



The Physiologist

INSIDE

APS
Council Meeting
p. 177

Introducing Ann
Schreihöfer, Chair
of APS Central
Nervous
System Section
p. 182

Starting a New
Lab: Developing
New Techniques
and Hiring
Personnel
p. 188

2007 APS Impact
Factors are
Published
p. 193

Arthur C. Guyton Teacher of the Year Award

Learning to Teach: An Evolution in Fits and Starts

Penelope A. Hansen
Memorial University of Newfoundland, Canada

Have you ever thought about why you became a teacher? About which people or experiences influenced you? How did you develop your attitudes to teaching and students? I was prompted to reflect on these questions when I was nominated for an APS Arthur C. Guyton Educator-of-the-Year Award because I had to explain my teaching philosophy for the jury. It struck me that we might be able to be better teaching

mentors if we understood how our mentors and experiences shaped us. We might even see how to avoid inadvertently turning off grad students and postdocs from a satisfying and exciting academic life of teaching. Perhaps my story will stimulate you to think deeply about your own formation as a teacher and encourage you to apply what you learn to your students and your academic programs.

When I look back over my development, I see that it resembles the pattern of biological evolution: its progress has been marked by a series of crucial



Penelope A. Hansen

events that have markedly changed my ideas about my role and behavior as a teacher. I can identify experiences that influenced me reaching as far back as primary school. In my small rural school, my teachers allowed me to help younger students with their schoolwork after I had completed my own. I can still recall how good – how special – that made me feel: I experienced a distinctive

kind of pleasure from interacting with other children in this way. Later, in high school and at university, I was taught by a few teachers who engaged me in an extraordinary way because of their intelligence, their enthusiasm for their subjects, and their humane ways of interacting with students. In fact, because of the influence of my first-year chemistry professor, I switched my major from the arts to sciences and earned a BSc in chemistry. *These experiences gave me a sense that teaching was a pleasurable human interaction that*

(continued on page 175)

The Physiologist

Contents

Guyton Teacher of the Year Award	
Learning to Teach: An Evolution in Fits and Starts <i>Penelope A. Hansen</i>	173
APS News	
APS Council Holds Summer Meeting in Bethesda	177
Why Do Professional Service Anyway? Do it for You! <i>Diane H. Munzenmaier</i>	180
Section News	
Introducing Ann M. Schreihof, Chair of APS Central Nervous System Section	182
Membership	
New Regular Members	183
New Student Members	184
New Affiliate Members	184
Recently Deceased Members	184
Education	
APS Teachers Merge Student Research and Teaching	185
Mentoring Forum	
Starting a New Lab: Developing New Techniques and Hiring Personnel <i>Francisco H. Andrade</i>	188
Communications	
Communications Update	191
Journal Press Release Program	191
New Media: Online Videos and Current Events	191
2008 AAAS/APS Mass Media Fellow	191
Science Policy	
Attacks on Researchers Spark Condemnation	192
Update on SBIR/STTR Reauthorization	192
Publications	
2007 APS Impact Factors are Published by Thomson/ISI	193
APS and PubMed Central	193
APS Committee Reports	195
Positions Available	220
People & Places	
Sigmund Appointed to Research Chair	228
Senior Physiologists' News	230
The Wine Wizard	231
Scientific Meetings and Congresses	232
APS Membership Application	235

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Headquarters phone: 301-634-7118

Fax: 301-634-7241

Email: info@the-aps.org

<http://www.the-aps.org>

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could have potent effects on learners.

I started on the path of becoming a teacher during my doctoral training. I was extremely fortunate to have a supervisor who was also my mentor. Dr. Kenneth B. Roberts, Memorial University of Newfoundland, not only taught me how to do research and write about it and how to navigate the politics of academic life, but also how to interact with students in ways that helped them to learn. He allowed me to do more and more of “his” teaching, each time with discussion of my plans for the session and debriefing afterwards. *I soon realized that I needed to put the same kind of careful, logical thought into teaching as I did into research.* Although it immediately became my practice, it wasn’t until much later that I articulated this idea in an editorial titled “Multiplying the benefits of research training” (*Am J Physiol* 266:S1, 1994).

