exercise and Bone Health: All It's Cracked Up to Be?**

Wendy Kohrt, Ph.D., FACSM
University of Colorado Health Sciences Center

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**Noon to 1 p.m. Break**

**1 to 3 p.m. Posters**

**3 to 4 p.m. Break**

**4 to 5:20 p.m. Symposium | Environmental Physiology**

Health, Productivity and Performance in a Warming Climate

Session Chair: Lacy Alexander, Ph.D., FACSM

Introduction

Lacy Alexander, Ph.D., FACSM
Penn State University
University Park, Pennsylvania

Global Warming and Worker Productivity

George Havenith, Ph.D., FACSM
Loughborough University
Loughborough, U.K.

Global Warming and Athlete Safety and Performance

Ollie Jay, Ph.D., FACSM
University of Sydney
Sydney, Australia

Global Warming in an Aging World

W. Larry Kenney, Ph.D., FACSM
Penn State University
University Park, Pennsylvania

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**4 to 5:20 p.m. Symposium | Hot Topics in Integrated Physiology of Exercise**

Molecular Bases of Exercise Adaptations

Session Chair: Ben Parker, Ph.D.

The Use of Phosphoproteomics to Study Signaling across Exercise

Ben Parker, Ph.D.
University of Melbourne
Melbourne, Victoria, Australia

A Novel Role for Acetyltransferases in Skeletal Muscle Metabolism and Exercise

Simon Schenk, Ph.D.
University of California, San Diego
San Diego, California

Transcriptional and Post-Transcriptional Regulation of Mitochondrial Content in Muscle

David A. Hood, Ph.D., FACSM
York University
Toronto, Ontario, Canada
Meeting Day 2: Friday, Sept. 23

8 to 9:20 a.m.  Symposium | Hot Topics in Integrated Physiology of Exercise Using Technology to Augment Human Performance Physiology
Session Chair: Michael Joyner, M.D., FACSM
Human Performance Augmentation for the Military: “Skin-In,” “Skin-Out” and Magnitude Considerations
  Nisha Charkoudian, Ph.D., FACSM
  U.S. Army Research Institute of Environmental Medicine
  Natick, Massachusetts
The Biomechanics and Energetics of Record-Breaking Running Shoe Technology
  Wouter Hoogkamer, Ph.D.
  University of Massachusetts, Amherst
  Amherst, Massachusetts
Human Performance Optimization: Are Sensors & Data Old News or a New Frontier
  Brad Wilkins, Ph.D.
  Gonzaga University
  Spokane, Washington

8 to 9:20 a.m.  Symposium | Skeletal Muscle New Concepts in Muscle Biology
Session Chair: Karyn Esser, Ph.D., FACSM
Introduction
  Karyn Esser, Ph.D., FACSM
  University of Florida
  Gainesville, Florida
Importance of RNA Transport in Skeletal Muscle
  Eric Wang, Ph.D.
  University of Florida
  Gainesville, Florida
Looking at Mitochondria and Myofibrils in 3D
  Brian Glancy, Ph.D.
  NHLBI/NIAMS
  Bethesda, Maryland
Muscle 3D Macro Mechanics Modeling
  Katherine Knaus, Ph.D.
  University of California San Diego
  La Jolla, California

9:20 to 9:30 a.m.  Break

9:30 to 10:50 a.m.  Symposium | Exercise Metabolism Exercise and Lipid Metabolism
Session Chair: Jill Kanaley, Ph.D., FACSM
Exercise Induced Adaptations in White and Brown Adipose
  Kristin Stanford, Ph.D.
  The Ohio State University
  Columbus, Ohio
Intermuscular Adipose Tissue, Insulin Sensitivity and Regulation with Exercise
  Bryan Bergman, Ph.D.
  University of Colorado Anschutz Medical Campus
  Aurora, Colorado
Adipose Metabolism and Exercise in Metabolic Disease
  Lauren Sparks, Ph.D.
  Advent Health Research Institute
  Orlando, Florida

