This year, the Respiration Section’s Julius H. Comroe, Jr. Lecture will be delivered by Dr. Aron Fisher, Professor of Medicine and Physiology and Director of the Institute of Environmental Medicine at the Perelman School of Medicine, University of Pennsylvania in Philadelphia. Dr. Fisher is a renowned expert in the field of pulmonary endothelial cell biology and medicine and mechanisms of lung injury. His work has focused on the role of reactive oxygen species, mechanical forces, phospholipids and lipid peroxidation in endothelial cell signaling and lung function. Most recently, he has made a key contribution in studies of the structure-function relationships and physiological role of the protein peroxiredoxin 6 in repair of cell membranes damaged by exposure to oxidative stress. His research has led to development of exciting new potential therapeutic strategies for ameliorating oxidative stress induced lung injury.

After completing a BS from Dickinson College, Dr. Fisher received an MD from the University of Pennsylvania. He completed his training in Internal Medicine at University Hospitals of Cleveland before returning to the University of Pennsylvania for postdoctoral training, and appointment to a faculty position. Dr. Fisher is the author of over 150 publications and has been an active champion of, and role model for, junior investigators throughout the country.

The Julius H. Comroe Jr. Distinguished Lectureship of the APS Respiration Section was established in 1993 and is awarded annually to recognize a research scientist who has made an outstanding contribution to the field of respiratory physiology. The award honors Julius Comroe (March 13, 1911 — July 31, 1984) who was a medical researcher specializing in physiology of the human heart and lungs. He was also a surgeon and director of the Cardiovascular Research Institute for the University of California at San Francisco. Comroe was a member of the National Academy of Sciences, and he served as president of the American Physiological Society in 1960. Noted for his scientific contributions in cardiovascular and respiratory function, Comroe was also a highly effective teacher who conceived and carried out a number of special programs and publications promoting better communication of physiological knowledge to a broader audience.
Respiration Section Scientific Program

Sunday April 21
Symposium: Emerging Concepts in AMPK Function
J Creighton & J Zmijewski; 8:00 – 10:00 AM; BCEC 210A

Featured Topic: Inflammation and Cardiorespiratory Control
F Powell; 10:30 AM – 12:30 PM; BCEC 211

Symposium: Monoaminergic Control of Breathing During Development
K Cummings & M Hodges; 3:15 – 5:15 PM; BCEC 211

Monday April 22
Featured Topic: Origins of Cells that Contribute to Pulmonary Epithelial and Vascular Remodeling
S Majka & D Alvarez; 8:00 - 10:00 AM; BCEC 211

Featured Topic: Cell Stress in Lung Disease
M Koval & S Mulugeta; 10:30 AM – 12:30 PM; BCEC 211

Symposium: Programming the Lung: Epigenetic Mechanisms
L Kobzik & S Matalon; 3:15 – 5:15 PM; BCEC 211

Tuesday April 23
Julius H. Comroe Jr. Distinguished Lectureship of the APS Respiration Section
A Fisher; 10:30 – 11:30 AM; BCEC 205C

Symposium: Cardiorespiratory Function/Integration in Health and Disease
K Morris & D Baekey; 3:15 – 5:15 PM; BCEC 207

Wednesday April 24
Symposium: Neurotrophins in the Respiratory System
Y Prakash & G Sieck; 8:00 – 10:00 AM; BCEC 210A

Symposium: Oxidative Stress-Induced Endothelial Cell Reprogramming
R Minshall & N Voelkel; 10:30 AM – 12:30 PM; BCEC 211

Symposium: Recent Advances in Understanding Mechanisms regulating Breathing during Exercise
H Forster & J Dempsey; 10:30 AM – 12:30 PM; BCEC 210A

Featured Topic: Hypoxic Chemotransduction: Defining the Oxygen Sensors
C Wyatt; 2:30 – 4:30 PM; BCEC 211

Scientific Program Highlights

Monday April 22
Central Nervous System Modulation of Cardiorespiratory Responses to Hypoxia
I Solomon; 3:15 – 5:15 PM; BCEC 209
Sponsored by: Hypoxia Group; Hypoxia & Oxidative Stress Track; Central Control of Homeostasis Track