My mentor was an outstanding public speaker who gave engaging, even exciting, lectures. I, on the other hand, was at first frightened to death of lecturing. To increase my level of comfort, I wrote out all my lectures and virtually read from the scripts, which included far too much detail, all trees and no forest. I perceived lecturing as some kind of “test” of myself, of my knowledge, and of the lecture topic. *Eventually I realized two essential things about lecturing: first, it isn’t about me, it’s all about students; and second, teaching is not the same thing as “telling.”*

Realization that the only role of teaching is to help students learn came as a blinding flash of the obvious, after which I quickly lost a great deal of my fear of lecturing and began to focus more on what students need to learn and how I could help them do it. As I began to wonder about the purposes of lecturing, my mentor, with his usual sense of impeccable timing, gave me copy of Donald Bligh’s, *What’s the Use of Lectures?* I found this as exciting to read as the latest paper related to my area of research. We had some very stimulating discussions about the ideas in this book, the kind of discussions about teaching that are sadly missing from many graduate students’ experience.

Understanding that teaching is not just “telling” came as a revelation to me when I gave what I thought was an excellent lecture on Starling forces. It was followed the next day by a small group problem-based discussion that involved this topic. I facilitated one of

the groups which happened to include some of the brightest, most motivated medical students, and it became clear as I listened that they didn’t understand Starling forces! This was a crucial point in my evolution as a teacher, after which I started to think even harder about how I could create lectures that were more effective at helping students understand the concepts of physiology, rather than leading them to simply memorize facts. *I realized that I needed to incorporate active learning activities in my lectures.* I slowly began to adopt this approach to give students opportunities to apply what they were hearing and to give me ongoing feedback about whether or not they understood what I was saying. Some of my physiology colleagues, particularly Dee Silverthorn, have helped me to learn about and use active learning techniques in practical and creative ways. I am still developing this aspect of my teaching, currently exploring the use of “clickers” and the electronic white board.

Nearly 20 years ago I began to receive teaching awards from our medical students. Looking back, I see that this was a terrific “feel-good” experience that encouraged me to focus more and more on teaching and less and less on bench research. In 1988 I made the difficult decision to close my lab, and took up a full-time administrative position as Assistant Dean for Undergraduate Medical Education. Our dean supported my development by funding my participation in education meetings and short courses. These helped me to advance my knowledge of the theories and practice of education and to learn qualitative research methods that I could use to evaluate educational innovations. I found out that my ideas about teaching had solid foundations in constructivist and social theories of learning, and that there was a huge body of research on pedagogy that I needed to explore. *The realization that what I had learned empirically about teaching and learning had solid theoretical and research bases stimulated me to dig into this body of literature and to begin writing about education.*

I became an advocate of the idea that writing about something increases your understanding of it, which I expressed in an editorial, *Writing to learn physiology* (*Am J Physiol* 267:S1, 1995). Furthermore, the discipline required to write publishable papers about education made me a better writer and a more

thoughtful teacher. In 1992 the APS Publications Committee and Council took a chance on me, a Canadian previously unknown to them. They appointed me Chief Editor of *Advances in Physiology Education*, another crucial fork in my evolutionary path as an educator. It gave me opportunities to meet and work with many new colleagues in the APS and around the world whose primary academic focus was on physiology education. I no longer felt like an odd-woman-out, as I had felt among my basic science colleagues at Memorial during the four years since closing my research lab. *I realized that being part of a virtual community of like-minded physiologists gave me both the confidence and the opportunities I needed to continue developing as an educator.* These opportunities were broadened with my involvement with the APS Teaching Section and the IUPS Education Committee, both of which I have been fortunate to chair.

Two more events caused abrupt changes in my evolution as a teacher, like pebbles that start avalanches. One was a stage performance I attended in Switzerland and the other was a two-word phrase I ran across in a book on higher education that I was reading.

A colleague took me to a performance that was essentially a monologue, with minimal props and no set, of a section of Mann’s *The Magic Mountain*. I had previously read this novel in English so I could partly follow the story even though the performance was in German, a language I hardly understood. I began to pay attention to the actor’s body language and the way he used his voice. The audience was paying rapt attention; you could have heard a pin drop. *And then the penny dropped for me: I realized that students might be more engaged during a lecture if I used more body language and modulated my voice, and if I organized lecture material as a “story” rather than hierarchically, as I had been doing.* I started reworking lectures to frame them within everyday scenarios or clinical cases, which act as storylines. I’m still working on creating a more engaging stage presence, since my default speaking voice is rather monotone and my natural movements are minimal.

