

ACSM Conference on Integrative Physiology of Exercise

Eden Roc
Miami Beach,
Florida, USA
September 17-20, 2014

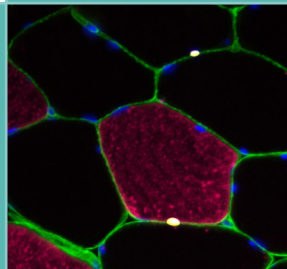
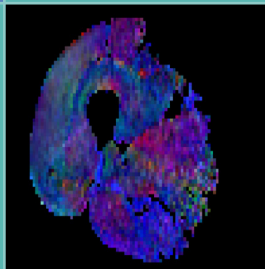
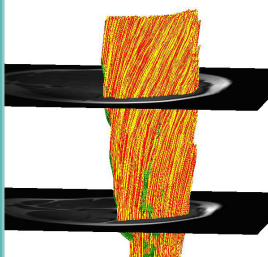


<http://www.acsm.org/attend-a-meeting/IPE2014>

This conference has been endorsed by:



**ABSTRACTS DUE
JULY 15, 2014**



THANK YOU TO THE FOLLOWING SPONSORS:





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 2014 ACSM Specialty Conference,

Integrative Physiology of Exercise on September 17-20, 2014. We are excited to be returning to the Eden Roc Resort in Miami Beach, Florida after our great success in 2010. A keynote lecture and a reception will be held at 7:00 p.m. on Wednesday, September 17th to welcome you to Miami Beach and the conference.

To emphasize areas of rapid advancements in exercise physiology, the IPE 2014 program includes the following:

- Exercise, stem cells and adaptation
- Exercise metabolism: integration of heart, skeletal muscle and fat
- Exercise, oxidative stress, and mitochondrial dynamics
- Circadian rhythms, sleep, systems health and exercise performance
- Cytokines and "Exer-kines;" new insight into exercise and system's health

To achieve a balanced schedule, we have organized morning and late afternoon symposia and keynote lectures around the 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 (1:00-3:00 p.m.) 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, 2014 (see the ACSM website for details).

Finally, we're very excited to highlight *several* Keynote Lectures provided by eminent scientists including: David Dinges, Bruce Spiegelman and Erik Richter. So, mark your calendars for September 17-20, 2014 and set your sights on beautiful Miami Beach.

Sincerely,

*Karyn Esser, Ph.D., FACSM
Chair, ACSM Integrative Physiology of Exercise Conference*

IPE KEYNOTE LECTURERS



**Wednesday
September 17, 2014
7:00-8:00 p.m.**

What We Can Learn from Trips To Mars? Sleep, Exercise and Performance
David F. Dinges, University of Pennsylvania



**Thursday
September 18, 2014
11:00 a.m.-12:00 p.m.**
Models of Exercise and Secreted Proteins: Toward a New Generation of Therapeutics
Bruce Spiegelman, Harvard University



**Friday
September 19, 2014
11:00 a.m.-12:00 p.m.**

Keeping Clocks Aligned: A New Role for Exercise in Systemic Health and Performance
Karyn Esser, FACSM, University of Kentucky



**Saturday
September 20, 2014
11:00 a.m.-12:00 p.m.**
Muscle Metabolism, Signaling and Exercise
Erik Richter, University of Copenhagen

ACSM Conference on Integrative Physiology of Exercise

WEDNESDAY, SEPTEMBER 17, 2014

- 7:00-8:00 p.m.** Keynote Lecture
What We Can Learn from Trips
To Mars? Sleep, Exercise and
Performance
*David F. Dinges, University of
Pennsylvania*
- 8:00-9:00 p.m.** Opening Reception

THURSDAY, SEPTEMBER 18, 2014

- 8:30-10:30 a.m.** Concurrent symposia

SESSION 1A: **How Does Exercise Induce Skeletal Muscle Hypertrophy? Let's Work It Out**