Tuesday April 23
Assessing Postganglionic Sympathetic Neuronal Discharge Patterns: Implications for Understanding Aberrant Sympathetic Outflow
K Shoemaker & M Knuepfer; 8:00 – 10:00 AM; BCEC 207
Sponsored by: Neural Control & Autonomic Regulation Section; Blood Pressure Regulation Track; Central Control of Homeostasis Track

Oxidative Stress
M Helms & S Niederlechner; 8:00 – 1:00 AM; BCEC 206B
Sponsored by: Cell & Molecular Physiology Section; Hypoxia & Oxidative Stress Track

Integrative Cardiovascular and Respiratory Physiology of Non-Model Organisms
J Eme; 10:30 AM – 12:30 PM; BCEC 212
Sponsored by: Comparative & Evolutionary Physiology Section
Control of Breathing Mixer

Saturday April 20, 6:30 to 10 PM
Renaissance Boston Waterfront Hotel
Pacific Ballroom-Salon D

The organizers would like to stay with the “Hot Topics in Respiratory Control” theme but make the “talks” less an advertisement for upcoming posters and more a seed for discussion. There will still be two categories:

1. “Hot Topics in Respiratory Control” – Any work not duplicating data of an EB 2013 scheduled presentation and having to do with control of respiration will be fair game. These presentations will follow the highly successful format of 2 data slides and a maximum of 5 min. Presentations will be open for discussion of the scientific topic with an intention to have an equal time devoted to discussion as to presentation.

2. “Hot Topics for EB 2013” - These talks will allow you to highlight work you will present at EB 2013 in your scheduled session, to attract the audience to a poster or scheduled later in the week. These presentations will comprise 1 data slide and a 1-min pitch stressing the important question and finding of your work. These presentations will be open for brief discussion.

For more information contact
Bob Putnam
robert.putnam@wright.edu

Trainee Highlights

Sunday April 21
Respiration Section Trainee Highlights Breakfast
7:30 AM – 10:00 AM; Atlantic Ballroom ½

Monday April 22
Trainee Highlights in Physiological Genomics Featured Topic
H Klemcke & C Moreno Quinn; 8:00 10:00 AM; BCEC 209
Sponsored by: Physiological Genomics Group; Translational Physiology Track

NIH K Awards
H Khachaturian; 9:15 AM; BCEC Hall B Career Center Area
Sponsored by: Science Policy Committee; Career Development Track

Comparative and Evolutionary Physiology Abstract-driven Trainee Session
H Contreras & S Kirkton; 10:30 AM – 12:30 PM; BCEC 212
Sponsored by: Comparative and Evolutionary Physiology Section

Tuesday April 23
Communicating Science to Non-Scientists: Keys to Funding and Visibility
S Coaxum & L Leon; 8:00 – 10:00 AM; BCEC Center 205B
Sponsored by: Careers in Physiology Committee; Career Development Track

Wednesday April 24
Neural Control and Autonomic Regulation Trainee Featured Topic
E Lazartigues & P Shi; 8:00 – 10:00 AM; BCEC 211
Sponsored by: Neural Control and Autonomic Regulation Section; Career Development Track; Education Track

Translational Research: From Bench to Bedside
J Rennison & A Whitaker; 10:30 AM – 12:30 PM; BCEC 207
Sponsored by: Trainee Advisory Committee

The Changing Face of Tenure
K O’Hagen & A Dorrance; 2:30 PM – 4:30 PM; BCEC 212
Sponsored by: Women in Physiology Committee; Career Development Track

Respiration Section Banquet and Business Meeting

Tuesday April 23
Reception (cash bar and refreshments): 6:00 PM
Dinner buffet begins at 7:00 PM

Anthony’s Pier 4 – Boston Room
40 Northern Ave; Boston, Massachusetts 02210
(within easy walking distance of the Convention Center)

Directions via Public Transit:
Take the Red Line to South Station. Change at South Station and take the Silver Line to Courthouse stop. Anthony’s Pier 4 is on Seaport Boulevard, on the left.

Dinner Speaker: Dr. Jahar Bhattacharya from Columbia University will talk about “Serendipity and Science”.

Dinner Menu: Buffet Dinner, consisting of Seafood Newburg, Roast Sirloin Strip of Beef, Rice Pilaf, Green Beans a L’Alsacienne, Glover Salad, Hot Popovers and Freshly Baked Rolls, Chocolate Rum Mouse and Coffee.

