



# The Physiologist

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## The Porter Fellowships: A Major Contributor to my Professional Success

**James G. Townsel**  
Meharry Medical College



**James G. Townsel**

My entrance into a science career did not follow the typical pattern. Although, I have always had a love for science, I gave little thought to the pursuit of a graduate degree in science. I was a pre-medical student as an undergraduate and also an advance ROTC student at Virginia State College in Ettrick, VA. Upon graduation, the cost of medical school caused me to rethink my options and a career as an Army officer appeared rather attractive. I was commissioned a second lieutenant in the Army Medical Service Corps. Among my responsibilities in a unit that operated a pharmacy, I was involved in the training of enlisted men who worked in the pharmacy. Thus, I developed an interest in both physiology and pharmacology. Hence, after my four year tour was completed, I left the service and entered graduate school at Purdue Univ. to study physiology. My PhD research centered on the identification of the neurotransmitter involved in the regulation of the *Limulus* heart. In the course of my studies I became aware of a number of neurotransmitter studies ongoing in

the Kravitz laboratory in the Department of Neurobiology at Harvard Medical School. I very much wanted to pursue postdoctoral studies in the Kravitz group. However, by now I had to be concerned with a growing family, a wife and three young children. A mentor of mine at Virginia State College (VSC) who had been following my progress at Purdue, contacted me with an offer as a full time faculty member at VSC. I felt it prudent to accept this faculty offer which paid considerably more than the postdoctoral offers available to me.

By now, I knew that my mission in life was that of providing educational opportunities in science for minority youth underrepresented in the sciences. The position at VSC appeared to be ideal in that it would permit me to achieve my mission. However, after a few years on the faculty at VSC, I realized that without my active involvement in research, my ability to achieve my goals were limited. Fortunately, an opportunity opened for me to acquire a senior postdoctoral appointment in the laboratory of Edward Kravitz, Department of Neurobiology, Harvard. Thus after teaching for four years I joined the Kravitz laboratory in the fall of 1971. The senior postdoctoral appointment provided relatively generous support; however, I was not without fiscal concerns. My family remained in Virginia, where my two oldest kids were enrolled in school and were doing quite well. Thus, I was required to maintain two households. Steven Kuffler, Chairperson  
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of the Department of Neurobiology, became aware of my plight and spoke with Cliff Barger in the Department of Physiology at Harvard and arranged for me to acquire a Porter Fellowship. The added contribution from the Porter Fellowship enabled me to spend two years in the Neurobiology Department. These were the most exciting two years of my early scientific career. Not only was the ongoing research within the department cutting edge but some of the most notable neuroscientist throughout the world visited the department during my time there. Clearly, these were easily the most transforming years of my early career. In 1973, I completed my studies at Harvard, and was faced with a painful decision. I realized that I would not be able to return to my previous position at Virginia State, a primarily undergraduate institution, if I wished to have a meaningful research career.

However, I was unwilling to abandon my commitment of providing opportunities in science for minority youth, thus I chose to accept a position at Meharry Medical College in Nashville, TN, a historical Black Medical and Dental School. Aside from medical and dental education, Meharry also offered the PhD in the biological sciences. Shortly after joining the faculty at Meharry in the fall of

1973, I was fortunate to acquire both an R01 as well as an NSF grant in 1975 to support my research. Thus, my career as a research scientist was launched. I left Meharry in 1978 to accept an administrative/research position at the College of Medicine Univ. of Illinois at Chicago. The separation was short-lived, however, and in 1984, I returned to Meharry as Chairperson of the Department of Physiology. We focused on building research strength in the department with a focus in neuroscience. I was aided by an institutional NIH award in 1985 that provided the department with five new faculty positions, all in neuroscience. By 1988, the department gained approval to offer the PhD in physiology with an emphasis in neuroscience. The quality of our program was key to our successful competition for an openly competitive training grant in neuroscience from the National Institute of Mental Health in 1993. It is noteworthy that our success was a first for a Historical Black College and University (HBCU) and/or minority serving institution. We attracted a number of highly talented African American PhD students. Several of our graduates were attracted to postdoctoral positions in the Department of Neurobiology at Harvard. In general, our efforts to advance diver-

sity in neuroscience resulted in national recognition. Several of the awards warrant particular recognition. In 2003, I was the recipient of Neuroscience Educator of the Year Award by the Association of Neuroscience Departments and Programs. In 2004, I was elected a Fellow of the American Association for the Advancement of Science. In addition to my efforts at Meharry, I was also involved with a program at the Marine Biological Laboratory (MBL) at Woods Hole, MA. The major objective of this program was to assist neuroscience PhD students and post doctorates to achieve career success. The program is named Summer Program in Neuroscience, Ethics, and Survival (SPINES). I served as co-course director for a number of years and in 2007, the MBL established the Martinez/Townsend Endowed Lecture.

In sum, a postdoctoral fellowship augmented by the Porter Fellowship enabled me to spend two years in training in the Department of Neurobiology at Harvard. These two years in the scientifically exciting and challenging environment of excellence at Harvard were critical to my scientific development and was enabling in allowing me to have a level of success in achieving my personal career goals. ♦

## APS News

### APS Participates in the 90th Anniversary Meeting of the Physiological Society of Japan

APS President Kim Barrett had the pleasure of representing the Society at the 90th Anniversary meeting of the Physiological Society of Japan (PSJ), held in Tokyo from March 27-30. The meeting, conducted primarily in English, attracted more than 1,800 physiologists and trainees from all over Japan, as well as a number of international speakers. Barrett gave a plenary lecture that included some of her research findings, but also described many of the programs through which the APS seeks to attract, nurture and support the next generation of physiologists, as well as underpinning the vitality of the discipline as a whole. She received many questions about how specific APS programs, such as Professional Skills Training courses

and PhUn week, might be emulated by our sister society. She also had the opportunity to meet with women members of PSJ, and to compare and contrast progress made towards gender equality in the US and Japan. Finally, she got a great exposure to many aspects of a beautiful city and its culture, including the cuisine (sukiyaki and baby squids in jelly with wild vegetables from the mountains), the customs (shoeless dining, heated toilets, and bird noises announcing staircases in the subway stations for the visually impaired) and the spectacular cherry blossoms throughout the city and especially in Ueno Park. She extends thanks and congratulations to her gracious hosts and especially PSJ President Dr. Yoshihiro Ishikawa. ♦



**Yoshihiro Kubo, Kim E. Barrett and Satoshi Kurihara. Kubo and Kurihara, PSJ Vice Presidents, accept a proclamation from the APS on the 90th Anniversary of the PSJ.**



**Junna Hatae, Kim E. Barrett and Junko Kimura during their visit to see the cherry blossoms in Ueno Park.**

## New Regular Members

\*transferred from student membership

### **Kenneth B. Adler**

North Carolina State Univ.

### **Zienab Abdulhafeez Alrefaie**

King Abdulaziz Univ., Saudi Arabia

### **Anie Azroyan**

Harvard Med. School, MA

### **Patricia Bachiller**

Massachusetts Gen. Hospital, Boston

### **Richard Karl P. Benninger**

Univ. of Colorado, Aurora

### **Sumit Bhattacharya**

Harvard Med. Sch., Boston, MA

### **Gaelle Boudry**

INRA Ur1341 ADNC, St-Gilles, France

### **Melissa Sue Bowlin**

Univ. of Michigan, Dearborn

### **Josiane Broussard**

Cedars-Sinai Med. Ctr., Los Angeles, CA

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San Jose State Univ., CA

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Yonsei Univ., Seoul, Republic of Korea

### **James Collawn**

Univ. of Alabama, Birmingham

### **Andrea S. Cornford**

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### **Pedro Del Corral**

Benedictine Univ., IL

### **Brendan J. Dougherty**

Univ. of Wisconsin, Madison

### **Britta Dreier**

Univ. of California, Davis

### **Lisa Ebihara**

Rosalind Franklin Univ., IL

### **Nancy M. Eicker**

Vermont Tech. College

### **Mai Kamal Elmallah**

Univ. of Florida, Gainesville

### **Peter English**

Univ. of Texas, Austin

### **Reha Erzurumlu**

Univ. of Maryland, Baltimore

### **Louise Evans\***

Med. College of Wisconsin, Milwaukee

### **Paolo Fanti**

Univ. of Texas, San Antonio

### **Carol Anne Fassbinder-Orth**

Creighton Univ., NE

### **Todd A. Fiacco**

Univ. of California, Riverside

### **John C. Gensel**

Univ. of Kentucky, Lexington

### **Goran C. Hedenstierna**

Univ. Hosp. Med. Sci., Uppsala, Sweden

### **Anne-Cecile Huby**

Georgia Health Sci. Univ., Augusta

### **Motoyuki Iemitsu**

Ritsumeikan Univ., Kusatsu, Japan

### **Brock Thomas Jensen\***

Slippery Rock Univ., PA

### **Chao Kai Kang**

Nat'l Chung-Hsing Univ., Taiwan

### **Ollie Kelly**

Miles College, Fairfield, AL

### **Chris R.J. Kennedy**

Ottawa Hosp. Res. Inst., ON, Canada

### **Lutz E. Kraushaar\***

Adiphea GmbH, Singapore

### **Matthew Allan Kreitzer**

Indiana Wesleyan Univ.

### **John Ladisa**

Marquette Univ., WI

### **David R. Ladle**

Wright State Univ., OH

### **Christina C. Lewis**

Samuel Merritt Univ., Berkeley, CA

### **Lijun Liu**

Univ. of Toledo, OH

### **Nicolas Markadieu**

Vanderbilt Univ., TN

### **W. Bradley Nelson\***

Ohio Dominican Univ., Columbus

### **Sean Alec Newsom\***

Univ. of Colorado, Aurora

### **Eduardo A. Nillni**

Brown Univ./Rhode Island Hosp.

### **Emma Tina Bisgaard Olesen**

Aarhus Univ., Denmark

### **Louise Ostergaard**

Univ. of Zurich, Switzerland

### **Jin O-Uchi**

Thomas Jefferson Univ., PA

### **Janaina Paulini**

Univ. of Sao Paulo, Brazil

### **Jonathan Peake**

Queensland Univ. Tech., Australia

### **Ana Belen Peinado Lozano**

Technical Univ., Madrid, Spain

### **Gaetano Perchiazzi**

Univ. of Bari, Italy

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The Intellis Corp., San Diego, CA

### **Teresa Pitts**

Univ. of Florida, Gainesville

### **Enkhsaikhan Purevjav**

Cincinnati Children's Hosp., OH

### **Syed M. Qadri**

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### **Carrie M. Quinn\***

Army Res. Inst. Environ. Med., MA

### **Niwanthi W. Rajapakse**

Baker IDI Heart/Diabetes Inst., Australia

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Johns Hopkins Univ., Baltimore, MD

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Mansoura Univ., Egypt

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Stanford Univ., CA

### **Ye Chun Ruan**

Massachusetts Gen. Hosp., Boston

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Univ. of Oregon, Eugene

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Worcester State Univ., MA

### **Xiao (Gregory) Shen**

Cedars-Sinai Med. Ctr., CA

### **Haley Speed**

Univ. of Texas Southwestern Med. Ctr.

### **Frank T. Spradley\***

Univ. of Mississippi Med. Ctr., Jackson

### **Catia Sternini**

Univ. of California, Los Angeles

### **James Alfred Stewart**

Mississippi State Univ.

