Season’s Greetings from the Chair!
Greetings around the fall semester in teaching land! My current teaching/developing commitments include facilitating my standard first-year-seminar for incoming freshman undergraduates who think that they are pre-med, planning for my larger advanced human physiology class in the spring for the new medical biology major, participating in the planning teams for Foundations I and Skin and Musculoskeletal blocks in our new medical school curriculum (systems-based) starting August 2013, and working on some of the preliminaries for our Scholarship of Teaching and Learning/Preparing Future Faculty for Teaching APS Conference in 2014. In my freshman class we are using Biomedical Ethics: Opposing Viewpoints as a resource to have a theme of interest to the students while helping them adjust to college life. In my advanced physiology class, we use Silverthorn’s Human Physiology: An Integrated Approach as a resource for the team-based, problem-based, case-based, experiment-based, and project-based class. We have recently invested in the PowerLab Advanced Teaching Systems and will be using them for some of the experiment-based and case-based activities. Over the last year, I served on a committee here at USD to design a new medical biology major that meets the criteria of the HHMI/AAMC Scientific Foundations for Future Physicians and the upcoming changes in MCAT 2015. My advanced human physiology class is now a required capstone experience for the medical biology majors. The major has already become hugely popular among our undergraduates. Our new medical school curriculum will limit the amount of lecture time for the medical students weekly and will add various student-centered pedagogies. The curriculum-design teams have been made up of both basic science and clinical science faculty (a first for Sanford School of Medicine of the University of South Dakota with separate clinical campuses) and have been working for months on the redesign. Last, APS staff and I checked out Mount Desert Island Biological Laboratory and the College of the Atlantic in Bar Harbor, ME which looks like a good choice for our upcoming teaching conference. As soon as the location gets settled, I will be calling together the planning committee to begin designing the conference. Thanks for all of the volunteers! Otherwise, I attended the Section Advisory Committee meeting in Bethesda in September, represented the Teaching Section at the Nominating Committee meeting in Bethesda, and recently returned from a meeting of the APS Communications Committee. Dee Silverthorn, Rob Carroll, and I assisted at the South Asian Association of Physiologists meeting and teaching workshop in Colombo, Sri Lanka November 7-9. Have a great holiday break!

Meet the APS Teaching Section Committee Members

Ian Kay: International Committee Representative

September 1972, T-Rex top the charts in the UK whilst Mac Davis does the same in the Billboard 100. More significantly though, I move to ‘Senior School’ and a lifelong interest in Biology begins – due in part to an inspirational teacher and some stick insects. Eventually, I went to university and read for a
degree in biology – pre-Google days, when yes, we went to the library and read! It was here that my interests turned to physiology - an interest which has stayed and has given me a career. Initially, the teaching I received was in comparative physiology – something I would recommend to everyone, giving as it does, a demonstration of the variety of ways by which animals solve common problems. However, my interests further developed, perhaps inevitably, to mammalian i.e. human physiology. Following graduation, I then completed a PhD and subsequently post-doctoral fellowships before taking my current Faculty post.

Over the last 20 years I have taught and examined many students – some of whom are now establishing themselves in careers in physiology. During this time I have moved away from lab based research towards a pedagogical research and I have contributed to the educational activities of The Physiological Society and the Society of Biology here in the UK. I hope to bring to the Teaching Section enthusiasm and commitment. I genuinely believe that we are at an extremely exciting and challenging time in physiology education – I think perhaps in education in general. An explosion of technology available to us and students and the changing needs and expectations of students are just some of the challenges that we face in the short term. I look forward to working with colleagues in the section to help address these (and other) challenges that we face as Physiology educators. I certainly look forward to meeting everyone in Boston in 2013.

And finally, for those of you who have been racking your brains about the titles of the songs that were topping the charts in September 1972 – they were ‘Children of the Revolution’ and ‘Baby Don’t Get Hooked on Me’ respectively.

Ian S. Kay, B.S. PhD

David Harris: Guyton Award Selection Committee Chair

I received my PhD in Physiology from Temple University in 2004 and was partially supported with an AHA predoctoral fellowship grant. My postdoctoral fellowship was done in Thomas Jefferson University’s Center for Translational Medicine, which led to my first faculty position at Jefferson. I also served as an Adjunct Faculty member at Rowan University for 3 years teaching anatomy and physiology. In 2007 I was nominated for the Melvin Marcus Young Investigator Award in Cardiovascular Science and in 2008 was awarded an AHA Scientist Development Grant. That year I became course director for Medical Physiology at Drexel University College of Medicine, where I received a Golden Apple award in 2011 for education. Currently, I am an Assistant Professor of Physiology at the University of Central Florida and my educational research interests involve the use of simulation in medical education.

David Harris, PhD

Training Advisory Committee Up-Date

TAC met in Washington DC in December for its annual business meeting. Significant time will be set aside to discuss Strategic Planning issues.