10:50 to 11:10 a.m.  Break

11:10 a.m. to noon  Keynote Lecture | Sex Differences in Athletic Performance
Sandra Hunter, Ph.D., FACSM
Marquette University
Milwaukee, Wisconsin

Noon to 1 p.m.  Break
1 to 3 p.m.  Posters
3 to 4 p.m.  Break
**Symposium | Cardiovascular Physiology**
COVID-19 and Cardiovascular Health in Athletes and Highly Active People

Session Chairs: John QuIndry, Ph.D., FACSM & Tracy Baynard, Ph.D., FACSM

**Introduction**

John QuIndry, Ph.D., FACSM
University of Montana
Missoula, Montana

Tracy Baynard, Ph.D., FACSM
University of Massachusetts Boston
Boston, Massachusetts

**Return to Play Following COVID Infection**

Jonathan Kim, M.D.
Emory University
Atlanta, Georgia

**Pathophysiology of Long COVID (PASC) and Implications**

Benjamin Levine, M.D., FACSM
University of Texas Southwestern Medical Center
Dallas, Texas

**Myopericarditis Following COVID Infection**

Meagan Wasfy, M.D.
Massachusetts General Hospital
Boston, Massachusetts

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**Symposium | Physical Activity and Health**
Physical Activity, Exercise and the Brain

Session Chair: William E. Kraus, M.D., FACSM

**Introduction**

William E. Kraus, M.D., FACSM
Duke University School of Medicine
Durham, North Carolina

**Irisin — Harnessing the Neuroprotective Effects of Exercise**

Christiane Wrann, Ph.D.
Harvard Medical School
Boston, Massachusetts

**Movement, Metabolic Function and Mental Flexibility: Examining Pathways and Profiles of Lifestyle Modification for Brain Health**

Patrick Smith, Ph.D.
Duke University School of Medicine
Durham, North Carolina

**Exercise, Brain and Cardiovascular Health (eBACH)**

Kirk I. Erikson, Ph.D.
University of Pittsburgh
Pittsburgh, Pennsylvania

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**Meeting Day 3: Saturday, Sept. 24**

8 to 9:20 a.m. **Symposium | Environmental Physiology**
Therapeutic and Performance Aspects of Cold

Session Chair: John Castellani, Ph.D.

**Introduction**

John Castellani, Ph.D.
U.S. Army Research Institute of Environmental Medicine
Natick, Massachusetts

**Metabolic Responses to Cold Exposure — From Survival to Therapeutic Applications**

Denis Blondin, Ph.D.
University of Sherbrooke
Sherbrooke, Quebec, Canada

**Cold Impact on Military Performance**

Billie Alba, Ph.D.
U.S. Army Research Institute of Environmental Medicine
Natick, Massachusetts

**Cold Exposure and Muscular Performance**

Heather Massey, Ph.D.
University of Portsmouth
Portsmouth, U.K.

8 to 9:20 a.m. **Symposium | Physical Activity and Health**
Sedentary Behavior and Health: Recent Insights

Session Chair: Peter T. Katzmarzyk, Ph.D., FACSM

**Sedentary Behavior and Health: From Basic Science to Epidemiology and Back Again**

Peter T. Katzmarzyk, Ph.D., FACSM
Pennington Biomedical Research Center
Baton Rouge, Louisiana