### **Mary E. Sunday**

Duke Univ., NC

### **Zoran Tadic**

Univ. of Zagreb, Croatia (Hrvatska)

### **Misty Thompson**

Vanderbilt Univ., TN

### **Elizabeth Barbara Torres**

Rutgers Univ. NJ

### **Annelyn Torres-Reveron**

Ponce Sch. Med., Puerto Rico

### **Eugene Tunik**

Univ. of Med. and Dentistry, NJ

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Univ. of Kansas

### **Zhen Wang**

Univ. of Mississippi, Jackson

### **Annie M. Whitaker\***

Louisiana State Univ., New Orleans

### **Jacob Malachi Wilson**

Univ. of Tampa, FL

### **Andriy Yabluchanskiy**

Univ. of Mississippi, Jackson

### **Tetsu Yamakado**

Okanami Gen. Hosp., Nabari City, Japan

### **Yimu Yang**

Univ. of Colorado Sch. Med., Aurora

### **Xin Yu**

Case Western Reserve Univ., OH

### **Donald Zakutansky**

Gateway Tech. College, Kenosha, WI

### **Alex Carlos Zambon**

Univ. of California, San Diego, CA

### **Yanli Zhang-James**

SUNY, Syracuse, NY

### **Ming-Sheng Zhou**

Univ. of Miami, FL

### **Xin Zhou**

Pingjin Hosp., Logistics Univ., China

### **Xueping Zhou\***

West Virginia Univ.

## New Graduate Student Members

**Justine M. Abais**  
Virginia Commonwealth Univ.

**Heather Allaway**  
Pennsylvania State Univ.

**Anja Bastian**  
Univ. of Oklahoma

**Micah Battson**  
Univ. of Colorado, Boulder

**Joseph William Beals**  
Colorado State Univ.

**Bryan Becker**  
Univ. of Nebraska

**Marisa Benson**  
Syracuse Univ., NY

**Nina Bertaux-Skeirik**  
Univ. of Cincinnati, OH

**Jing Bi**  
State Univ. of New York, Upstate

**Charles A. Brown**  
Louisiana State Univ.

**Boris Patrick Budiono**  
Griffith Univ., Australia

**Zhijuan Cao**  
Baylor College of Med., TX

**Abderrahmane Chahidi**  
Univ. of Sorbonne Nouvelle, France

**Katie Collette**  
Univ. of North Dakota

**Anita Cote**  
Univ. of British Columbia

**Garrett N. Coyan**  
Univ. of Kansas

**Stephanie Meyers Davis**  
Univ. of South Florida

**Isha Dhande**  
Univ. of Houston, TX

**Stacey Dineen**  
Indiana Univ.

**Sami Dodhy**  
Virginia Commonwealth Univ.

**Andrea Duran**  
California State Univ., Fullerton

**Matthew Ely**  
Univ. of Oregon

**Fan Fan**  
Univ. of Missouri

**Jessica Fay**  
Univ. of Massachusetts, Amherst

**Viktor Feketa**  
Baylor College of Med., TX

**Shawn Flanagan**  
Univ. of Connecticut

**Patrick Forbes**  
Delft Univ. of Tech., Netherlands

**Werner Furuya**  
Univ. Estadual Paulista, Brazil

**Vijay LaxmanbhaiI Goplain**  
B.J.M Medical College, India

**Leslie Anne Hargett,**  
Univ. of South Alabama

**Furqan Hassan**  
Cornell Univ., NY

**Adrian Hodgson**  
Univ. of Birmingham, AL

**Candice Holden**  
Univ. of Louisville, KY

**David C. Hughes**  
Univ. of Bedfordshire, UK

**Koshiro Inoue**  
Univ. of Tsukuba, Japan

**Janalee Isaacson**  
Univ. of Missouri, Kansas City

**Kate Israel**  
Oakland Univ., MI

**Rebecca Kappus**  
Univ. of Illinois, Chicago

**Michael Katsnelson**  
Case Western Reserve Univ., OH

**Tanaporn Khamphaya**  
Mahidol Univ., Thailand

**Han Kyul Kim**  
Univ. of Florida

**Jahyun Kim**  
Univ. of Delaware

**Kiyoung Kim**  
Univ. of Texas, Austin

**Yu Ho Kim**  
Syracuse Univ., NY

**Divya Prasanna Kumar**  
Virginia Commonwealth Univ.

**Robert Lakin**  
Univ. of Toronto, ON

**Kathryn Lillegard**  
Univ. of Minnesota, Duluth

**Marcelo Limborço-Filho**  
Univ. Fed. de Minas Gerais, Brazil

**Chang Liu**  
Karolinska Institutet, Sweden

**Oliver Loson**  
California Inst. of Tech.

**C. Madhavan**  
Pondicherry Inst. of Med. Scis., India

**Molly Magoon**  
Univ. of South Carolina

**Kristina Makey**  
Univ. of Mississippi

**John R. Martin**  
Indiana Univ.

**Moe Matsuo**  
Univ. of Tokyo, Japan

**Meghan Cameron McCue**  
Univ. of Minnesota

**Erica Midttveit**  
Univ. of Oregon

**Hitesh K. Modak**  
Seth G.S. Med. Coll. & K.E.M. Hosp., India

**Jillian Noblet**  
Indiana Univ.

**Gokhan Ordek**  
New Jersey Inst. of Tech.

**Roger Paxton**  
Colorado State Univ.

**Nicole Perry**  
Univ. of North Carolina, Greensboro

**Aaron Phillips**  
Univ. of British Columbia, Canada

**Sanjeev Rana**  
Himalayan Ecol. & Conserv. Res., India

**Sofhia Verena Ramos**  
Brock Univ., Canada

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Marquette Univ., WI

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Ponce Sch. of Med. & Health Sci.,  
Puerto Rico

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Univ. of Ioannina, Greece

**Teresa Hinkle Sanders**  
Georgia Inst. of Technology

**Joseph J. Sepe**  
Univ. of Wisconsin, Madison

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Oakland Univ., MI

**Rheana A. Techapinyawat**  
Univ. of Arizona, Phoenix

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Des Moines Univ., IA

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Pennsylvania State Univ.

**Carlijn Vernooij**  
Univ. of Birmingham, UK

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Portland State Univ., OR

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Boston Univ., MA

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Univ. of Central Florida

**Sparkle Williams**  
Tennessee State Univ.

**Pei-Tzu Wu**  
Univ. of Illinois

**Ningyong Xu**  
Univ. of South Alabama

**Nicole Zachwieja**  
West Virginia Univ.

## New Undergraduate Student Members

### Sean All

Univ. of Florida

### Imran John Anwar

Tulane Univ., LA

### Irene Arguello

Tougaloo College, MS

### Tamara Marie Armstrong

Univ. of Arizona

### Barbarah Back

North Dakota State Univ.

### Ellen Claire Burns

Univ. of Kentucky

### Michael Francis Catanzaro

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### Margarette Helen Clevenger

Henry Ford Hospital, MI

### Eric Daniel Dyne

Kent State Univ., OH

### Sarah Ehrlicher

Colorado State Univ.

### Michael Francisco

Univ. of Oregon

### Lucy Gao

Johns Hopkins Univ., MD

### Peter Grin

Univ. of Western Ontario, Canada

### Zachary Kadow

Drake Univ., IA

### Jin Sun Kim

Ursinus College, PA

### Rachel McNally

Univ. of Wisconsin, Madison

### Molly Logan Miller

Univ. of New Hampshire

### Taylor Andrew Morris

Sewanee: The Univ. of the South, TN

### Katherine Poinsatte

Kenyon College, OH

### Nicholas Ravanelli

Univ., of Ottawa, Canada

### Lauren Joann Redlinger

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### Amanda Ross

Johns Hopkins Univ., MD

### Cameron Rousseau

Univ. of Wisconsin

### Anthony Sainz

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### Michaela Shuler

Boston Univ., MA

### Collin Daniel Smith

Capital Univ., OH

### Jennifer Sarah Steger

Brown Univ., RI

### Brady J. Tucker

Brigham Young Univ., UT

### John Christopher Weibel

Case Western Reserve Univ., OH

### Benjamin John Weidemann

Univ. of Iowa

### Christopher Cullen Welsh

McMaster Univ., Canada

### Kathleen Suzanne White

Univ. of Kansas Med. Ctr.

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### Shane Buel

Redlands High School, CA

### Robert Carlisle

Texas A&M Univ.

### Robert Gaglione

Rutgers Univ., NJ

### Molly Jo Geiger

Univ. of Oregon

### Lubov Sergeevna Grigoryeva

Massachusetts Gen. Hosp./Harvard

Med. Sch.

### Pamela Riley

Charles River Laboratories, Inc., MA

### Jason Smith

Eck N Teck Genetics R & D LLC, MI

### Ann Marie Youngdahl

Ridgewater College, MN

## Recently Deceased Members

### Joe M. Dabney

Gaithersburg, MD

### Alan Goldfien

San Rafael, CA

### Robert B. Mellins

New York, NY

### James S. Miller

Goshen, IN

### Bernard D. Newsom

Lower Lake, CA

### Frank A. Sreter

Concord, MA

### Sidney J. Stolzenberg

Rockville, MD

### Roy V. Talmage

Longview, TX

### Jay Tepperman

Oakland, CA



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## Bell Named Editor of *AJP-Renal Physiology*



**P. Darwin Bell**

Research in the Department of Medicine at the Medical Univ. of South Carolina. He is also affiliated with the Ralph H. Johnson Veterans Administration (VA) Medical Center in Charleston, SC. His graduate work, as well as postdoctoral training, were at

Philip Darwin Bell has been named Editor of *AJP-Renal Physiology*, effective July 1, 2013.

Bell is an Endowed Professor of Medicine and Vice Chair for

the Univ. of Alabama at Birmingham (UAB), where he focused on macula densa-tubuloglomerular feedback control of renal hemodynamics. He joined the UAB faculty and rose to the rank of Professor and was honored to be appointed as the first UAB Thomas E. Andreoli Professor of Medicine. Andreoli served as the UAB Division Director of Nephrology (1970-1979) and was the first Editor of *AJP-Renal Physiology* (1976-1983).

Bell has served as an Associate Editor for *AJP-Renal Physiology* since 2007 and will assume Editor-in-Chief duties on July 1, 2013. Previously, he was a member of the Editorial Board of *AJP-Renal Physiology* and *Kidney International*. Besides the American Physiological Society (APS), he is a

member of the American Heart Association (AHA) and the American and International Societies of Nephrology. He has served on a number of national peer review groups, including those for the National Institutes of Health, AHA, and VA. Within the APS, he was secretary of the Renal Section, a member of the Joint Programming Committee, and served as Chair of the APS Conference Committee. Bell is a recent recipient of the Carl W. Gottschalk Award given by the Renal Section for outstanding research accomplishments.

Recent work in Bell's laboratory has focused on understanding the mechanisms of cystogenesis in polycystic kidney disease (PKD). ♦

## Samson Named Editor of *AJP: Regulatory, Comparative, Integrative Physiology*



**Willis Samson**

Chemistry at Duke Univ. and after serving in the US Army received his PhD in Physiology at the Univ. of Texas Southwestern Medical Center (UTSWMC) under the tutelage of Dr. S. M. McCann. As an Assistant Professor at UTSWMC, Samson directed his attention to actions of newly described vasoactive peptides in the central control of cardiovascular function, stress hormone secretion, and fluid and electrolyte homeostasis, establishing lasting collaborations with José Antunes Rodrigues (USP-Ribeirão Preto, Brazil) and Alastair V. Ferguson (Queen's Univ., Ontario, Canada). Samson and his collaborator Jerry Fulton

Dr. Willis K. Samson has been named Editor of *AJP: Regulatory, Comparative, Integrative Physiology*, effective July 1, 2013.

Samson majored in

(UTSWMC) were first to apply cytotoxin-mediated cell targeting to study the physiological roles of the natriuretic peptides and oxytocin, the latter studies in collaboration with Edward Stricker and Joseph G. Verbalis (Univ. of Pittsburgh).

