ACSM Conference on Integrative Physiology of Exercise

September 22-25, 2010
Eden Roc
A Renaissance Beach Resort & Spa
Miami Beach, Florida

AMERICAN COLLEGE of SPORTS MEDICINE
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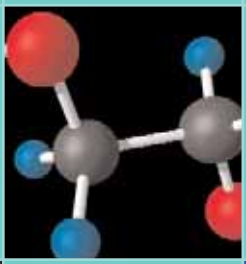
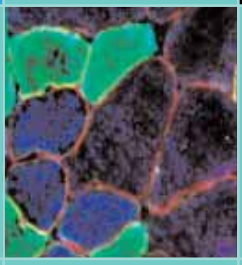
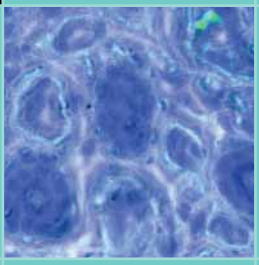
ABSTRACTS DUE JULY 15, 2010

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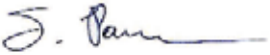
Friends and Colleagues:
On behalf of the Scientific Planning Committee and the American College of Sports Medicine, it is my pleasure to invite you to attend the 2010 ACSM Specialty Conference, "Integrative Physiology of Exercise" to be held at the Eden Roc Resort in Miami Beach, Florida on September 22-25, 2010. A keynote lecture and a reception will be held at 7PM on Wednesday, September 22nd to welcome you to Miami Beach and the conference. To emphasize the rapid research developments in key areas of exercise physiology, the IPE 2010 program will focus on the following major themes:

- Integrative exercise physiology: adaptation and performance
- Exercise metabolism: mitochondrial dynamics and substrate regulation
- Exercise, oxidative stress, and redox signaling
- Cardiovascular control and adaptation to exercise

To achieve a balanced schedule, we have organized morning and late afternoon symposia and keynote lectures around the four conference themes. The symposia lectures will be given by senior as well as emerging scientists and are intended to provide a springboard for dynamic scientific exchanges. Importantly, each symposium will include aspects of how advances in basic science lead to changes in practice.
Scientific poster sessions are scheduled on each day of the conference (1-3PM) and these unopposed poster presentations will comprise a major component of the conference. Indeed, the abstracts that you present will shape the exchange of information and ideas that transpire in this exciting venue. Please note that abstract submissions are currently being accepted and that the abstract submission deadline is July 15, 2010 (see the ACSM Web site for details).
Finally, we're very excited that four esteemed scientists, Bruce Spiegelman, Steven Segal, Michael Reid, and Bente Pedersen will be delivering keynote addresses during the 2010 IPE meeting in their respective disciplines. So, mark your calendars for September 22-25, 2010 and set your sights on beautiful Miami Beach.
Sincerely,



Scott K. Powers, Ph.D., FACSM
Chair, ACSM Integrative Physiology of Exercise Conference

KEYNOTE SPEAKER SERIES SPONSORED BY ADINSTRUMENTS

WEDNESDAY
SEPTEMBER 22, 2010
7:00-8:00PM
Intercellular Coordination of Blood Flow Control
Steven Segal
University of Missouri

THURSDAY
SEPTEMBER 23, 2010
11:00AM-12:00PM
Regulation of Muscle Physiology by PCG-1 Coactivators
Bruce Spiegelman
Harvard University

FRIDAY
SEPTEMBER 24, 2010
11:00AM-12:00PM
Free Radicals, Muscle Force, and Fatigue: A Quarter Century of Progress
Mike Reid
University of Kentucky

SATURDAY
SEPTEMBER 25, 2010
11:00AM-12:00PM
The Diseasome of Physical Inactivity and the Role of Myokines in Muscle-fat Cross-talk
Bente Klarlund Pedersen
Centre of Inflammatory Metabolism

ACSM Conference on Integrative Physiology of Exercise

WEDNESDAY, SEPTEMBER 22, 2010

7:00-8:00PM Keynote lecture
Intercellular Coordination of Blood Flow Control
Steve Segal, University of Missouri

8:00-9:00PM Opening Reception

THURSDAY, SEPTEMBER 23, 2010

8:30-10:30AM Concurrent symposiums

SESSION 1A: **Fatigue Mechanisms Limiting Exercise Performance**
Chair: Mark Hargreaves

8:30-8:35AM Introduction
Mark Hargreaves, University of Melbourne

8:35-9:05AM Neuromuscular Fatigue: Central and Peripheral Interactions
Markus Amann, University of Utah

9:05-9:35AM Regulation of Skeletal Muscle Excitability: Role in Muscle Fatigue
Thomas Pedersen, Aarhus University

9:35-10:05AM Cardiovascular Determinants of Exercise Performance
Jose Gonzalez-Alonso, Brunel University