The phrase that sparked a radical change in my teaching was “hidden curriculum.” The idea that there might be something hidden in teaching and learning had never occurred to me until 1990

when I came across these two words together. I began to have intense discussions about this idea with my mentor. And, it so happened that I had just been awarded a Canadian teaching fellowship that included a five-day retreat at a resort in rural Quebec. At the retreat nine other awardees from other disciplines and universities and I had a continuous, lively, free-flowing discussion about teaching and learning. I had only recently discovered those two magic words and couldn't stop thinking about them; and the hidden curriculum turned out to be one of our best discussions at the retreat. Hearing other disciplines' ideas about this topic helped me to analyze the hidden curriculum for physiology. *Realizing first that a hidden curriculum exists and then understanding its effects on learning is probably the single most important evolutionary change I've experienced as a teacher.* It has enabled me to change how I teach in ways that

take advantage of the hidden beneficial aspects and lessen the undesirable ones. I was invited to write a piece about physiology's hidden curriculum for the APS journal then called *NIPS* (*News Physiol. Sci.* 7:41-44, 1992), and these ideas later formed the basis for my Bernard Distinguished Lecture in 2002 titled "Physiology's Recondite Curriculum" (*Adv. Physiol. Educ.* 26:139-145, 2002). I am still engaged by the idea of a hidden curriculum, and last August I presented research findings about the significant influence of the hidden curriculum on medical students' career choices at a European education conference. It was as if those two words lit a fuse, a fuse that is still burning after 18 years.

These fits and starts in my evolution as a teacher have come from my interaction with my mentor and other colleagues, from paying attention to my students' learning, from reading and writing

about physiology education, and even from attending a play in a language I didn't understand. Each of these nine events was followed by a period in which I thought about the event and sometimes immediately, sometimes very slowly, realized something new and significant that changed my beliefs and behavior as a teacher. Through these experiences I have come to see my interaction with students as one of deep complexity, involving the full range of emotion and intelligence that informs all human interaction. Sometimes I relate to my students as a friend or coach who encourages and advises, sometimes as an expert who can help them see the "big picture" or explain complicated information, sometimes as just another part of a team that has to work hard together to master a body of knowledge. I am still discovering how to do these things better, still excited and enjoying every minute of it ... and still evolving. ❖

APS Council Holds Summer Meeting in Bethesda

Each summer the APS Council holds a meeting in Bethesda, MD. This year's meeting was held June 24-26, 2008, at the APS headquarters. During this meeting, Council welcomes the chairs of the APS committees to present their annual reports. In addition to presenting annual reports, the chairs also discussed the highlights of their committees' activities and programs during the past year, and presented Council with their plans for their committees for the coming year. It is at this meeting that the chairs submit any requests for new committee programs to Council for review and approval. The reports presented to Council can be found beginning on page 195.

This year, Council also welcomed the chairs of two new APS Committees—Peter Lauf, Chair of the Chapter

Advisory Committee (CAC), and Darwin Bell, Chair of the APS Conference Committee (APSCC). The CAC will, among other things, provide support for existing chapters, and encourage and assist members with the creation of new chapters. The APSCC has taken over the conference program from the Joint Program Committee. The Committee has already revised the process for members wishing to submit conference proposals. Reports from both of these committees are available in this issue of *The Physiologist*.

Prior to the beginning of the Council meeting, the Executive Committee met to interview several candidates for the position of chair of the Finance Committee. Peter Wagner, who is the current chair, will end his term on December 31, 2008, after serving six

years. The Executive Committee made their recommendation to Council, who then approved the selection of Jeff Sands, Emory University School of Medicine. Sands will begin his three-year term on January 1, 2009.

Besides receiving the committee reports, Council also received a report from the recently created Pipeline Task Force. The Task Force was an outgrowth of the Stop-Gap Fellowship Initiative APS implemented last year. The Task Force is charged with evaluating current APS programs, and determining if there are new programs that APS could initiate to address this issue.