Samson moved in 1988 to the Univ. of Missouri becoming a Professor of Anatomy and Neurobiology and in 1992 to the Univ. of North Dakota as Chair in Medical Physiology. In 1999, Samson assumed his current position as Professor of Pharmacological and Physiological Science and Director of Graduate Programs in the Biomedical Sciences at Saint Louis Univ.

With Aaron Hsueh (Stanford Univ. School of Medicine) and Jaw-Kang Chang (Phoenix Pharmaceuticals), Samson and his colleague, Gina L. C. Yosten, employed a bioinformatics approach to discover the novel peptide neuronostatin and have characterized its biological activity in the brain (with Ferguson), pancreas (with John A. Corbett, Medical College of Wisconsin), and heart (with Jun Ren, Univ. of Wyoming). Yosten and Samson recently

identified the orphan G protein-coupled receptor GPR107 to be a cognate receptor for neuronostatin. In collaboration with Hsueh and Chang and also with Nae Dun (Temple Univ.), the Yosten/Samson lab recently announced the discovery of another novel neuropeptide, phoenixin, and demonstrated its potential role in the hypothalamic control of gonadotropin secretion. The lab now employs a Deductive Reasoning Strategy developed by Yosten to "pair" newly described and known peptides with orphan, G protein-coupled receptors for which ligands have yet to be identified.

Samson has served on numerous committees at NIH, APS, the American Heart Association, and the Endocrine Society. He served as Deputy Editor-in-Chief for the previous *AJP RIC* Editor, Curt Sigmund, and shares the duties with Paul Davis (Albany, NY) as Heads of the Faculty of 1000 in Diabetes and Endocrinology. He is also the Editorial Advisor for the Endocrine Section of the APS publication, *Comprehensive Physiology*. ♦

## New Archive Scholars Professional Development Program for Educators

APS has launched a new online professional development program for educators, the Archive Scholars Program, in conjunction with the APS Archive of Teaching Resources ([www.apsarchive.org](http://www.apsarchive.org)). The goal of this program is to help high school, community college, and undergraduate educators to become proficient digital library users and active contributors to the Archive of Teaching Resources' Community of Practice. By the end of the program, Archive Scholars become community participants who are able to find, rate, and comment on resources, as well as submit resources and collections of their own creation. This program is sponsored by the National Science Foundation (DUE-1043878) and is run with the assistance of the Archive Partners: the American Physiological Society, American Association of Anatomists,

Human Anatomy and Physiology Society, Massachusetts Society for Medical Research, Northwest Association for Biomedical Research, and the Society for Developing the Program.

The first Archive Scholars Program for High School Educators took place online, October 1-November 30, 2012. Seven high school biology and anatomy and physiology teachers from across the country took part in the program and are now official Archive Scholars: Raena Cota, New Mexico State Univ., NM; Peggy Deichstetter, St. Edward High School, IL; Mary Eldredge-Sandbo, Des Lacs-Burlington High School, ND; Natasha Ezerski, Seneca Valley High School, MD; Tami Kepshire, Portage High School, IN; Pauline Schork, Clinton High School, WI; and Leslie Worton, Edison High School, CA. Their Six Star Science Archive collections (listed below) can be viewed at <http://www.apsarchive.org/featured.cfm>. For more information, contact Miranda Byse, Archive Coordinator, [mbyse@the-aps.org](mailto:mbyse@the-aps.org). ❖

## 2013 Writing and Reviewing for Scientific Journals Course

For the eighth consecutive year, APS held its Professional Skills Training Course on Writing and Reviewing for Scientific Journals in Orlando, FL. Twenty-six students and six instructors took part in this course, which was held January 17-20, 2013. During this course, students learned the essentials of manuscript writing and reviewing while gaining valuable opportunities for networking and collaboration.

FASEB MARC generously provided travel awards to eligible underrepresented minority students. Participants who successfully applied and received these travel awards were Ramon Ayon, Univ. of Illinois Chicago School of Medicine; Tyrone Ceaser, Gramercy Research Group; Tracy Dodd, Louisiana State Univ. Health Sciences Center; Maryvi Gonzalez-Sola, Univ. of Puerto Rico; Angelina Hernandez, Indiana Univ. School of Medicine;

### Six Star Science Collections



#### Cellular Transport

A collection of resources that help explain the processes of osmosis and diffusion, as well as allowing students to extend that knowledge outside the cell.



#### Inheritance

This is a collection that includes lesson plans, an excerpt from an online textbook, animations, and lesson plans to enrich a unit taught on inheritance.



#### Diffusion & Osmosis

The items in this collection are a combination of lab activities that students can perform to learn and gain a better understanding of how diffusion and osmosis works.



#### Muscles: The Art of Movement

This collection will be used as a visual & kinesthetic means to understand muscle movement, as well as muscle location. The videos of dunking a basketball and swimming are great to use as an introduction to the muscular system. They get the students interested and ready to learn.



#### Exploring Cell Processes

This is a collection of interactive sites, resources, and lesson plans that will enrich lessons to help students increase their understanding of the structure and function of cells by focusing on processes from osmosis to meiosis.



#### Immunology

This collection augments the basics of the immune system. The activities and videos in this collection help students visualize and understand the components of the immune system in a fun, interactive, problem solving way.



#### Bioinformatics

This collection of resources will help to introduce the topic of Bioinformatics, from the start of DNA extraction to PCR to DNA sequencing. The collection includes an animation about DNA barcoding using the COI region of mtDNA, as well as resources about the Human Genome Project.

Six Star Science Collections Developed by 2013 Archive Scholars.

Debra Irsik, Univ. of Nebraska Medical Center; Lorena Martin, Univ. of Miami; Marina Martinez, Univ. of Arizona; Yainyrette Rivera-Rivera, Ponce School of Medicine and Health Sciences; and Bryan Wilson, Wake Forest Univ. School of Medicine.

Additional trainees who were accepted into and participated in the course included Kameswari Ananthakrishnan, Univ. of Arizona; Vivek Choudhary, Georgia Health Sciences Univ.; Maha Coucha, Georgia Health Sciences Univ.; Emily Cox, Washington State Univ.; Heather Held, Univ. of South Florida; Raisa Loucil, Ponce School of Medicine Health Sciences; Heidi Medford, Washington State Univ.; Zahra Nourian, Univ. of Missouri; Lea Pedersen, Aarhus Univ.; Alicia Schiller, Univ. of Nebraska Medical Center; Sophie Teng, Louisiana State Univ. Health Sciences Center; Leslie Thompson, East Carolina Univ.; David Trac, Emory Univ. School of Medicine; Courtney Wheatley, Univ. of Arizona College of Pharmacy; Sulei Xu, West Virginia



**Kim Barrett (center) with course participants Raisa Loucil, Emily Cox, Ramon Ayon, Sophie Teng, and Yainyrette Rivera-Rivera.**

Univ.; and Margaret Zimmerman, Georgia Health Sciences Univ.

APS would like to thank the following members for generously offering their expertise and time as instructors for the course: Kim Barrett, Univ. of California San Diego; Heddwen Brooks, Univ. of Arizona; Robert Hester, Univ. of Mississippi Medical Center; Charles Lang, Penn State Univ.; Frank

Powell, Univ. of California San Diego; and Willis Samson, Saint Louis Univ. School of Medicine.

The next Writing and Reviewing for Scientific Journals course will be online June 24 – August 9, 2013. The next live course will be held January 16-19, 2014 in Orlando, FL. For more information, e-mail [education@the-aps.org](mailto:education@the-aps.org). ❖



## CALL FOR NOMINATIONS

### for the Editorship of the

## Journal of Neurophysiology • [jn.org](http://jn.org)



Nominations are invited for the Editorship of *Journal of Neurophysiology* to succeed D. Linden, who will complete his term as Editor on June 30, 2014. The APS Publications Committee plans to interview candidates in the Fall of 2013.

Applications should be received before **August 15, 2013**.

Nominations, accompanied by a curriculum vitae, should be sent to the Chair of the APS Publications Committee via regular mail:

Hershel Raff, Ph.D.  
American Physiological Society  
9650 Rockville Pike  
Bethesda, MD 20814-3991

You may also send your nominations to Hershel Raff via e-mail, care of the APS Publications Department Administrative Assistant, Charmon Kight ([ckight@the-aps.org](mailto:ckight@the-aps.org)).

## APS Urges NIH to Revisit Chimpanzee Recommendations

The APS supports NIH's efforts to utilize a science-based approach to resolve issues related to future research and care of chimpanzees, President Dr. Susan M. Barman said in a letter to Dr. James Anderson, Director of the Division of Program Coordination, Planning, and Strategic Initiatives. Nevertheless, the APS has reservations about the failure to include individuals familiar with the management of the chimpanzee populations in question in NIH's Working Group (WG) on the Use of Chimpanzees in NIH-Supported Research. As a result, the APS noted in its comments, the WG report is "deeply flawed."

The WG was convened in February 2012 in the wake of the Institute of Medicine report, *Chimpanzees in Biomedical and Behavioral Research: Assessing the Necessity*. The WG's findings were presented to NIH's Council on Councils on January 22, 2013. Afterwards NIH requested public comments on the recommendations.

The IOM report was released in December, 2011, after a year-long study. NIH commissioned this study at the behest of Senators Jeff Bingaman (D-NM), Tom Harkin (D-IA), and Tom Udall (D-NM). The IOM then convened a committee charged with assessing the current and future need for public health research with chimpanzees. That panel determined that while the need for such research is decreasing as new research models become available, chimpanzee research in a few areas remains necessary. Some of that research may be phased out with the advent of other research models, but additional needs may still arise in the future.

The IOM findings provided the backdrop for the WG's efforts. The WG's recommendations were divided into three sections: Ethologically Appropriate Physical and Social Environments; Chimpanzee Research Colony Size and Placement; and Review Process for Future Proposals to Use Chimpanzees in NIH-Supported Research.

APS noted in its comments on the WG recommendations that issues revolving around the use of chimpanzees in biomedical and behavioral research require "thoughtful balancing of ethical and scientific considerations."

APS expressed support for the decision to maintain some chimpanzees for research "until appropriate alternatives are available." Using the enhanced criteria for the use of chimpanzees in research as set forth by the IOM, NIH's WG recommended ending about half of 22 currently-approved chimpanzee research projects. The specific projects to be discontinued were not identified. Nevertheless, APS pointed out that "The grants in question were approved because the objectives were important, the science was meritorious in a highly competitive environment, and chimpanzees were seen to be the appropriate model. Therefore, 'the aspects of the research involving chimpanzees should be ended in an orderly fashion, and NIH should facilitate a transition to another research model to fulfill the original goals of the grants.'"

APS identified several problems with the WG's recommendations. These included an "excessive reliance on inflexible engineering standards when performance standards would better serve animal welfare"; recommendations that are "mutually contradictory"; and an "ambitious timetable that would make the recommendations difficult and costly to implement."

Excessive reliance on engineering standards was evident in the WG's recommendations for "Ethologically Appropriate Physical and Social Environments" (EASPEs)—a term that the IOM panel had used without defining. The WG said that EASPEs should "not simply allow but also, importantly, [promote] a full range of behaviors that are natural for the species." It then went on to stipulate that chimpanzees should be placed in multi-male, multi-female social groups of at least 7 individuals with at least 1,000 ft.<sup>2</sup> per individual, year round access to indoor and outdoor areas, and 20 ft. of vertical climbing space. The recommendations also specified that EASPEs should offer opportunities for all group members to travel, rest, and feed in elevated spaces, to forage for food, and to have daily access to nest-building facilities.

The APS noted that the American Society of Primatologists had "offered more outcome-oriented guidance regarding the physical and social environment needed to permit the expression of species-typical behaviors." The APS recommended that NIH "consider alternative means of achieving the objectives of EASPEs."