- TAC feels it is important to have undergraduate input into TAC activities. It was proposed that the committee request the addition of an “at large” undergraduate member to TAC with the various provisos.
- TAC is working on an APS Ambassador Program. The Ambassador would go to local/regional universities and schools to do outreach and promote APS membership. There would be one
ambassador for each local chapter to be selected by the chapter. This will go before council for approval.

- Symposium at EB 2013—The topic is skills needed for translational research. Confirmed speakers include Mike Joyner and Christine Warbeck, providing perspectives on their work. They also need someone from NIH to define translational research. Another possibility is Gary Gibbons from NHLBI. Other committee members suggested Chris Austin, Cathy Hudson. Sharon Ingram and Merry Lindsey.

- TACE update (Trainee Advisory Consulting Editor for the Journal of Applied Physiology, Peter Wagner, Editor): The current TACE is Dr. Shawn Bender at the University of Missouri. Bender has been recommending early stage investigators to be reviewers. He wants recommendations from TAC and TAC volunteers. He started a Facebook page in September.

Additional Trainee Resources:
- Visit the Trainee Website (www.the-aps.org/trainees) for a wealth of information!
- Subscribe to the Trainee Listserv by sending an e-mail with “Trainee Listserv” in the subject line to Education@The-APS.org
- Join the “APS Trainees” and “American Physiological Society” groups on Facebook for updates.

Please don’t hesitate to contact me at bunkera@morningside.edu if you have any questions, comments, or concerns regarding trainees in APS.

**APS Science Policy Committee Up-Date**

The APS Science Policy and Animal Care and Experimentation Committees work with the Society’s leadership to develop policy positions and advocate for physiology research. To see the latest news from the Office of Science Policy including new position statements on animals in research and comments on proposed conflict of interest rules at the NIH, visit the APS website at http://www.the-aps.org/pa.

**Implementation Plans for the new Guide for the Care and Use of Laboratory Animals**

NIH and AAALAC, Intl. both use the Guide for the Care and Use of Laboratory Animals as a standard for animal care and use programs, but each has different plans for implementing the new 8th edition. Current information on their plans is available at http://www.the-aps.org/pa/policy/animals/Guide.htm

Rebecca Osthus
APS Science Policy Analyst

**Physiologists in Industry**

The APS PIC is sponsoring a Symposium at EB 2013 entitled " Nrf2 Signal Pathway in Human Diseases and as Novel Therapeutics" (chaired by Eugene W. Shek, Ph.D. and Ira J. Smith, Ph.D.) on Sunday, April 21st at 8 – 10 am in the Convention Center, Room 205C. Nuclear factor erythroid 2-related factor 2 (Nrf2) is a transcription factor that is ubiquitously expressed in all human organs. In response oxidative, electrophilic, carbonyl and environmental stresses, Nrf2 detaches from its cytosolic inhibitor, (Keap1), and translocates into the nucleus where it binds to ARE to induce various adaptive defense responses by upregulating multitude of phase II defense enzymes and antioxidant stress proteins (such as HO-1, NQO1, glutamate-cysteine ligase, glutamyl cysteine synthase, glutathione peroxidase, and various glutathione S-transferases). Inappropriate host defense predisposes cells, tissues and organs to inflammation, oxidative
stress and cell injury. Thus Nrf2 plays a critical role in determining susceptibility to various diseases ranging from cancer, chemoresistance, COPD, diabetes, and cardiovascular diseases. In this symposium, Donna Zhang, Ph.D. from University of Arizona will review the signaling pathway of Nrf2 regulation and its dual roles in cancer; Shyam S. Biswal, Ph.D. from John Hopkins Bloomberg School of Public Health will review Nrf2 as novel therapeutic target in combating COPD; Giovanni E. Mann, Ph.D. from King’s College London will review the interaction of impaired Nrf2 mediated redox signaling in gestational diabetes; and finally, Namakkal Rajasekaran from University of Utah Health Sciences will review Nrf2 signaling mechanism in the heart and its therapeutic potential for cardiac diseases. Attendees will gain a broad knowledge and understanding of Nrf2 signaling pathways in the pathophysiology of various diseases along with a deep appreciation for how Nrf2 may be novel therapeutic targets.

The PIC Novel Disease Model Award is sponsored by Plato BioPharma, Inc., a world leader in in vivo model development and execution. The PIC Novel Disease Model Award will be granted to a graduate student and a postdoctoral fellow who submit the best abstracts at EB 2013 that describe a novel disease model. The model can be in vitro or in vivo but should clearly emphasize the potential utility of the system for future research related to a disease. The award is $500 for the graduate student and $800 for the postdoctoral fellow categories, respectively, and will be presented at the APS Business Meeting.