*Chairs: Troy Hornberger and
Karyn Esser, FACSM*

- 8:30-8:35 a.m.** Introduction
- 8:35-9:05 a.m.** The Regulation of mTOR by
Mechanically-Induced Signaling
Events: Emerging Concepts
*Troy Hornberger, University of
Wisconsin - Madison*
- 9:05-9:35 a.m.** Exploring New Roles for the
TGF-Beta Signaling Network in
Skeletal Muscle Adaptation
*Paul Gregorevic, Baker IDI Heart
and Diabetes Institute*
- 9:35-10:05 a.m.** Blood Flow Restriction Exercise:
How We Think It Works and
How We Can Make It Better
*Jeremy Loenneke, University of
Oklahoma*
- 10:05-10:30 a.m.** Resistance Exercise-Induced
Hypertrophy in Humans:
Evidence-Based Findings vs.
Belief beyond Evidence
*Stuart Phillips, FACSM
McMaster University*

SESSION 1B:

Aging, Exercise and Systems Health

Chair: Craig Harms, FACSM

- 8:30-8:35 a.m.** Introduction
- 8:35-9:05 a.m.** The Aging Athlete's Heart
*Benjamin Levine, FACSM
University of Texas
Southwestern Medical Center*
- 9:05-9:35 a.m.** Aerobic Exercise and Vascular
Health with Aging
*Douglas R. Seals, University of
Colorado*
- 9:35-10:05 a.m.** Skeletal Muscle Health and
Plasticity in Lifelong Exercisers
*Scott Trappe, FACSM
Ball State University*
- 10:05-10:30 a.m.** Aging, Exercise and Respiratory
System Health
*Jerome A. Dempsey, FACSM
University of Wisconsin -
Madison*

- 10:30-11:00 a.m.** Break

- 11:00 a.m.-12:00 p.m.** Keynote Lecture
Models of Exercise and Secreted
Proteins: Toward a New
Generation of Therapeutics
*Bruce Spiegelman, Harvard
University*

- 12:00-1:00 p.m.** Lunch Break

- 1:00-3:00 p.m.** Poster Sessions

- 3:00-5:00 p.m.** Concurrent Symposia

SESSION 1C:

Exercise-Induced Oxidative Stress: Cause and Consequences

Chair: Scott K. Powers, FACSM

- 3:00-3:05 p.m.** Introduction
- 3:05-3:35 p.m.** Exercise-Induced Radical
Production in Skeletal Muscles:
Friend or Foe?
*Scott K. Powers, FACSM
University of Florida*
- 3:35-4:05 p.m.** Sources of Oxidant Production
in Contracting Skeletal Muscles:
A Changing Paradigm
*Malcolm Jackson, University of
Liverpool*

4:05-4:35 p.m.	Use of Antioxidant Supplements to Improve Performance during Endurance Exercise <i>Michael B. Reid, University of Florida</i>	9:35-10:05 a.m.	Beyond Growth: Our Evolving Understanding of the Satellite Cell in Human Skeletal Muscle <i>Gianni Parise, McMaster University</i>
4:35-5:00 p.m.	The Controversy of Antioxidants and Exercise Training Adaptation - What Does the Evidence Say? <i>Carmen Gomez, University of Valencia</i>	10:05-10:30 a.m.	Can Inflammation Susceptibility in Myogenic Cells Predict Responses to Exercise Rehabilitation? <i>Marcas Bamman, FACSM University of Alabama - Birmingham</i>

SESSION 1D:

Exercise-Induced Metabolic Adaptations in the Heart; Sex, Flies and Lipids

Chairs: Karyn Hamilton, FACSM and Leslie Leinwand

3:00-3:05 p.m.	Introduction
3:05-3:35 p.m.	Sex Differences in Physiologic/ Pathological Hypertrophy <i>Leslie Leinwand, University of Colorado</i>
3:35-4:05 p.m.	Exercise Induced Changes in Cardiac Physiology: Lessons Learned from <i>Drosophila</i> <i>RJ Wessells, University of Michigan</i>
4:05-4:35 p.m.	A Menu for the Heart: Lipids and Other Foods <i>Ira Goldberg, Columbia University</i>
4:35-5:00 p.m.	<i>Speaker TBD</i>

SESSION 2B:

Exercise and Vascular Health

Chair: John Halliwill, FACSM

8:30-8:35 a.m.	Introduction
8:35-9:05 a.m.	Sustained Post-Exercise Vasodilation in Humans: What, How, and Why? <i>John Halliwill, FACSM University of Oregon</i>
9:05-9:35 a.m.	VEGF and Metabolism: A New Role for VEGF? <i>Mark Olfert, West Virginia University</i>
9:35-10:05 a.m.	Exercise and Arterial Stiffness in Clinical Populations <i>Kenneth Wilund, University of Illinois, Urbana-Champaign</i>
10:05-10:30 a.m.	Intravascular ATP: Source of and Role in Muscle Blood Flow Control <i>Brett Kirby, Duke University</i>