The WG recommended retiring several hundred chimpanzees while keeping 50 available for research. However, some of the WG recommendations for this cohort were contradictory. The research population should consist primarily of healthy individuals less than 30 years old. They should be an even mix of males and females, and at least half should be immunologically naïve to infections such as Hepatitis C and HIV. The WG also said that existing social groups should be preserved as much as possible. However, APS pointed out that "given the small number [of chimpanzees] to be designated for the research colony, it is likely that social groups will have to be dissolved." In addition, if approved research "requires exposure to infectious agents, then the entire social group of each study participant will be exposed, rapidly diminishing the number of immunologically naïve subjects." Also, over time some of the initial cohort may acquire spontaneous illnesses or otherwise cease to be appropriate research subjects. The WG called for a review to be conducted every five years to determine whether the research population was being over- or under-utilized. "The procedure for dealing with underutilization seems obvious enough," APS noted, "but no mechanism was put into place to recruit additional individuals if 50 are not enough." The APS, therefore, recommended that NIH reconsider whether 50 was an appropriate number of chimpanzees to retain for research, and that it institute a mechanism for bringing more animals into the research population if needed.

The WG recommended placing all NIH owned or supported chimpanzees to facilities meeting its definition of EASPEs within five years. However, "Given the magnitude of investment needed to construct such habitats, NIH may not be able to proceed without Congressional action," APS pointed out: "Federally owned or maintained chimpanzees will need continuous care while new construction or the modification of existing facilities takes place so the cost of creating EASPEs will come as an addition to rather than in place of the funds NIH currently spends for housing and support." Consequently, "it may be difficult for NIH to muster the resources needed to implement the WG's EASPE recommendations on a five-year timetable for reasons that are outside of the agency's control." For

that reason, APS urged flexibility both in terms of the criteria for EASPEs and the timetable for achieving them.

## Science Policy News Now Available

APS members now have the opportunity to subscribe to *Science Policy News*, a monthly electronic publication from the APS Office of Science Policy.

*Science Policy News* features opportunities to advocate for research along with news on policy issues of interest to physiologists. It will be published electronically the third Tuesday of each month, with special editions when needed, e.g., if Congress is about to take an important vote.

To sign up for *Science Policy News*, send an email with "Subscribe" in the subject line to [sciencepolicy@the-aps.org](mailto:sciencepolicy@the-aps.org). Only APS members may subscribe to *Science Policy News*, but please feel free to share the Action Alerts with your colleagues. ❖

## Congress Passes FY 2013 Funding Bills

On March 26, 2013, President Obama signed into law a package of legislation (H.R. 933) that will fund federal programs through the end of fiscal year (FY) 2013, including research at the National Institutes of Health (NIH), National Science Foundation (NSF), NASA and Medical and Prosthetic Research at the VA. With Members of Congress unable to reach a compromise on the twelve individual bills that fund the federal government annually, H.R. 933 extended the FY 2012 funding levels through the remainder of the year for most agencies, subject to a 5.1% reduction due to sequestration. The legislation added small increases for some agencies,

including the NIH and NSF, but did not reverse cuts in effect due to sequestration, leaving most agencies with a net decrease in their operating budgets.

In addition to extending funding levels for the remainder of the fiscal year, H.R. 933 contains a troubling provision that prohibits the NSF from funding political science research "except for research projects that the Director of the National Science Foundation certifies as promoting national security or the economic interests of the United States." The social and behavioral sciences at NSF and other agencies are a frequent target for legislators who seek to eliminate those programs on the grounds that they represent a waste of taxpayer resources. ❖

## Federal Budget Changes Due to Sequestration

Agency	FY 2013 level (before sequestration)	Operating budget (after 5.1% reduction due to sequester)
NIH	\$30.1 billion	\$28.6 billion
NSF	\$7.25 billion	\$6.8 billion
NASA	\$17.5 billion	\$16.65 billion
VA	\$582 million	VA programs not subject to sequester

## 48th annual meeting of the Lake Cumberland Biological Transport Group

Sunday, June 16-Wednesday, June 19, 2013  
Lake Cumberland State Resort Park  
Jamestown, KY

This is an excellent, inexpensive forum for principal investigators, postdoctoral fellows and graduate students to present both published data or work in progress and receive feedback.

Submission of a presentation title (i.e., no abstracts) is all that is necessary. Cell biology, physiology, molecular biology, and biochemistry presentations centered around the theme of biological transport are all welcome. Presentations are made in an informal atmosphere with open discussion encouraged. The scientific sessions will be held morning and evening. Afternoons

are free to enjoy swimming, fishing, golfing, riding, hiking, or just relaxing in this beautiful 3,000 acre state park. Registration fees are only \$15 for students, \$25 for post-docs, and \$60 for established investigators. To find out more, please visit <http://www.cumberlandbio.org/> or contact the Chair (Silvia Dossena, [silvia.dossena@pmu.ac.at](mailto:silvia.dossena@pmu.ac.at)), the Vice Chair (Norma Adragna, [norma.adragna@wright.edu](mailto:norma.adragna@wright.edu)), or the Chair Emeritus (Eleanor Lederer, [e.lederer@louisville.edu](mailto:e.lederer@louisville.edu)). ❖

## Workplace Dynamics: Understanding How to Work Together in Research Environments

Lori M. Conlan, Director Career Services Center and the Office of Postdoctoral Services, OITE/NIH  
Sharon Milgram, PhD Director Office of Intramural Training & Education (OITE) at the NIH



Lori M. Conlan



Sharon Milgram

There is broad agreement that scientists must develop strong interpersonal skills to do effective team science and to transition from training to management positions, at and away from the bench. However, some graduate and postdoctoral training programs have struggled to provide training in these areas and many begin their careers

with little understanding of the basic principles of management and leadership. Two factors often cited as barriers to providing leadership and management training are cost and the availability of experts who understand the unique nature of biomedical research teams. Another barrier is that many students, postdocs and mentors find little value in “soft skills” training, believing that success in science is driven predominantly by publications, patents, funding, etc. This is unfortunate since the book *Lab Dynamics* (Cohen and Cohen)\* surveyed scientists and found nearly two-thirds report that interpersonal conflict had hampered progress on a scientific project between one to five times in their career. Furthermore, many of our postdoctoral fellows share that navigating how to manage and lead a research team is one of the earliest challenges they face as they transition to independence. Our trainees leaving the research environment to work in science communications, policy, education, law, and other non-bench science careers share similar struggles in management and leadership.

The mission of the NIH Office of

Intramural Training & Education (OITE; [www.training.nih.gov](http://www.training.nih.gov)) is to help trainees in the NIH Intramural Research Program develop the career and professional skills needed to succeed in a broad array of science careers. For many years we have offered workshops focused on career exploration, job search skills and science communication (you can find many videocasts at [https://www.training.nih.gov/oite\\_videocasts](https://www.training.nih.gov/oite_videocasts)); however, like many institutions we struggled to assist our trainees with the development of leadership and management skills. After extensive discussions with career counselors, mentors, students, fellows, and experts in many areas of leadership development, we embarked on a two-year journey to develop a series of workshops to provide an education in leadership and management. The resulting “Work-place Dynamics” series focuses on: 1) increased awareness of self and others using the Myers-Briggs Type Indicator®; 2) communication styles and influencing others; 3) conflict dynamics; 4) team theory; and 5) diversity training. Trainees can take all or part of the series which we offer twice per year. Our goal is to help participants gain greater self-awareness and an appreciation that others may tackle problems and approach conflict and group work differently. We hope that by providing a language to discuss these differences, our trainees will be better able to manage themselves and work across difference in the research environment (and beyond). The presentations use lab-based examples that resonate with scientists. Although designed for our population on NIH campuses, we hoped that the materials we develop could be used to more broadly benefit trainees in the extramural community. To date we have had ~400 postdocs and graduate students start and 90 complete the series; we have also presented elements of the program at National meetings including the National Postdoc Association, Experimental Biology, and the Annual Biomedical Research Conference for Minority Students.

One thing we have learned is that our trainees appreciate the interactive group work, but also like to receive information on helpful resources they can access

from home. We will share some of these resources here in the hopes that APS readers can benefit from the reading the material that most strongly resonates with our participants.

Although there are a variety of personality assessments that can be used in leadership and management training, we chose to use the MBTI because it is widely used in academic and industry settings (CAPT bibliography). Although there are many outstanding books to gain some understanding of personality types, we find that “Type Talk at Work” is a good fit for our community. Conflict is perhaps the most stressful topic we cover with many trainees sharing that they lack resources for dealing with and defusing conflict in the workplace and at home. We use the Thomas-Kilmann Conflict Mode (TKI) model to introduce the concept of conflict styles and to help participants identify the styles they use and the styles they struggle with. The TKI model looks at conflict using two factors. The conflict styles are set on two axes, one on assertiveness (based on importance of the task at hand), and one on cooperativeness (based on importance of the relationship). By understanding the different conflict styles, scientists can make effective decisions on engaging a particular conflict.

Another element of understanding conflict is a greater appreciation of hot-button issues and triggers. Our participants find resources from the Center for Conflict Dynamics at Eckerd College and the book, *Becoming a Conflict Competent Leader* to be helpful. The information provides a way to explore the triggers that cause conflict, and guidelines for approaching the conflict constructively instead of destructively. This material provides a “protocol” of sorts to discuss conflict.

The book *Crucial Confrontations* is another resource we use because it provides a framework and practical tips on preparing for difficult conversations and tense negotiations. The book provides advice on how to know when, and if, you should confront a conflict, how to start a conflict conversation, how to make an action plan to work on the problem with the person you are in conflict with, and what to do when you get an answer that throws you off your

planned conversation. There are step-by-step instructions on each component of the conversation that even skeptical scientists can find valuable.

Many of the resources above also discuss giving feedback, but we would be remiss if we did not mention The Center for Creative Leadership (CCL) and their framework for feedback centered on "Situation, Behavior and Impact." This method is widely used to give feedback that is specific and informative to both the giver and the receiver. An example could be: "When we had lab meeting on Tuesday (situation) and you came in 20 minutes late (behavior), we all lost time because we couldn't start without you (impact). Can you tell me what was going on for you that day?" The CCL has a variety of resources on being a better leader, manager and employee in small easy to read booklets.

All of this material integrates well into an understanding of Emotional Intelligence, a concept popularized by Daniel Goleman. Although we do not teach specific elements of Emotional Intelligence in the Workplace Dynamic Series, it is a popular part of our two-day management bootcamp (an intense training to prepare our postdocs and fellows in topics such as staffing your unit, setting expectations, motivating others, and additional conflict management training). Emotional Intelligence provides information to strengthen interpersonal relationships and teams by providing a structure to identify self- and relationship-management tools. There are many books on Emotional Intelligence including, *Emotional Intelligence: 10th Anniversary Edition; Why It Can Matter More Than IQ* and *Working with Emotional Intelligence*, both by Daniel Goleman.

Finally, we chose to include an introduction to diversity and difference in the Workplace Dynamics Series because we believe we all have a responsibility to develop a scientific workforce that is diverse and welcoming. In this workshop participants discuss their views of diversity and difference and learn about major social group identities in the United States. The concepts of power and privilege are introduced and participants meet in small groups to discuss their own views on how to make the science workforce more welcoming and inclusive. Participants interested in more in-depth material find the book *Readings for Diversity and Social Justice, Third Edition* helpful.

We appreciate that there are many approaches to developing leadership programs and many outstanding books well worth reading (if we only had the time). We don't mean to imply that the material we use or the books we recommend are the "best" out there, but only that they have been helpful to us. We look forward to hearing from APS readers about other resources. We all share the responsibility to make research environments productive and welcoming and believe that understanding these "soft-skills" will enhance the scientific workforce and promote scientific discoveries.