10:05-10:30AM Metabolic Factors in Fatigue
Mark Hargreaves, University of Melbourne

SESSION 1B: **Mitochondrial Biogenesis and Dynamics**
Chair: George Brooks

8:30-8:35AM Introduction
George Brooks, University of California-Berkley

8:35-9:05AM The Mitochondrial Proteome in Health and Disease
Vamsi Mootha, Harvard Medical School

9:05-9:35AM Mitochondrial Dynamics in Health and Disease
Yisang Yoon, University of Rochester

9:35-10:05AM Exercise-induced Addition and Removal of Mitochondria in Skeletal Muscle
Zhen Yan, University of Virginia

10:05-10:30AM The Regulation of Mitochondrial Biogenesis Following Exercise
John Holloszy, Washington University

10:30-11:00AM Break

11:00AM-12:00PM Keynote Lecture
Regulation of Muscle Physiology by PCG-1 Coactivators
Bruce Spiegelman, Harvard University

12:00-1:00PM Lunch Break

1:00-3:00PM Poster Sessions

3:00-5:00PM Concurrent Symposiums

SESSION 1C: **Exercise-induced Oxidative Stress: Cause and Effect**
Chair: Anne McArdle

3:00-3:05PM Introduction
Anne McArdle, Liverpool University

3:05-3:35PM Subcellular Compartmentalization of Redox Signaling and Control
Dean Jones, Emory University

3:35-4:05PM Reactive Oxygen Species in Muscle: Sources and Mediators of Muscle Adaptation
Malcolm Jackson, Liverpool University

4:05-4:35PM Redox Control of Skeletal Muscle Contractile Function
Michael Reid, University of Kentucky

4:35-5:00PM Regulation of NF-kB and Inflammation by Heat Shock Proteins
R. William Currie, Dalhousie University

SESSION 1D: **Exercise-induced Angiogenesis**
Chair: Ronald Terjung

3:00-3:05PM Introduction
Ronald Terjung, University of Missouri

3:05-3:35PM Factors Influencing Angiogensis in Active Muscle
Stuart Egginton, University of Birmingham

3:35-4:05PM Modulation of Exercise-induced Angiogenesis
Tara Haas, York University

4:05-4:35PM Coordination of Angiogenesis and Mitochondrial Synthesis in Muscle
Ylva Hellsten, Copenhagen Muscle Research Center

4:35-5:00PM Functional Significance of Angiogenesis and VEGF
Peter D. Wagner, University of California-San Diego

FRIDAY, SEPTEMBER 24, 2010

8:30-10:30AM Concurrent symposiums

SESSION 2A: **Neurogenic Reflexes in the Circulatory Response to Exercise**
Chair: Nisha Charkoudian

8:30-8:35AM Introduction
Nisha Charkoudian, Mayo Clinic

8:35-9:05AM Mechanical and Metabolic Stimuli Evoking Exercise Pressor Reflex
Marc Kaufman, Pennsylvania State University

9:05-9:35AM Sympathetic Neurovascular Control in Exercising Muscle
Gail Thomas, Cedars-Sinai Medical Center

9:35-10:05AM Arterial Baroreflex Function during Exercise: Influence of Aging
Paul Fadel, University of Missouri

10:05-10:30AM Human Vascular and Hemodynamic Responses to Local Hypoperfusion in Exercising Muscle
Darren Casey, Mayo Clinic

SESSION 2B: **Tissue Signals that Impact Inter-Organ trafficking and Coordination of Metabolites and Nutrients**
Chair: Bente Karlund Pedersen

8:30-8:35AM Introduction
Bente Karlund Pedersen, Centre of Inflammatory Metabolism

8:35-9:05AM The Regulation of Muscle – microRNA and Their Potential Role in Metabolism
Camilla Scheele, Centre of Inflammatory Metabolism

9:05-9:35AM Insulin Signaling During Exercise and Recovery
Laurie Goodyear, Harvard University

9:35-10:05AM How Muscle Contractions Lead to Activation of AMPK Activity in Other Organs
Neil Ruderman, Boston University

10:05-10:30AM Muscle - Fat -Brain Interactions in Nutrient Sensing during Exercise and Recovery
Gerald Shulman, Yale University

10:30-11:00AM Break

11:00AM-12:00PM Keynote Lecture
Free Radicals, Muscle Force, and Fatigue: A Quarter Century of Progress
Mike Reid, University of Kentucky

12:00-1:00PM Lunch Break

1:00-3:00PM Poster Sessions

3:00-5:00 PM Concurrent Symposiums

SESSION 2C: **Mitochondria in Health, Aging, and Disease**
Chair: Holly Van Remmen

3:00-3:05PM Introduction
Holly Van Remmen, University of Texas Health Science Center-San Antonio