You’re invited! Come meet, eat and socialize with your fellow Physiologists who are working in the corporate, industrial, academic, or government sector. The 12th Annual Physiologists in Industry Committee Mixer will feature free hors d’oeuvres along with information on the roles of Physiologists in Industry. This is a great opportunity to network with industry and academic APS members alike – we hope to see you there!

Nancy Pelaez, Ph.D.
Assoc. Prof of Biol. Sci.
Lily Hall G-224, Purdue Univ.

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**EB 2013: Program and Policy Updates from the NIH and NSF**

Featuring: John Wingfield, Ph.D. (NSF), Griffin Rodgers, M.D. (NIDDK) and Story Landis, Ph.D. (NINDS) Institute Directors will provide updates on existing programs, address new initiatives and research priorities at their agencies, and outline plans for future activities and emerging opportunities for researchers. In this highly competitive funding environment it is increasingly important not only for investigators to keep up to date on the activities of the agencies that fund their work, but also for institute leaders to have an opportunity to communicate directly with the investigator community. Join us on Wednesday, April 24, 2013 at 2:30PM in Room 207 of the Boston Convention & Exhibition Center to participate in a discussion with NSF and NIH leadership.

**Ask Congress to protect research funding!**

Now that the elections are over, Congress will be returning to Washington, DC for a short lame duck session before the end of the year. As things now stand, funding for most federal programs—including scientific research at the NIH, NSF and NASA—is slated to cut by some 10% on January 2, 2013 under a process known as sequestration. This would have a devastating impact on research. Congress can prevent these cuts, but to understand the urgency, they need to hear from the scientific community just how harmful sequestration would be. Please use this link to send a message to your Members of Congress, and then ask your colleagues to do the same: [http://capwiz.com/faseb/issues/alert/?alertid=62032501](http://capwiz.com/faseb/issues/alert/?alertid=62032501)

Rebecca Osthus
APS Science Policy Analyst

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**Upcoming Awards and Deadlines**
Summer Research Programs: Due date 02/01/2013

APS Undergraduate Summer Research Fellowships (UGSRF)
The APS Undergraduate Summer Research Fellowship (UGSRF) program funds 24 full-time undergraduate students with little or no laboratory research experience to work for 10 weeks during the summer in the laboratory of an established APS investigator.

APS Undergraduate Research Excellence Fellowships (UGREF)
The Undergraduate Research Excellence Fellowship (UGREF) program funds 6 full-time undergraduate students with significant research experience to work for 10 weeks during the summer in the laboratory of an established APS investigator.

Website for these awards: http://www.the-aps.org/mm/Education/Undergraduate/Student-Awards-and-Events/Summer-Research-Programs

Scarletta Whitsett
Science Fair Coordinator/Project Asst.

CALL FOR NOMINATIONS: FASEB EXCELLENCE IN SCIENCE AWARD - 2014

FASEB is seeking nominations for its 2014 Excellence in Science Award that recognizes the significant accomplishments of women scientists. We look forward to another list of nominees that reads like a 'Who's Who' of international science, containing the names of outstanding women in science who have accomplished scientific work of lasting impact and have contributed substantially to training the next generation of scientists.

Nominations must be submitted on the FASEB award website by March 1, 2013.

PAPER SUBMISSIONS WILL NOT BE ACCEPTED

Nomination Procedures:
Nominators and their candidates must be members of a FASEB member society. Self-nominations will not be accepted. All nominations must be submitted on the FASEB Excellence in Science Award website. Access to the site will be available as of January 1, 2013.

Smissions must include all of the following documents that are to be uploaded individually in PDF format.

1. Nomination Letter, setting forth in detail:
   · Contributions to the field that represents the nominee’s outstanding achievement in science;
   · Leadership and mentorship;
   · Evidence of national recognition;
   · Honors and awards; and
   · Synopsis of selected bibliography

2. Full Curriculum Vitae - including all publications
   · The C.V. must document all publications, leadership roles, mentorship, teaching, honors, and awards
   · 5 Reprints
   · 3 Letters of Support from Peers
   · 3 Trainee Letters of Recommendation

The Excellence in Science Award is sponsored solely by FASEB to recognize outstanding achievement by women in biological science. All women who are members of one or more of the societies of FASEB will be eligible for nomination. Nominations recognize a woman whose career achievements have contributed significantly to further our understanding of a particular discipline by excellence in research.
This announcement for the 2014 season is being e-mailed to FASEB member societies with their permission.

For complete award details go to:

http://www.faseb.org/What-We-Do/Awards/Excellence-in-Science-Award.aspx

For questions, please contact:
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EB 2013

- February 21, 2013: late breaking submission
- February 22, 2013: early registration deadline (Program will not be mailed this year)
- March 22, 2012: hotel reservations and cancellation deadline
- April 20, 2012: APS Opening Reception
- April 21, 2012: APS 125th Anniversary Beach Party
- April 23, 2012: APS Business Meeting
- April 24, 2012: APS Closing Party

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