For more information contact
Judy Creighton, Banquet Organizer:
jcreighton@uab.edu;
or Catherine Ohnmacht, APS Sections Administrator:
cohnmacht@the-aps.org; or (301) 634-7976.
Proposals are needed for Symposia and Featured Topic sessions for Experimental Biology 2014, which will be held in San Diego, CA from April 26 to 30. The Respiration Section is responsible for programming 4 Symposia and 4 Featured Topics. Lung Biology and Control of Breathing subsections each have 2 Symposia and 2 Featured Topics.

Proposal submission forms are available at: [http://www.the-aps.org/mm/Conferences/EB](http://www.the-aps.org/mm/Conferences/EB)

Send your proposals to one of the Program Committee Co-chairs
Greg Funk
[Control of Breathing]:
gf@ualberta.ca or
Chris Waters
[Lung Biology]:
cwaters2@uthsc.edu

Proposals for EB2014 sessions will be evaluated at the Program Committee Meeting; Tues April 23, 11:45 AM - 1:15 PM; Pacific Grand Ballroom E

Your input is needed to ensure that the Respiration Section provides you with the best programming. Feel free to contact any program or steering committee members with ideas and/or suggestions.

### APS Named Lectures

**Saturday April 20**
Physiology in Perspective--The Walter B. Cannon Memorial Award Lecture
Michael Joyner; 5:30 PM

**Sunday April 21**
Claude Bernard Distinguished Lectureship of the Teaching of Physiology Section
Eric Mazur; 10:30 – 11:30 AM; BCEC 205C
Confessions of a converted lecturer.

Hugh Davson Distinguished Lectureship of the Cell & Molecular Physiology Section
Amira Klip; 2:00 – 3:00 PM; BCEC 210A
Insulin signal transduction meets vesicle traffic via Rab GTPases and unconventional myosins.

Ernest Starling Distinguished Lectureship of the Water & Electrolyte Homeostasis Section
Donald Kohan; 3:15 – 4:15 PM; BCEC 210A
Collecting duct endothelium: the last word in sodium and water excretion and blood pressure regulation.

Henry Pickering Bowditch Memorial Award Lecture
Jonathan Tune; 5:45 – 6:45 PM; BCEC 210BC
Translational insights into the regulation of coronary blood flow.

**Monday April 22**
Carl Ludwig Distinguished Lectureship of the Neural Control & Autonomic Regulation Section
Roger Dampney; 8:00 – 9:00 AM; BCEC 210A
Central mechanisms regulating coordinated cardiovascular and respiratory function in stress and arousal.

Solomon Berson Distinguished Lectureship of the Endocrinology & Metabolism Section
Ellis Levin; 10:30 – 11:30 AM; BCEC 210A
Extra-nuclear estrogen receptors: functions for physiology and pathophysiology.

Edward Adolph Distinguished Lectureship of the Environmental & Exercise Physiology Section
Douglas Seals; 2:00 – 3:00 PM; BCEC 210A
The remarkable anti-aging effects of aerobic exercise on arteries.

Joseph Erlanger Distinguished Lectureship of the Central Nervous System Section
Charles Bourque; 3:15 – 4:15 PM; BCEC 205C
Verney’s osmoreceptor: an integrated unit comprising ion channels, glial cells and mechanosensitive neurons.

Carl Gottschalk Distinguished Lectureship of the Renal Section
Jeff Sands; 3:15 – 5:15 PM; BCEC 210A
Regulation of renal urea transport.

**Tuesday April 23**
Julius Comroe Distinguished Lectureship of the Respiration Section
Aron Fisher; 10:30 – 11:30 AM; BCEC 205C
The serpentine path to a novel mechanism based inhibitor of acute inflammatory lung injury.

Robert Berne Distinguished Lectureship of the Cardiovascular Section
David Lefer; 2:00 – 3:00 PM; BCEC 205C
A long and winding road: the story of nitric oxide in the heart.

August Krogh Distinguished Lectureship of the Comparative & Evolutionary Physiology Section
Stan Lindstedt; 3:15 – 4:15 PM; BCEC 205B
From Tusko to Titin: giant insights from comparative physiology.

Horace W. Davenport Distinguished Lectureship of the Gastrointestinal & Liver Physiology Section
Ole Holger Petersen; 3:15 – 4:15 PM; BCEC 210A
Calcium signal mechanisms in epithelial cells: Roles in physiology and pathology.