3:05-3:35PM Caloric Restriction and Longevity: from Physiology to Molecular Mechanisms
Eric Ravussin, Pennington Research Center

3:35-4:05PM Mitochondrial Energetics and Insulin Action in Skeletal Muscle
Deborah Muoio, Duke University

4:05-4:35PM Metabolic Adaptation in Aging and Disease
David Marcinek, University of Washington

4:35-5:00PM Exercise as a Countermeasure for Aging - Human and Murine Models
Mark Tarnopolsky, McMaster University

SESSION 2D: **Bone-Fat-Brain Connections**
Chair: Susan Bloomfield

3:00-3:05PM Introduction
Susan Bloomfield, Texas A&M University

3:05-3:35PM Leptin's 'Central' Role in Regulation of Bone Mass: Is the Brain Important?
Mark Hamrick, Medical College of Georgia

3:35-4:05PM Interaction of Sympathetic Nervous System and Lepin in Bone Loss and Energy Restriction
Susan Bloomfield, Texas A&M University

4:05-4:35PM Neuroendocrine Regulation of Bone Mass in Humans
Madhu Misra, Harvard Medical School

4:35-5:00PM How Reversible is Bone Loss Following Prolonged Energy Deficiency?
Mary Jane DeSouza, Pennsylvania State University

SATURDAY, SEPTEMBER 25, 2010

SESSION 3A: **Redox Signaling in Muscle Injury and Regeneration**
Chair: Tom Best

8:30-8:35AM Introduction
Tom Best, Ohio State University

8:35-9:05AM Roles of Reactive Oxygen Species in Contraction-induced Muscle Injury and Regeneration: Effect of Age
Anne McArdle, Liverpool University

9:05-9:35AM Regulation of Muscle Growth and Regeneration by the Immune System
James Tidball, University of California-Los Angeles

9:35-10:05AM Activation of Satellites Cells in Regenerating Muscle
Denis Guttridge, Ohio State University

10:05-10:30AM Muscle Regeneration: Are Stem Cells the Answer?
Johnny Huard, University of Pittsburgh

SESSION 3B: **Energy Substrate Partitioning During Exercise and Recovery**
Chair: Barry Braun

8:30-8:35AM Introduction
Barry Braun, University of Massachusetts - Amherst

8:35-9:05AM Metabolism of Triglyceride and Fatty Acids during the Post-exercise Recovery Period
Gregory Henderson, Mayo Clinic

9:05-9:35AM Age, Exercise, Diet: Effects on Insulin Resistance
John Kirwan, Cleveland Clinic

9:35-10:05AM Calcium and AMPK in Control of Fuel Utilization in Muscle
Erik A. Richter, University of Copenhagen

10:05-10:30AM Teasing Apart the Effects of Exercise and Energy Imbalance on Metabolic Health
Barry Braun, University of Massachusetts - Amherst

10:30-11:00AM Break

11:00AM-12:00PM Keynote Lecture
The Diseasome of Physical Inactivity and the Role of Myokines in Muscle-fat Cross-talk
Bente Klarlund Pedersen, Centre of Inflammatory Metabolism

12:00-1:00PM Lunch Break

1:00-3:00PM Poster Sessions

3:00-5:00PM Concurrent Symposiums

SESSION 3C: **Exercise-induced Cardioprotection: Therapeutic Targets**
Chair: Donna Korzick

3:00-3:05PM Introduction
Donna Korzick, Pennsylvania State University

3:05-3:35PM Why Do Mitochondrial Kill – Can We (Pre)condition Them to be Less Destructive
Elizabeth Murphy, NHLBI, NIH

3:35-4:00PM Role of Myocardial Ion Channels in Exercise-induced Cardioprotection
David Brown, East Carolina University

4:00-4:30PM The Effect of Exercise on the Cardiovascular Complications of Diabetes: How Protective Is It?
Earl Noble, University of Western Ontario

4:30-5:00PM Adipocyte-Derived Feeder Cells and Effects on Cardioprotection: A Therapeutic Intervention for Acute Coronary Syndrome
Kurt Saupe, University of Wisconsin-Madison

SESSION 3D: **Signaling Mechanisms Mediating Skeletal Muscle Adaptations to Exercise**
Chair: Karyn Esser

3:00-3:05PM Introduction
Karyn Esser, University of Kentucky

3:05-3:35PM Activity Dependent Signaling Pathways for Transcriptional Regulation in Cultured Adult Skeletal Muscle Fibers
Martin Schneider, University of Maryland

3:35-4:05PM Adaptations to Exercise from a Mitochondrial Bioenergetics Point of View
Darrell Neufer, East Carolina University

4:05-4:35PM Anabolic Signaling, Gene Expression and Protein Synthesis in Human Skeletal Muscle Following Acute Resistance Exercise
Blake Rasmussen, University of Texas Medical Branch

4:35-5:00PM Circadian Effects on Muscle Adaptation to Exercise
Karyn Esser, University of Kentucky

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REGISTRATION INFORMATION

For immediate registration, register online at www.acsm.org. An online receipt and confirmation will be generated upon completion of online registrations.