To comment on this article, go to: <http://www.the-aps.org/forum-workplace>. ❖

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*Lori M. Conlan is trained as a biochemist, receiving her BS in biochemistry from Michigan State Univ. and her PhD in biochemistry and biophysics from Texas A&M Univ. She worked for several years as a postdoc at the Wadsworth Center, NYS Department of Health, before transitioning from the lab to focus on career issues for the next generation of scientists. Lori started as the director of the Science Alliance, an international career development program for graduate students and postdocs sponsored by the New York Academy of Sciences. She now is at the NIH in the Office of Intramural Training & Education assisting the 4,000 NIH postdocs in their personal career choices. Lori is the director of two offices, the Office of Postdoctoral Services and the NIH Career Services Center. She speaks at universities and institutions around the nation on career development topics for young scientists.*

*Sharon Milgram worked for two years as a physical therapist before returning to graduate school at Emory Univ. where she earned a PhD from the Department of Cell Biology and Anatomy. She completed postdoctoral training in the Neuroscience Department at The Johns Hopkins Univ. before joining the faculty at The Univ. of North Carolina at Chapel Hill. There she rose to the rank of Full Professor with tenure in the Department of Cell & Developmental Biology. At UNC Milgram lead an active research program focused on the cell biology of polarized cells. Alumni of her research group work in a variety of STEM careers in all sectors. Milgram directed training grants from the NSF and NIH, including a Research Experience for Undergraduates (REU), an Maximize Student Diversity (IMSD) and a Cell and Molecular Biology training grant. She also directed the Interdisciplinary Biomedical Sciences graduate program and was the founder of the UNC Office of Postdoctoral Services. In 2007 Milgram joined the National Institutes of Health (NIH) where she directs the NIH Office of Intramural Training and Education ([www.training.nih.gov](http://www.training.nih.gov)), an office dedicated to providing career counseling and professional development opportunities for trainees in the NIH intramural Research Program. The OITE coordinates trans-NIH training programs at all educational levels, including the Summer Internship Program, NIH Intramural Postbac Programs, the Graduate Partnership Program, the Undergraduate Scholarship Program, and NIH Intramural Postdoctoral Programs. Milgram lectures widely on STEM careers and has a passion for working with trainees at all educational levels.*

## Students Matter: The Rewards of University Teaching

J. Kevin Dorsey and P. K. Rangachari, editors  
Illinois, USA: Southern Illinois Univ. School of Medicine, 2012, 205 pp.  
\$25.00  
ISBN: 978-06515629209

The invitation to review *Students Matter: The Rewards of University Teaching*, edited by Professors Dorsey and Rangachari, appealed because it is a subject that I have thought about lately, as I scissor my way through the red tape of pending retirement. The book is a collection of essays by faculty from a variety of pre-clinical and clinical disciplines and countries, in which they reflect on lessons learned during their journeys to becoming distinguished educators. Common themes are how learning to do research facilitated the journey, but was not sufficient; how failure was an important step towards success; surprise at learning that there is a literature related to educational theory and practice; and the satisfaction associated with facilitating learning that made a difference in students' lives. I could see bits and pieces of my 30 year career as a physiologist in a veterinary college mirrored in these reflections.

The book opens with an essay by Dr. Howard Barrows, to whom the book is dedicated. He conceptualized the book, however it serves as a Gedenkschrift, as he passed away prior to its publication. Barrows was instrumental in developing what he calls "provocation-enhanced learning," but what most of us know as problem based learning, and with promoting the use of simulated patients. He explains how his journey to becoming an "accidental educator" resulted from witnessing how little of the content taught in the first years of medical school was retained and able to be used by students in the clinical years. The best tip I took from this essay was the advice to work backwards from selected cases to identify the basic science concepts that need to be taught, rather than crafting cases around what are perceived to be the essential concepts that should be taught. Context, context, context.

The next essay is a description by Dr. Kim Barrett (current president of the American Physiological Society) of how she moved from the traditional "telling"

style of teaching to a more active learning style of teaching involving small groups and clinical cases. She notes how advances in technology have created opportunities for changing the way we teach, along with changing how students learn. The take home message from this essay was her observation that "the future of teaching and learning will increasingly emphasize validation, understanding and synthesis over actual content, given the accelerating democratization of information" courtesy of the internet. True, but not easy. Finding the right balance between content and application will always be a challenge.

The essays continue in this style; thoughtful reflections on teaching experiences good and bad, always concluding with a "lessons learned" section designed to make it easier for those who are just starting a teaching career. It was interesting to learn the history of the development of teaching methods and how others approach engaging students in the learning process – particularly students who may not yet have attained the maturity needed for their chosen professions. Learning that others struggled with finding balance in academic careers and that there is the option to close the lab and develop a satisfying a full-time teaching career. Take-home tips range from changing the vocabulary of the classroom to promote a focus on application of knowledge, focusing on "in time" knowledge rather than "in case" knowledge, and matching the teaching method to the goals and objectives of the learning experience. Then there are the philosophical observations, such as why universities are so slow to change, how what looks like a career may not be, and how deep-down those drawn to the academy are those who like being students.

The editors state that the hope was that this book would "give a louder global voice to the importance of excellent teaching." It succeeds at projecting that voice in an engaging and readable fashion. As is often the case, however, those drawn to the title and text will likely be those who don't need convincing on that count. This is not a "how-to" book or a reference text and readers seeking a theory-based exposition on best practices in teaching will be disappointed. Rather it is a book that academics at all career stages could benefit from to help them remember that students do matter and there

are better and worse ways of promoting learning at the university level.

Lynne E. Olson  
The Ohio State Univ.

## Science on the Far Horizon

G. Edgar Folk with Diana L. Thrift  
Pennsylvania, USA: Infinity Publishing, November 2012, 248 pp.  
\$19.95  
ISBN: 978-0-7414-7899-7

Imagine spending the night in a bat cave on a Caribbean island for the sake of science, entertaining a variety of visitors from those with fur and four feet to one with scales and no legs to an entire crew with six legs that use your shelter as a major highway. This is only one of the many experiences that Ed Folk shares with his readers in his memoir of his life in science. Generally credited with defining the field of Environmental Physiology, Folk's story spans nearly a century.

It was a love for the outdoors and nature that led a young Ed Folk to study biology in school and began him on the path to a career in natural science. It was the real world *Financial Effect*, as he refers to it, that led him to a variety of jobs to support his education and later his family. Summer camp counselor, conservatory curator, and librarian were some of the jobs that helped pay for school, while a bat banding job was crucial in laying the direction of his graduate work. An avid birder and horseman, Ed was determined to pursue a science career that would allow him to be outdoors as much as possible. But his early foray into teaching in the form of giving lectures to groups about snakes, where his motto was "keep the audience interested," told him he also wanted to include teaching no matter where he went or what else he did.

The reader is taken on a tour of Ed Folk's science career from undergrad and graduate school at Harvard to his work at the Harvard Fatigue Lab during WWII, a position that was result of the *Financial Effect*. Many soldiers can thank Folk and his associates for helping to keep their feet warm, dry and comfortable. Once his formal education was complete he went on to faculty position at Bowdoin College in Maine where part of his duties involved management of a research facility on Kent Island in

## University of Iowa Hosts Book Signing for Edgar Folk

The Department of Molecular Physiology & Biophysics at the University of Iowa hosted a book signing for long-time faculty member G. Edgar Folk on January 29. The signing provided an opportunity for Folk to talk

about his career and to reflect on the content of his memoir, *Science on the Far Horizon*. As noted by department chair, Kevin Campbell, Ed Folk had been an influential member of the department's faculty for 60 years and

his work had helped to establish the field of Environmental Physiology. His memoir, which was written with the assistance of Diana Thrift, provides an exhilarating narrative of a life in science. ❖



Victoria Folk Sprague (Folk's daughter), Edgar Folk, and Diana Thrift



Martin Frank, Edgar Folk, and Kevin Campbell.

the Bay of Fundy and studies involving Leach's storm petrel. After six years at Bowdoin, Ed left to join the medical college faculty at the Univ. of Iowa where he has remained since 1954.

A significant portion of the book is given to describing Ed's years at the Naval Arctic Research Lab (NARL) in Point Barrow, AK where he maintained an active research lab from 1961-1977. Among the animals he worked with in the arctic are lemmings, wolves, grizzly and polar bears, wolverines, and ground squirrels. During this time his research into circadian rhythms and hibernation resulted in development of surgical procedures for implanting radio transmitters so animals could be studied in natural environments from afar. Ed was frequently invited to institutions around the world to instruct other scientists on these surgical procedures.

It is clear that amongst the many memories in his life and career, those things that stand out best for Ed are the people he has met and worked with, whether as scientist, teacher, student or interested bystander. At times the book becomes a veritable who's who of natural scientists and other people in his life, whether briefly met or long term relationships. There are many photos, usually the author's own, of friends, family and colleagues. Fellow physiologists, especially those in the comparative or environmental areas, will recognize a good many of those

names. Younger scientists or those in different fields of physiology may not recognize the names but their contributions to the field and importance to and influence on the author are clear. Occasionally, the author goes off on a tangent when explaining work or experiences of others with whom he has been associated, but he always comes back to his own story. Curiously, not so many of his students are named, but like the good teacher he is, Ed states "I could go on and on about the terrific people who have been my students; I have been proud of them all."

The book is written in a conversational style, as though the author were speaking directly to the reader. The forward, written by his daughter, Victoria, tells the reader how nature impacted the man and his relationships with his family and sets the stage for the story that is about to be told. It is intended for a general audience, for anyone who has a general interest in science and nature. For those who want more information, there is a reference list, organized by chapter, citing many of the author's papers as well as those of his colleagues, mentioned in the text. Having been a teacher for all of his adult life, Ed takes the opportunity to include short lessons throughout the book, such as explaining binomial nomenclature or describing the role of specific mammalian hormones. Considering the importance of teaching in the author's life, it was

unfortunate that the term poisonous was used several times in describing various snakes rather than the more correct term venomous.

This memoir chronicles the changes in science and the world over a period of 70 years that only someone who has lived through the changes can describe. Horses and dog sleds to cars and snowmobiles, and whatever the scientific equivalent would be, Ed Folk has been there, done that. Whether this makes the reader long for the good old days or be relieved not to have to do things as our predecessors did, we can be thankful to Ed Folk and his colleagues for their pioneering work into *Environmental Physiology* and to Ed specifically for letting us share his life of science, nature, teaching and family.

Polly K. Phillips  
Miramar, FL

## Coronary Vasculature: Development Structure-Function, and Adaptations

Robert Tomanek  
New York, USA: Springer, 2013, XVIII,  
276 p. 74 illus., 59 in color \$189.00.  
ISBN: 978-1-4614-4886-0.

As emphasized in the introduction of

this volume, the past several decades have dramatically expanded our understanding and appreciation of the coronary vasculature, reflecting the recognition of ischemic heart disease as the leading cause of morbidity and mortality in western society. The roles played by coronary vessels in meeting the metabolic demands of the myocardium at different times in development, in response to altered metabolic demands and alterations in cardiovascular disease are highly complex, and clearly addressed in this current review which will appeal to clinicians, as well as basic scientists and students. A broad list of clinical and basic scientific consultants ensured that this review included a consensus of contributions. The stated purpose of the book is to review, summarize discuss and integrate structural, functional and pathological findings in the coronary vasculature. Given the very wide variety of topics which could be covered in such a major task, the text achieves its purpose and is a current, comprehensive and valuable overview of central topics in this area. Tomanek's background in cardiovascular physiology with an emphasis on molecular mechanisms of vascular development and remodeling in health and disease is a recurring theme throughout. As a source text, it is anticipated that many sections would be read in isolation and there is some anticipated redundancy between chapters which is often helpful. The book is divided into 12 chapters (with 74 figures, 5 tables) which cover the coronary vascular anatomy, molecular physiology, history and clinical implications of coronary vessel dysfunction. A large number of helpful topic "review" bars are provided which summarize and clarify the author's impressions on different presentation topics.