**Mitochondrial and Metabolic Changes Induced by Acute Sedentary Behavior: Impact on Recovery**

Paul M. Coen, Ph.D.
Advent Health Research Institute
Orlando, Florida

**Transcriptomic, Phenotypic and Behavioral Characteristics Associated with Inherited Physical Inactivity**

Frank W. Booth, Ph.D., FACSM
University of Missouri
Columbia, Missouri

9:20 to 9:30 a.m. Break
9:30 to 10:50 a.m.  **Symposium | Exercise Metabolism**  
**Ketogenic Diet and Exercise Metabolism/Performance**  
*Session Chair: Louise Burke, Ph.D., FACSM*  
- LCHF and Elite Athletes: Metabolic Flexibility, Performance and Other Body System Effects  
  *Louise Burke, Ph.D., FACSM*  
  *Australian Catholic University*  
  *Canberra, Australia*  
- Shifting Muscle Acetylation and Mitochondrial Function and Improving Learning and Memory with a Ketogenic Diet  
  *Keith Baar, Ph.D., FACSM*  
  *University of California, Davis*  
  *Davis, California*  
- Impact of Combined Ketogenic Diet and Exercise Training on Substrate Oxidative Capacity in Mice  
  *Robert Noland, Ph.D.*  
  *Pennington Biomedical Research Center*  
  *Baton Rouge, Louisiana*  

9:30 to 10:50 a.m.  **Symposium | Cardiovascular Physiology**  
**Extraordinary Exercise and Cardiovascular Health: Can There Be too Much of a Good Thing?**  
*Session Chair: Benjamin Levine, M.D., FACSM*  
- Introduction  
  *Benjamin Levine, M.D., FACSM*  
  *University of Texas Southwestern Medical Center*  
  *Dallas, Texas*  
- Physical Activity and CAC: What’s the Signal?  
  *Laura DeFina, M.D.*  
  *Cooper Institute for Aerobics Research*  
  *Dallas, Texas*  
- The Right Ventricle: The Vulnerable One?  
  *Bill Cornwell, M.D.*  
  *University of Colorado Medical School*  
  *Denver, Colorado*  
- Atrial Fibrillation in the Athlete: What’s the Risk, and What Can You Do about It?  
  *Guido Claessen, M.D.*  
  *UZ Leuven*  
  *Leuven, Belgium*  

10:50 to 11:10 a.m.  Break

11:10 a.m. to Noon  **Keynote Lecture | From the Gym to the Lab: Lessons in Human Skeletal Muscle Hypertrophy**  
*Stuart Phillips, Ph.D., FACSM*  
*McMaster University*  
*Hamilton, Ontario, Canada*

11:10 a.m. to Noon  **Keynote Lecture | From the Gym to the Lab: Lessons in Human Skeletal Muscle Hypertrophy**  
*Stuart Phillips, Ph.D., FACSM*  
*McMaster University*  
*Hamilton, Ontario, Canada*

Noon to 1 p.m.  Break

1 to 3 p.m.  **Posters**

3 to 4 p.m.  Break

4 to 5:20 p.m.  **Symposium | Exercise Metabolism**  
**Connections between Systemic Metabolism, Exercise and Neural/Brain Health**  
*Session Chair: John Thyfault, Ph.D., FACSM*  
- Effects of Exercise and Lactate Metabolism on the Brain in Aging and Disease  
  *Jill Morris, Ph.D.*  
  *University of Kansas Medical Center*  
  *Kansas City, Kansas*  
- Exercise and Connections to Brain Metabolism and Cognition Through GD15  
  *Anders Klein*  
  *University of Copenhagen*  
  *Copenhagen, Denmark*  
- Exercise-Associated Pathways as Novel Neuroprotectants against CNS Aging and Alzheimer’s Disease  
  *Constanza Cortes Rodriguez, Ph.D.*  
  *University of Alabama at Birmingham*  
  *Birmingham, Alabama*  

4 to 5:20 p.m.  **Symposium | Skeletal Muscle**  
**Muscle Health in Aging and Disease**  
*Session Chair: Stuart Philips, Ph.D., FACSM*  
- Introduction  
  *Muscle Growth with Aging*  
  *Sue Bodine Ph.D.*  
  *University of Iowa*  
  *Iowa City, Iowa*  
- Pathophysiology of Muscle with Aging  
  *Beth Philips, Ph.D.*  
  *University of Nottingham*  
  *Nottingham, U.K.*  
- Targeting Omega 3 Supplements to Preserve Muscle in Aging/Disease  
  *Chris McGlory, Ph.D.*  
  *Queen’s University*  
  *Kingston, Ontario, Canada*  

Schedule subject to change