As an alternative, mailed registrations may be sent to ACSM, Department 6022, Carol Stream, IL 60122-6022. Mailed registrations may take up to four weeks for processing and confirmations will be mailed to registrants.

Pre-registration ends 9/8/10. Thereafter, registrations will be accepted/processed on-site.

Please notify ACSM by 8/20/10 if you need any special accommodations as a result of disability. The planners and sponsors of this event claim no liability for the acts of any suppliers to this meeting, nor for the safety of any attendee at or while in transit to this event. The planners and sponsors reserve the right to cancel this event without penalty. Attendees who purchase non-refundable airline tickets, do so at their own risk. The total amount of any liability of the planners and sponsors will be limited to a refund of the registration fee. Your submission of this form acknowledges acceptance of these terms. Accepted membership applications are not refundable.

Cancellation Policy: Cancellations with full refunds will be accepted if sent in writing to the ACSM National Center or e-mailed to meeting@acsm.org and postmarked by 8/12/10. A service charge of $50 will be assessed on all cancellations. Refunds will not be issued for cancellations made after 8/12/10.

27.0 CECs (Continuing Education Credits): Individuals needing credits for continuing certification purposes must sign up on the registration form. (Verification of this meeting will not be offered one year beyond conference). Spouses, exhibitors, and media must register for the meeting to be eligible for credit. Credit verification letters will be mailed eight weeks post meeting.

Non-Members: Take advantage of the discounted "New ACSM Member" rate by registering as a new member. This fee includes conference fee and a year of membership dues. Important Information for New Members: Membership is on an anniversary term (e.g., join in September and renew the following September). Accepted membership applications are not refundable. Please read the Code of Ethics on www.acsm.org/ethics.

FASEB MARC Travel Award Program:
https://ns2.faseb.org/marc/travel1.html

ACSM MEMBERSHIP AREAS OF INTEREST

Basic and Applied Science: Fundamental and practical applications in teaching research and clinical settings, which encompass the disciplines of exercise physiology, biochemistry, motor control psychology, athletic medicine, sociology of sport, rehabilitation, and growth and development.

Medicine: A person who is licensed to practice medicine and/or surgery, or possesses an equivalent licensure, and whose main occupation is the actual practice of a licensed profession.

Education and Allied Health: A primary portion of his/her work is in the teaching of others; or a primary portion of his/her work is to carry out a health-related function under physician guidance or prescription.

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• Professional/$220 • Professional-in-Training/$155
• Undergraduate Student/$80 • Graduate Student/$80

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105 Coach
106 Ergonomist
107 Exercise Biochemist
108 Exercise Physiologist
115 Kinesiologist
116 Sports Psychologist/Sociologist
117 Veterinarian
118 Other Basic and Applied Science
201 Cardiologist
202 Chiropractor
203 Dentist
204 Emergency Medicine
205 Family/General Practice
206 General Surgery
207 Internal Medicine
208 Neurologist
209 Neurosurgeon
210 OB/GYN
211 Ophthalmologist
212 Orthopaedic Surg.
213 Pediatrics
214 Physiatrist
215 Podiatrist
216 Psychiatrist
217 Radiologist
218 Other Medicine
301 Athletic Trainer
302 Kinesiotherapist
303 Health Educator
304 LPN
305 Nutritionist
306 Occupational Therapist
307 Optometrist
308 Physical Educator
309 Physical Therapist
310 Physician Assistant
311 Registered Nurse
312 Respiratory Therapist
313 Other Health Care Specialist
401 Student

ACSM CONFERENCE ON INTEGRATIVE PHYSIOLOGY OF EXERCISE

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ACSM Conference on Integrative Physiology of Exercise

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Circle appropriate fee. ACSM tax I.D. #23-6390952

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Registration fee from schedule at left $ _____

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Regional Chapter Dues $ _____
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YOU MUST BE A CURRENT NATIONAL MEMBER TO PAY CHAPTER DUES

Contribution to ACSM Foundation* $ _____

TOTAL DUE $ _____

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I affirm the statements made by me on this application are correct and that I meet the requirements for the membership category I have requested. If choosing Professional, Professional-in-Training, Graduate Student, or Undergraduate Student categories, I understand that $29 of my membership dues is allocated to a year's subscription to *Medicine & Science in Sports & Exercise*®. I have read and agree to abide by the code of ethics and professional conduct of the American College of Sports Medicine.

Signature:_____ Date:_____

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