**Chapter 1** (*General concepts of blood vessel formation and remodeling*) reviews vascular development, discussing arterial and venous specification, signal pathways in vessel formation, biomarkers and regulation of vascular integrity. Although a complex area, (particularly for students), the presentation is straightforward.

**Chapter 2** – (*Prenatal coronary morphogenesis*), describes formation of the primary coronary plexus and cell migration leading to epicardial development. Cell-cell communication and cell fate in coronary vessel differentiation, the roles of growth factors and

transcription factors in formation of the different components of the coronary vessel types during development are presented clearly presented and discussed. **Chapter 3** (*Postnatal coronary morphogenesis and growth*) next focuses on considerations of increased postnatal metabolic demands, adaptations to postnatal pressure loading, changes in coronary morphogenesis and myocardial capillary growth. Postnatal significance of altered myocardial metabolism in the control of vascular supply, and the links between the growing myocardium and vascular expansion and capillary growth remodeling of coronary vessels, the significance and postnatal changes in coronary collaterals are discussed. **Chapter 4** (*Structure – function of the coronary hierarchy*) reviews anatomy and histology of the different coronary vessels, supply functions of the major coronary arteries and the blood supply to the atria. This chapter also evaluates metabolic influences (reviewing nitric oxide, prostanoids, autacoids, K<sup>ATP</sup> channels, and adenosine) on metabolic flow regulation. Chapter 4 reviews coronary venous valves, their roles in perfusion, the Thebesian venous system, venous anastomoses and roles of the vasa vasorum of the coronary vasculature. **Chapter 5** (*Historical perspectives*) is an interesting and thorough examination of the history of coronary anatomic studies including contributions by six "classical" investigators (DaVinci, Vesalius, Harvey, Malpighi, Lower, Vieussens [for coronary anatomy, blood oxygenation, coronary anastomoses], as well as Thebesius, Pratt [recognizing coronary sclerosis, angina, exertion pain]). Later contributions of Wiggers, Anrep, Wearm (capillaries), Gregg (phasic variations in coronary flow) and more contemporary studies including a discussion of myocardial infarction, arteriography, coronary bypass and endarterectomy are detailed in chapter 5.

**Chapter 6** (Coronary anomalies) discusses intrinsic abnormal coronary arterial arrangements, aneurysms, fistulae, malformations and their roles in mortality and morbidity. The second part of this chapter reviews alterations in regulation of coronary vessel formation and coronary arterial anomalies in sudden cardiac death. Next, **Chapter 7** (Aging) provides a systematic review of the effects of aging, hypertension, atherosclerosis. Age related influences on

myocardial perfusion, age related impairment of vasodilator responses, reductions in myocardial capillary density and different vessel responses to aging affected by lifestyle and disease are reviewed. **Chapter 8** (Adaptations to exercise training) focuses on neural and humoral adaptations in coronary blood flow to exercise with a focus on capillary remodeling, summarizing different animal exercise models of capillary growth. Exercise mediated protection against ischemia/reperfusion injury, mechanical and physiologic mechanisms (flow, remodeling) in exercise training prevention and treatment of coronary disease are discussed.

**Chapter 9** (Hypoxia) provides a valuable summary of coronary cell responses and blood flow to acute and chronic hypoxic/ischemic regulatory mechanisms. The roles of HIF-1 and its downstream targets of VEGFs/VEGFRs are evaluated with particular emphasis on fetal and perinatal hypoxia. HIF-1 regulation in the heart and its regulation ischemic neovascularization and sprouting are discussed, and roles of adenosine, K<sup>+</sup> channels, nitric oxide, reactive oxygen species, and glutathione as mediators of coronary hypoxic signaling reviewed. The viability and responsiveness of endothelial and vascular smooth muscle, macrophages and other cells during ischemia provide a general review of ischemic responses to coronary hypoxia. Additionally, hypoxia mediated cell recruitment, high altitude compensations and cardioprotective effects of hypoxia in pre-conditioning and roles of NO, K<sup>ATP</sup> channels and erythropoietin are also reviewed.

**Chapter 10** (Myocardial ischemia) and infarction discusses acute and chronic effects of myocardial ischemia (as opposed to hypoxia), ischemic metabolites, consequences of substrate deficiency leading to development of reversible "stunning" or "hibernating" myocardium. Contributions of reactive oxygen species, Ca<sup>2+</sup>, inflammatory mediators to reperfusion injury are discussed. Vascular remodeling and reactivity after ischemic stress and roles of NO/oxidant flux in the control of vasoconstrictor responses are discussed. The utility and significance comparison of different animal models (dog vs. pig) as models of coronary ischemia are reviewed and the contributions of large epicardial, anastomoses and small

intracardial vessel evaluated. Fluid shear and its influence of collateral growth, effects on genetic regulation are reviewed. Reversible/irreversible stages of myocardial infarction, ventricular remodeling, VEGF-receptor and Ang-2, vasoreactivity in the post-MI heart are discussed. Ischemic pre- and post conditioning mechanisms are reviewed in depth. Early, delayed phases of IPC, mechanisms of IPC and IPC influence of infarct size are presented clearly. **Chapter 11** (Cardiac hypertrophy) describes and compares physiological and pathological myocardial hyper-

trophic regulation by ischemia, drugs, inflammation as well as pressure and volume overloading, thyroid hormone effects and cardiomyopathy. **Chapter 12** (Therapy for the coronary vasculature) gives a general review of candidate genes, proteins, stem and progenitor cells and pharmacological agents currently being evaluated as treatments clinical trials.

The strengths of the book are that despite its density, it concentrates in a logical manner, an enormous quantity of findings, with each chapter providing a clear and current topical review.

Bibliographically, each chapter draws on an impressive number of indispensable, original source citations. Importantly, each chapter provides more than sufficient clinical as well as scientific relevance. Aside from the few minor typographical errors (expected in any first edition), this is overall, a well written and valuable academic resource for educators, medical and graduate students and researchers. ❖

*J. Steven Alexander  
Louisiana State Univ., Shreveport*

## People & Places

### Gunter-Smith Selected as York College's President



**Pamela Gunter-Smith**

Pamela Gunter-Smith has been selected to serve as York College's fourth president beginning July 1, 2013. Gunter-Smith has served as provost and academic

vice president at Drew Univ. in Madison, N.J., since 2006. In this role she served as chief academic officer with overall responsibility for academic programs and academic support in the university's three schools - the College of Liberal Arts, the Theological School and the Caspersen School of Graduate Studies. Her many accomplishments encompass advancing a new vision for the sciences, including the design of a new science facility; elevating standards for promotion and tenure; increasing the diversity of faculty and students; improving student retention; and creating new graduate programs. She also led Drew's strategic planning and assessment efforts.

Prior to this appointment, she served as the Porter Professor of Physiology at Spelman College from 1992-2006. At Spelman, Gunter-Smith chaired the Biology department (1992-2002) and was the associate provost for Science and Mathematics (2002-2003). She also served as the program director for Spelman's NIH-sponsored Center for Biomedical and Behavioral Research (2002-2003) and Spelman's Howard Hughes Medical Institute Program (1993-2002). Gunter-Smith has also held academic appointments at the George Washington Univ. (Washington, D.C.) and the Uniformed Services Univ. of the Health Sciences (Bethesda, MD). For 12 years before joining Spelman (1981-1992), Gunter-Smith was a research scientist and science administrator at the Armed Forces Radiobiology Research Institute in Bethesda, MD.

Gunter-Smith has served on numerous committees that address science education and the underrepresentation of minorities in science. These include review panels for the National Institutes of Health, the National Science Foundation and the Howard Hughes Medical Institute. She served on the AP Biology Redesign Commission for the College Board and is a former co-chair of the Porter Physiology Development Committee for the American Physiological Society, the minority affairs committee of the society. More recently, she serves on the Board of Directors of the William Townsend Porter Foundation and the

Higher Education Resource Services (HERS).

Gunter-Smith holds a BS in Biology from Spelman College and a PhD in Physiology from Emory Univ. She conducted postdoctoral studies at the Univ. of Pittsburgh School of Medicine and the Univ. of Texas Health Science Center at Houston. She has published in the areas of gastrointestinal physiology and membrane ion transport and is the recipient of grants to support science education and her research. Gunter-Smith is a graduate of the 2001 HERS Summer Institute for Women in Higher Education Administration. In 2003-2004, she was an American Council on Education Fellow at the Univ. of Miami working with the university's president Donna Shalala.

Kaiser Mohammad Bijli has joined the Department of Atlanta Vet Affairs, Emory Univ. Medical Center, Decatur, GA. Bijli was formerly at Univ. of Rochester Medical Center, Department of Pediatrics, Rochester, NY.

Danny O. Jacobs, has accepted a position at the Univ. of Texas Medical Branch, School of Medicine, Executive Vice President and Provost, and Dean of the School of Medicine, Galveston, TX. Prior to his new position, Jacobs was Professor and Chair of Surgery at Duke Univ. Medical Center, Durham, NC. ❖

## Postdoctoral Positions

**Postdoctoral Position:** A Postdoctoral position is available beginning from July 2013 in the Department of Pharmacology and Physiology at Drexel Univ. College of Medicine in Philadelphia to join our team researching the role of mitochondrial ion channels in physiology. Our lab is fully funded and well-equipped, and it uses advanced molecular biology, biochemical, cell biology, super resolution imaging (STED), electrophysiology and cardiophysiological techniques to identify and elucidate physiological role and mechanisms of intracellular ion channels. Qualified applicants should have a PhD, DVM, MD, PhD, or equivalent, be highly motivated with a strong background in cell biology and/or electrophysiology and/or cardiophysiology. To apply for this position, please submit your CV and a cover letter describing your research experience, interest and goals. Contact information for three references should be included and applications should be sent to Dr. Harpreet Singh at [hsingh@mednet.ucla.edu](mailto:hsingh@mednet.ucla.edu). Salary and benefits are commensurate with NIH guidelines. Drexel Univ. College of Medicine provides a supportive and collaborative research environment, and offers excellent training and career development opportunities. Drexel Univ. College of Medicine is an equal opportunity employer.

**PhD and Postdoctoral Positions in Cardiovascular Physiology:** Several PhD and postdoctoral positions are advertised at the Institute for Experimental Research, Oslo Univ. Hospital Ullevål in Oslo, Norway. Our research interests focus on control of cardiomyocyte calcium homeostasis, and its dysregulation during cardiac disease. We are particularly interested in mechanisms underlying impaired contractility and arrhythmia during heart failure. Research projects for the advertised positions will investigate molecular maintenance of cardiomyocyte structure, electrophysiology, and excitation-contraction coupling. The successful candidates will join a world class, interactive research environment, with excellent access to infrastructure and technical assistance. We

are particularly interested in candidates with expertise in some of the following technologies: patch clamp, confocal microscopy, electron microscopy, whole-cell fluorescence, or molecular biology. The postdoctoral positions will be awarded to candidates with a strong publication record, and ambitions for establishing an independent research group. Previous experience in cardiac research will be considered an asset. The PhD positions will be awarded to ambitious scientists that have demonstrated an early aptitude for academic research. Preference will be given to candidates with previous experience in relevant methods. Please forward a CV and brief outline of research interests by email to: Dr. William E. Louch ([w.e.louch@medisin.uio.no](mailto:w.e.louch@medisin.uio.no)), or Professor Ole M. Sejersted ([o.m.sejersted@uio.no](mailto:o.m.sejersted@uio.no)). Positions will remain open until filled.