FRIDAY, SEPTEMBER 19, 2014

8:30-10:30 a.m.	Concurrent symposia
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SESSION 2A:

Beyond Fusion: New Roles for Stem Cells in Muscle Adaptation to Exercise

Chair: Charlotte Peterson

8:30-8:35 a.m.	Introduction	11:00 a.m.-12:00 p.m.	Keynote Lecture Keeping Clocks Aligned: A New Role for Exercise in Systemic Health and Performance <i>Karyn Esser, FACSM University of Kentucky</i>
8:35-9:05 a.m.	Satellite Cells Regulate Fibroblast Activity in Muscle During Overload <i>Charlotte Peterson, University of Kentucky</i>	12:00-1:00 p.m.	Lunch Break
9:05-9:35 a.m.	Role for Non-Satellite Stem Cells in Muscle Repair and Adaptation Post-Exercise <i>Marni Boppart, University of Illinois, Urbana-Champaign</i>	1:00-3:00 p.m.	Poster Sessions
		3:00-5:00 p.m.	Concurrent Symposia

SESSION 2C:**Mitochondrial Quality Control in Skeletal Muscle: A Role for Mitochondrial Clearance (Mitophagy)***Chair: Zhen Yan*

- 3:00-3:05 p.m.** Introduction
- 3:05-3:35 p.m.** Cause and Consequence of Altered Mitochondrial Function in Aging Muscle
Russell T. Hepple, McGill University
- 3:35-4:05 p.m.** Mitochondrial Remodeling In Muscle Adaption: Cash For Clunkers
Zhen Yan, University of Virginia
- 4:05-4:30 p.m.** Mitochondrial Dysfunction and Sarcopenia
Christian Leeuwenburgh, FACSM, University of Florida
- 4:35-5:00 p.m.** *Speaker TBD*

SESSION 2D:**Guts, Smarts and Heart: Effects of Exercise Dosage on Inflammation in the Gut, Brain and Cardiovascular System***Chair: Jeffrey A. Woods, FACSM*

- 3:00-3:05 p.m.** Introduction
- 3:05-3:35 p.m.** Impact of Exercise on the Gut and its Microbiota
Jeffrey A. Woods, FACSM, University of Illinois, Urbana-Champaign
- 3:35-4:05 p.m.** Exercise Reduces Inflammatory Microglia in the Hippocampus: Role in Neurogenesis and Behavioral Learning
Justin Rhodes, University of Illinois, Urbana-Champaign
- 4:05-4:35 p.m.** Anti-Inflammatory Effects of Aerobic Exercise on Aging Arteries
Douglas R. Seals, University of Colorado
- 4:35-5:00 p.m.** *Speaker TBD*
- 5:15-6:00 p.m.** Town Hall Meeting

SATURDAY, SEPTEMBER 20, 2014**8:30-10:30 a.m.** Concurrent symposia**SESSION 3A:****Regulation of Fuel Utilization during Exercise***Chair: Lorraine Turcotte, FACSM*

- 8:00-8:35 a.m.** Introduction
- 8:35-9:05 a.m.** Contraction-Induced Lipid Utilization: Who is Telling the Fat Players What to Do?
Lorraine Turcotte, FACSM, University of Southern California
- 9:05-9:35 a.m.** How to Run 1000 Miles: Fuel Use and Metabolic Adaptations in Iditarod Sled Dogs
Benjamin F. Miller, FACSM, Colorado State University
- 9:35-10:05 a.m.** Muscle Glycogen, GLUT4, and Exercise
Mark Hargreaves, FACSM, University of Melbourne
- 10:05-10:30 a.m.** Working Out the Kinks: Impact of Exercise on Insulin Resistance
Jeff Horowitz, FACSM, University of Michigan

SESSION 3B:**Exercise and Cytokines: Health Mediators or Stress Responders?***Chair: David C. Nieman, FACSM*