**Postdoctoral Fellow Position:** Cardiovascular Physiology Postdoctoral positions are immediately available in the laboratory of Dr. Ayako Makino at the Univ. of Illinois, Chicago. Area of research focuses on the vascular complication in diabetes, in particular cell-cell communication, mitochondrial function, and calcium handling in the endoplasmic reticulum in endothelial and smooth muscle cells. Successful candidate must have a PhD in the biomedical sciences, MD or equivalent degree. A strong record of productivity in cardiovascular physiology (dissection of arterioles from small animals, isometric tension measurement, and cell isolation) is desirable. Interested applicants should upload as a pdf a CV, a Letter of Interest, and the names and contact information for three references to the UIC Job Board: <https://jobs.uic.edu/job-board/job-details?jobID=28762>. Review of applicants is ongoing and the position will remain open until filled. The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer.

## Faculty Positions

**Course Director, Medical Physiology:** The Department of Pharmacology and Physiology is recruiting to fill a full-time faculty educator position for a Course Director of

Medical Physiology. Drexel University College of Medicine supports two curricular tracks for the first two years of undergraduate medical education with a total of 260 students in each year. The Program for Integrated Learning (PIL) is a problem based learning track with ~25% of the incoming class. The Interdisciplinary Foundations of Medicine (IFM) track is an integrated didactic curriculum that incorporates many small group activities and clinical experiences. This position requires the coordination and oversight of the Medical Physiology curriculum for medical students during their first year in both curricular tracks. In addition, it is anticipated that this individual will also contribute to the Graduate Program in Physiology. Candidates for this position must have a strong background and expertise in all aspects of the discipline of Medical Physiology and should be able to assume a significant portion of the teaching responsibilities. Experience teaching medical students is required and preference will be given to candidates with extensive experience with this background. The Course Director will also be expected to work with faculty in the Department of Pharmacology and Physiology and with clinical faculty in other Departments to ensure appropriate thematic and topical coverage. This individual will be expected to work in a highly collaborative environment with other course directors, staff and administrators to ensure integration of the curriculum across disciplines. Participation and support of the post-baccalaureate pre-med courses offered by the medical school are also included as responsibilities of the individual filling this position. In addition this individual should have strong teaching/presentation skills, organizational skills with attention to detail, excellent communication skills, ability to collaborate in interdisciplinary teams, and adapt to the needs of the medical school. The candidate is not expected to participate in laboratory-based research, as this is a full-time educator position, but research related to academic and educational areas such as using the College of Medicine's Independence Blue Cross Medical Simulation Center or in the development of novel

approaches to education is encouraged. The academic rank of the position is open but a preference is for experienced academic teachers in medical school. The position is available immediately. Drexel University is an Equal Opportunity/Affirmative Action Employer and is proactively committed to diversity and inclusion in all of its policies, practices and services. We are especially interested in qualified candidates who can contribute to the varied diversity and excellence of the academic community, and all of its complements. Applications should be directed to: [www.drexelmedjobs.com](http://www.drexelmedjobs.com); requisition number 2383.

**Professor and Head, Department of Anatomy & Physiology:** The Department of Anatomy and Physiology at the College of Veterinary Medicine at the Kansas State Univ. College of Veterinary Medicine, Manhattan, KS is inviting applications for the position of Department Head. The Department seeks a candidate of international stature interested in leading an outstanding research and teaching faculty while contributing to the scientific direction of the Department. Applicants must possess an earned doctoral degree (PhD, DVM, MD or equivalent) and a distinguished record of scientific research, extramural funding, administrative and leadership skills and a commitment to education and academic excellence. The successful candidate will be eligible for the title of Professor, with tenure, and approval as a K-State Graduate Faculty member. The Department Head will oversee departmental strategic planning to foster anticipated growth. The selected individual will have the opportunity to recruit faculty and shape the research focus of the Department. The Department Head will administer the teaching, research, and service programs of the department, as well as the curriculum taught by the department faculty in the professional and graduate programs. The successful candidate will participate in the research mission of

the college with his/her own extramurally-funded research program. See [http://www.vet.k-state.edu/employment/AP\\_head\\_full.htm](http://www.vet.k-state.edu/employment/AP_head_full.htm) for full position announcement including required qualifications and to apply online. Review of applications will begin on June 1, 2013, and will continue until the position is filled. Kansas State Univ. is an equal opportunity/equal access employer. A background check is required.

**Assistant/Associate Professor:** The Department of Nutrition, Dietetics, and Food Science at Brigham Young University invites applications for a full-time, continuing-status track faculty position at the rank of Assistant or Associate Professor. Applications from qualified individuals in all areas of nutrition will be accepted. Qualifications: Minimum of earned doctoral degree in Nutritional Science, Dietetics, or closely related field (e.g. biochemistry, physiology, molecular or cellular biology, human biology); evidence of research productivity and excellence in oral and written communication; teaching experience at the college/university level desired. For consideration at the Associate level, applicants must meet university standards for appointment to the rank, including a record of publications in peer-reviewed journals, demonstrated success as an instructor, and a history of successful grantsmanship. Responsibilities: teach undergraduate and graduate courses in Nutritional Science and/or Dietetics; advise Nutritional Science graduate students' thesis research; maintain a productive, fundable research program in an area of specialty; serve on Department, College, and University committees, as appointed; be an active participant in national/international professional organizations and activities. To apply: Complete an online faculty application found at: <https://yjobs.byu.edu/postings/295> and attach a letter of interest and current curriculum vitae. Questions may be directed to Dr. Merrill Christensen, search committee chair, at [merrill\\_christensen@byu.edu](mailto:merrill_christensen@byu.edu).

Screening of candidates begins immediately. The position will remain open until filled. BYU, an equal opportunity employer, requires all faculty to observe the university's honor code and dress and grooming standards. Preference is given to qualified candidates who are members in good standing of the affiliated church, The Church of Jesus Christ of Latter-day Saints.

**Eastern Virginia Medical School, Medical Educator in Physiological Sciences:** The Eastern Virginia Medical School (EVMS) is seeking applicants for a medical educator full time tenure track faculty position in the Department of Physiological Sciences (encompassing the disciplines of biochemistry, pharmacology, and physiology). The successful applicant must have a PhD and/or PharmD. He or she will contribute to medical and health professions curricula in pharmacology and pharmacotherapeutics, and will be expected to participate in the development of an integrated medical curriculum. Expertise in teaching medical and/or health sciences students is essential. An education philosophy oriented towards student-centered active learning and an interest in medical simulation is desirable. Research and/or clinical experience are also beneficial as there are many opportunities for collaboration within EVMS and its clinical partners, Sentara Healthcare and Children's Hospital of the King's Daughters. Interested applicants should send a statement of interest and teaching philosophy, curriculum vitae, representative teaching evaluations and names of three references electronically to [happs@evms.edu](mailto:happs@evms.edu). For more information please contact Dr. Deborah Damon, [damondh@evms.edu](mailto:damondh@evms.edu), Search Committee Chair. More information about the department and its programs can be found at <http://www.evms.edu/>. EVMS is an Equal Opportunity/Affirmative Action Employer/M/F/D/V and Drug and Tobacco Free workplace.

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## Letter to Margaret Anderson

**Judy A. Spitzer** writes: "I am a child survivor of the Holocaust from Budapest, Hungary. My parents had a lot of foresight when they sent me to a nursery school where, at three years of age, I started learning English, followed by private lessons in that language. I was 18 years old when I arrived to Philadelphia. About eight weeks later, I took my entrance exam at Temple Univ., passed it and started college. During this time my future husband (to whom I was engaged before I left Hungary) was finishing Medical School in Munich, Germany. His first job happened to be as an Instructor in Physiology at Dalhousie Medical School in Halifax, Nova Scotia, where we got married and lived for a year.

"So I spent my junior year in college at Dalhousie Univ.. Subsequently we moved around bit, until we ended up in Philadelphia at Hahnemann Medical College (now part of Drexel Univ.). I got my PhD there in Immunology.

"In 1973 my husband got an offer from the Louisiana State Univ. (LSU) School of Medicine in New Orleans that we could not refuse. We moved to New Orleans and spent 32 happy years there until Katrina hit in August 2005. During this period I was appointed Professor of Physiology and Medicine. My grant support from the NIH (National Institutes of Health) and the Office of Naval Research (ONR) sponsored my research activities and ended on the day of my retirement. In addition to my teaching, research and committee activities at LSU, I also participated in national NIH and ONR activities. I was a member of the NIH Surgery, Anesthesiology and Trauma (SAT) Study Section (the first woman in this position, but that's another story...). I went on several site visits with my colleagues, a couple times even chairing the site visit. My activities in the American Physiological Society extended to being a member, and finally chairperson of the Education Committee. In this

capacity, I suggested inclusion of lectures in the Medical Physiology course on the Physiology of Aging. While we were at LSU, I used to lecture on this topic to both Medical and Dental students.

"We evacuated from New Orleans two days before Katrina hit, as the Mayor of New Orleans strongly urged everybody to do. In fact, our house had eight feet of dirty water in it for two weeks, and we moved back to Philadelphia, where our two children and their families lived. With the loving support of our family, we built a new life for ourselves.

"Since my retirement over 10 years ago, the spectrum of my activities has changed quite a bit. My husband (also retired as Head of the Department of Physiology and Director of the Alcohol Research Center) and I enjoy traveling, spending more time with our family with friends. Another thing that I enjoy very much is not having to get up early in order to give 8:00 lectures. I have always been a late evening person. When I used to write grant applications, my most productive time was in the late evening.

"For a while I had been editor of our community's monthly newsletter. This afforded me the opportunity to meet some very interesting people and to interview them. An additional task that I perform each year is addressing high school students about my experiences as a child survivor of the Nazi Holocaust.

"Since you asked me for any words of wisdom to pass on to my younger colleagues, it would be this: think of the pleasant things that happened during your career, e.g., when a student of yours achieved a special distinction with your help, or when your grant support was renewed, and if there had been any not so great events, forget about them..."

## Letter to Phil Posner

**Bill Brownell** writes: "The discovery of outer hair cell electromotility took place on December 3, 1982 in the medical school laboratories at the Univ. of

Geneva. I was on Sabbatical from the Univ. of Florida working with Daniel Bertrand and Charlie Bader. Our plan was to use cell isolation and electrophysiological recording techniques they had developed on photoreceptor cells to conduct voltage clamp studies in isolated cochlear hair cells. Several months were required to optimize the primary cell culture procedures for hair cells. Outer hair cells proved easier to isolate and we began voltage clamp attempts in October. The home made optics, amplifiers and data collection programs required a team effort to pull off the experiments. We were using micropipettes to make intracellular recordings (whole-cell patch-clamp techniques were still not widely used). We settled into a routine where Charlie advanced the electrode while visualizing the cell through the microscope and Daniel was poised over the electronics looking for the tell-tale voltage shift that would indicate we were inside the cell. A common technique at the time was to 'buzz' the electrode when the electrode tip was positioned on the cell membrane. The buzz was achieved by throwing the amplifier head-stage into electrical oscillation. For reasons that are still not clear the buzz often pushed the tip of the electrode through the membrane. The pivotal moment occurred when Daniel buzzed and I could see Charlie's back and shoulders jerk. While still looking through the microscope Charlie called for another buzz and his body responded with another jerk. At that point Charlie turned around and said, 'We have a problem.' Daniel and I took a look at the outer hair cell movements as Charlie buzzed. Ion channels ceased to be of interest and the remainder of my Sabbatical was given over to OHC electromotility. Over the next few months I eliminated potential artifacts and further characterized the phenomena. It was after I knew that hyperpolarization caused the cell to elongate and depolarization caused it to shorten that I was confident OHC electromotility was real. We had no equipment for recording the conspicuous movements so we had visiting scientists sign our lab book acknowledging they saw the movements. I eventually captured the movements using video microscopy, eliminating the need for affidavits." ❖

Dear Friends:

Apologies for a relatively sparse offering this time, but other things have forced me to put wine tasting on the back burner. As it turns out, I tasted very few white wines these past few weeks and those I did try were not worth recommending to you. So, for the first time (I think) an all-red column.

2010 Chateau St. Michelle Red Blend "Indian Wells," Columbia Valley, Washington \$15. This is a solid wine. Nice dark plum and cherry fruit on the nose; rich and ripe (but nor sweet or overripe), viscous and smooth, with medium light tannins and balanced acid, and with good length.

2011 Chronic Cellars Red Blend "Purple Paradise," Paso Robles \$12. Forward dark cherry fruit on the nose with a bit of green bean (OK if in background as here); excellent, intense dark berry fruit on the palate, very tasty. The fruit tastes young (a bit grapey) but that will improve with time. There are dry herbs, spice, and a ripeness that seems to give it a sweet edge (but it is dry).

2006 Derby Zinfandel Laura's Vineyard, Paso Robles \$9. This is a high alcohol (15.7%) wine, and it is "old" for a Zin. Most zin's this old would be oxidized and flat by now, but not this one. Slightly herbal, dark berry fruit. A rich yet medium bodied wine, not too



Peter Wagner

extracted, and not too tannic and not sweet (thank goodness). It has good acid and length, some dry herbs behind the rich dark fruit.

2010 Brassfield Zinfandel, Volcano Ridge vineyard \$14. I forgot to identify the region/state, sorry. It too has high alcohol (15.5%). The nose is a bit dry and briary/stemmy, but the palate opens up with rich dark berry fruit. It has medium tannin, it is not sweet, and has good length and acid. There are dried herbs and a briary edge to make it interesting.

2007 Hearthstone Red Blend "Slipstone", Paso Robles \$13. This wine has a soft dark berry nose, medium to light body, slight minerality/chalkiness (interesting), and is neither overripe nor sweet. It is 65% grenache and 35% syrah, so a Rhone blend. The fruit is forward and rich. Alcohol is 15.1%. This is a very good everyday wine, good alone or with food.

2011 Chronic Cellars Red Blend "Sofa King Bueno", Paso Robles \$17. I have no idea what that name means, only that someone was probably "experimenting" at the time. A forward plum/cherry nose and palate with a rich, full bodied mouthfeel. Again, not overripe or sweet. It is a Rhone blend, mostly Syrah (79%) with the rest from other Rhone varieties. This is a good dinner party wine with something hearty on the plate.

2008 John Alan Meritage Reserve, Paso Robles \$18. This is a well-made and substantial but not at all overpowering wine. It is a classic Bordeaux blend led by Cabernet Sauvignon (50%). There is strong red/dark berry fruit, rich and full mouthfeel, obvious American Oak with dill, and a slight minty edge. It is not too tannic, has good acidity, and length.


Well, that's about all I have this month. Hopefully, better times ahead. ❖



## CALL FOR NOMINATIONS

### for the Editorship of the

### AJP-Cell Physiology • [ajpcell.org](http://ajpcell.org)



Nominations are invited for the Editorship of the *American Journal of Physiology-Cell Physiology* to succeed P. A. Insel, who will complete his term as Editor on June 30, 2014. The APS Publications Committee plans to interview candidates in the Fall of 2013.

Applications should be received before **August 15, 2013**.

Nominations, accompanied by a curriculum vitae, should be sent to the Chair of the APS Publications Committee via regular mail:

Hershel Raff, Ph.D.  
American Physiological Society  
9650 Rockville Pike  
Bethesda, MD 20814-3991

You may also send your nominations to Hershel Raff via e-mail, care of the APS Publications Department Administrative Assistant, Charmon Kight ([ckight@the-aps.org](mailto:ckight@the-aps.org)).

## Current Calls for Papers

### *Physiological Genomics*

**Updates on Mapping Quantitative Trait Loci**  
(April 30, 2013)

### **Mitochondrial Metabolism**

**NextGen Sequencing Technology-Based  
Dissection of Physiological Systems**

**Technology Development for Physiological  
Genomics**

***AJP-Gastrointestinal and Liver Physiology*  
Physiology and GI Cancer**

**Intestinal Stem Cells in GI Physiology and  
Disease**

**Innovative and Emerging Technologies in GI  
Physiology and Disease**

**Physiology and GI Cancer**

***AJP-Lung Cellular and Molecular Physiology*  
Biomarkers of Household Air Pollution**  
(April 1, 2014)

**Bioengineering the Lung: Molecules, Materials,  
Matrix, Morphology, and Mechanics**

**Translational Research in Acute Lung Injury  
and Pulmonary Fibrosis**  
(July 1, 2013)

**Real-time Visualization of Lung Function: from  
Micro to Macro**  
(January 1, 2014)

***American Journal of Physiology—  
Endocrinology and Metabolism***

**Islet Biology**  
(June 30, 2013)

**Novel Aspects of Adipocyte Biology**  
(June 30, 2013)

**CNS Control of Metabolism**  
(June 30, 2013)

***AJP-Regulatory, Integrative, and Comparative  
Physiology*  
Fetal and Neonatal Programming: Epigenetic  
Modification of Phenotype**  
(June 30, 2013)

**Integrative and Translational Physiology:  
Inflammation and Immunity in Organ System  
Physiology**  
(June 30, 2013)

**Integrative and Translational Physiology:  
Integrative Aspects of Energy Homeostasis  
and Metabolic Diseases**  
(June 30, 2013)

***AJP-Renal Physiology*  
Renal Solute Co-Transporters and Exchangers**  
(July 1, 2013)

**Chronic Kidney Disease and Fibrosis**  
(July 1, 2013)

**Renal Acid-Base Physiology**  
(July 1, 2013)

**Pathophysiology of Acute Kidney Injury**  
(July 1, 2013)

***American Journal of Physiology--Cell  
Physiology*  
Cellular Mechanisms of Tissue Fibrosis**  
(September 30, 2013)

**Cellular Circadian Rhythms**  
(May 31, 2013)

**Stem Cell Physiology and Pathophysiology**  
(May 31, 2013)

**Proteomic and Metabolomic Approaches to  
Cell Physiology and Pathophysiology**  
(May 31, 2013)

***Advances in Physiology Education*  
Teaching and Learning of Professional Ethics**

For a complete list of current Calls for Papers, visit *The Physiologist* website.

## June 16-19

**48th Annual Meeting of the Lake Cumberland Biological Transport Group, Jamestown, KY.** Information: Internet: <http://www.cumberlandbio.org/>.

## June 22-25

**6th International Conference on Children's Bone Health, Rotterdam, Netherlands.** Information: Janet Crompton. Tel.: +44 (0)1453 549929; Fax: +44 (0) 1453 548919; Email: iccbh@ectsoc.org; Internet: <http://www.iccbh.org>.

## June 23-28, 2013

**The 34th Annual Meeting of International Society for Gravitational Physiology: Gravitational Effects from Micro to Macro Biology, Toyohashi, Aichi, Japan.** Information: ISGP34@sozo.ac.jp; Internet: <http://www2.sozo.ac.jp/~ISGP34/>.

## June 30 to July 3, 2013

**24th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2013), Bologna, Italy.** Information: <http://www.pba2013.org>.

## July 15-19

**10th World Congress on Neurohypophysial Hormones, Bristol, England.** Information: Internet: <http://www.vasopressin.org/#/wcnh-x/4014208>.

## July 20-23

**Cell Senescence in Cancer and Ageing, Cambridge, United Kingdom.** Information: Internet: [https://registration.hinxton.wellcome.ac.uk/display\\_info.asp?id=342](https://registration.hinxton.wellcome.ac.uk/display_info.asp?id=342).

## July 21-26

**37th Congress of the International Union of Physiological Sciences (IUPS 2013), Birmingham, United Kingdom.** Information: Internet: <http://www.iups2013.org/>.

## August 17-18

**The Gordon Research Seminar (GRS) on Neuroethology: Behavior, Evolution & Neurobiology, Mount Snow Resort, VT.** Information: Internet: <http://tinyurl.com/neuroethology>.

## August 30-September 3

**The 14th International Conference on Systems Biology, Copenhagen, Denmark.** Information: Internet: <http://icsb2013.dk/>.

## September 6-9

**45th European Brain and Behaviour Society Meeting, Munich, Germany.** Information: Internet: <http://ebbs2013.com/>.

## September 29-October 2

**Lipids in Cardiac Health and Disease: From Toxicity to Protection the 11th Annual Meeting of the Society for Heart and Vascular Metabolism, Cambridge, MD.** Information: Internet: <http://heartmetabolism.org/2013/>.

## October 5-7

**The 13th International Congress on Amino Acids, Peptides and Proteins (ICAPP), Galveston, TX.** Information: Dr. Wu. Email: g-wu@tamu.edu

## October 23-26

**24th International Symposium on the Autonomic Nervous System, Kohala Coast, Big Island of Hawaii.** Information: Anita Zeller, AAS Executive Secretary, American Autonomic Society, 18915 Inca Ave, Lakeville, MN 55044. Tel.: 952-469-5837; Fax: 952-469-8424; E-mail: zeller.anita@mayo.edu; Internet: <http://www.americanautonomicsociety.org>.

## October 24-27

**The 18th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI), Vienna, Austria.** Information: Internet: <http://www.congressmed.com/cogi/>.

## November 16-20

**22nd IUBMB and 37th FEBS Congress, Marrakech, Morocco.** Information: Internet: <http://www.iubmb-2013.org/>.

## December 14-18

**2013 American Society for Cell Biology Annual Meeting, New Orleans, LA.** Information: Internet: <http://www.ascb.org>.

## 2014

### June 24-28

**The International 22nd Puijo Symposium "Physical Exercise in Clinical Practice - Critical Appraisal of Randomized Controlled Trials", Kuopio, Finland.** Information: Email: saila.laaksonen@uef.fi; Internet: <http://www.puijosymposium.org>.

### August 25-29

**7th World Congress for Psychotherapy, Durban, South Africa.** Information: Janie Koeries, Paragon-Conventions, Milnerton Mall, Loxton Road, Milnerton, Cape Town, South Africa. Tel.: 021 552 8679; Email: jkoeries@paragon-conventions.com; Internet: <http://www.wcp2014.com>.

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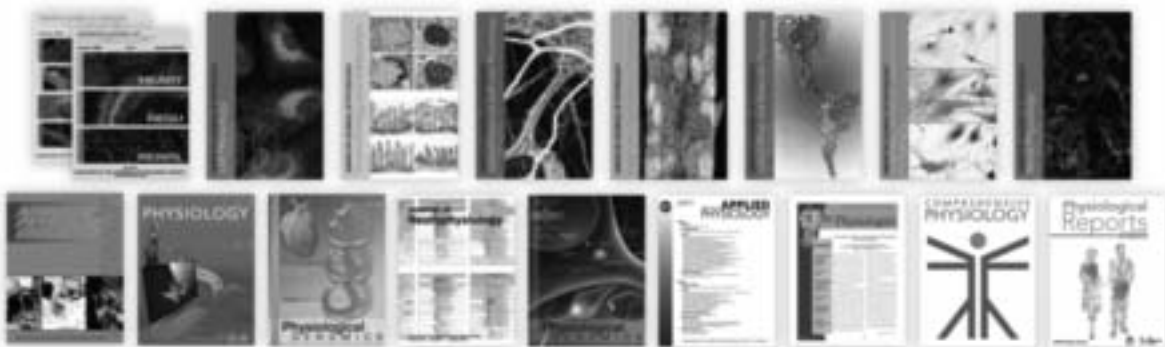
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