- 8:30-8:35 a.m.** Introduction
- 8:35-9:05 a.m.** An Introduction to Exercise and Cytokines
David C. Nieman, FACSM, Appalachian State University
- 9:05-9:35 a.m.** Skeletal Muscle as a Stress Sensor: Focus on Muscle-Derived Interleukin-6 during Heat Stress
Steven S. Welc, UCLA
- 9:35-10:05 a.m.** Effects of Exercise Training on Chronic Inflammation in Obesity: Potential Mechanisms
Tongjian You, FACSM, University of Massachusetts - Boston
- 10:05-10:30 a.m.** Exercise, Weight Loss, and Effects on Inflammation
Kristen M. Beavers, Wake Forest University

11:00 a.m.-12:00 p.m. Keynote Lecture
Muscle Metabolism, Signaling
and Exercise
*Erik Richter, University of
Copenhagen*

12:00-1:00 p.m. Lunch Break

1:00-3:00 p.m. Poster Sessions

3:00-5:00 p.m. Concurrent Symposia

SESSION 3C: **Exercise Only Affects Muscle?
Fat Chance**
Chair: Laurie Goodyear, FACSM

3:00-3:05 p.m. Introduction

3:05-3:35 p.m. Exercise Only Affects Muscle?
Fat Chance
*Laurie Goodyear, FACSM
Harvard University*

3:35-4:00 p.m. Control of Brown Fat
Differentiation and Function:
Interplay between Progenitors
and Inductive Cues
*Yu-Hua Tseng, Harvard
University*

4:00-4:30 p.m. Exercise and Brown Fat: Basic
Biology and Novel Therapeutics
*Bruce Spiegelman, Harvard
University*

4:30-5:00 p.m. *Speaker TBD*

SESSION 3D: **Exercise Genomics:
Beyond Big Data**
Chair: Monica Hubal, FACSM

3:00-3:05 p.m. Introduction

3:05-3:35 p.m. Adipose-Derived Exosome
miRNAs Regulate Skeletal
Muscle Insulin Signaling
*Monica J. Hubal, FACSM
Children's National
Medical Center*

3:35-4:05 p.m. Genomic Predictors of Exercise
Training Responses
*William E. Kraus, FACSM
Duke University*

4:05-4:35 p.m. Membrane Cytoskeleton
Remodeling in Response to
Acute Overload
*Eric P. Hoffman, George
Washington University*

4:35-5:00 p.m. *Speaker TBD*

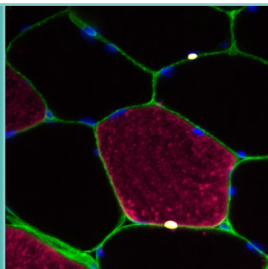
CONTINUING EDUCATION CREDITS (CECs)
27.0 CECs

Submit Your Abstract Now!

Abstracts for the 2014 ACSM Conference on Integrative
Physiology of Exercise are now being accepted!

Please visit:

<http://www.acsm.org/attend-a-meeting/IPE2014>



**Submission
deadline:
July 15, 2014
(11:59 p.m. PST)**



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Miami Beach, Florida, USA
September 17-20, 2014

Fee Schedule (register online at <http://www.acsm.org/attend-a-meeting/IPE2014>)

Preregistration ends 9/3/14

	Register by 6/16/14	Register by 8/8/14	Register by 9/3/14 or onsite
Current Members*			
Professional, Fellow, or Professional-in-Training	\$275	\$290	\$365
Single day rate	\$175	\$175	\$175
ACSM student members	\$150	\$150	\$175
Single day/student rate	\$ 60	\$ 60	\$ 60

Join ACSM now! (first time members)**

Professional	\$505	\$520	\$595
Professional-in-Training	\$430	\$445	\$520
Student	\$160	\$160	\$185

Non-ACSM member

Non-member Professional	\$515	\$530	\$605
Single day rate	\$200	\$200	\$200
Non-member Student (student ID required)	\$170	\$170	\$195
Single day/student rate	\$ 80	\$ 80	\$ 80

**This includes a member in good standing of any of the sponsoring societies: ACSM and APS (dues must be current at time of meeting).*

***Fee includes ACSM membership and meeting registration fees)*

HOTEL INFORMATION

Book your room at the luxurious Eden Roc Miami Beach resort and experience the most breathtaking views of Miami Beach

\$189

Visit <http://www.acsm.org/attend-a-meeting/IPE2014> to make hotel reservations.





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