Council was presented with a request from APS member Charles Tipton to approve the establishment of a new chapter—Arizona Physiological Society. Included with the proposal was a copy of



APS Council: (clockwise from upper left) Linda Samuelson, Thomas Pressley, Peter Wagner, James Hicks, Frank Powell, Gordon Mitchell, William Talman, Kenneth Baldwin, David Pollock, J. Michael Wyss, Irving Zucker, Joey Granger, Ron Lynch, Kim Barrett, Michael Portman, Barbara Goodman, and Pamela Carmines; (in the middle) Dee Silverthorn, and Hannah Carey.

the proposed bylaws, membership requirements, and a petition signed by members who will comprise the initial membership of the chapter. The Arizona Physiological Society plans to hold their inaugural meeting November 7-8. Council reviewed and approved this motion, and asked the Chapter Advisory Committee to work with the new chapter to finalize the bylaws and membership requirements.

One of the directives in the current Strategic Plan is for the Society to explore new strategies to raise funds for current and new programs and awards. This may include the hiring of a development officer. In order to determine if this was a viable option, APS hired the Garrow Company to conduct a survey to determine if APS should hire a development officer. As part of the survey, the Garrow Company interviewed the APS managers, Council members, and other APS members. They also surveyed several private foundations and were able to identify several that were potential sources of funding for the Society. The final report from the Garrow Company indicated that the opportunity exists for the Society to develop a philanthropic program, and there may be a need to hire a development officer to develop this program. As a result of this report, Council unanimously approved creating a committee that will work with the

Garrow Company to write a case statement to determine if the hiring of a development officer would be a good option.

Three years ago, APS started the Living History Program in which distinguished senior members of the Society are interviewed. These interviews are videotaped and posted to the APS web site for viewing. Most of these interviews are taped at the interviewees' institution, using the institutions' equipment. By doing this, the Society does not incur the costs of taping and editing the interviews. However, some of these interviews cannot be done at an institution. Because of this, the History of Physiology Group made a request to Council that APS contribute, if needed, up to \$1,000 per interview to help defray the costs of taping and editing an approved interview session. Up to 10 interviews (\$10,000) would be funded within a given year. Council approved the History Group's request.

During the meeting, Council approved a recommendation from the Awards Committee to grant five Research Career Enhancement Awards and one Teaching Career Enhancement Award from the applications received for the spring deadline. The recipients for the Research Career Enhancement Awards are Maureen Basha, Drexel Univ. College of Medicine; Jason Carter,

Michigan Technological Univ.; Thomas Reynolds IV, Skidmore College; Alexander Mongin, Albany Medical College; and Michael Hedrick, California State Univ., East Bay. The Teaching Career Enhancement Award recipient is Reem Abraham, Melaka Manipal Medical College.

Based on a recommendation from the Membership Committee, Council approved a recommendation that the student membership category be eliminated, and two new membership categories—graduate student and undergraduate student—be created. The Committee made the recommendation because they believed that the five-year limit of the student membership was too restrictive for undergraduate students who may transition to being a graduate student before being eligible for regular membership. With the addition of these two categories, the students can transition from undergraduate, to graduate, to regular membership. Before this change can take effect, the current bylaws regarding membership will need to be amended. The recommended bylaw change will be published in the December issue of *The Physiologist*, and will be voted on by the APS membership at the APS Business Meeting to be held at EB '09 in New Orleans, April 18-22.

The Membership Committee also recommended that a change in the Emeritus Membership requirements be made. They recommended that a member requesting emeritus member status not only have reached the age of 65, but also have been a regular member of the Society for at least ten years before being allowed to become an emeritus member. Council approved this recommendation. An amendment to this bylaw will also be published in the December issue of *The Physiologist*, and will be voted on at the APS Business Meeting to be held at EB '09.

Council approved a recommendation from the Women in Physiology Committee to revise the Caroline tum Suden/Frances A. Hellebrandt Award. Previously, both graduate students and postdoctoral fellows were eligible to apply for this award, and there was no limit on the number of times a member could receive this award. In order to provide more members with an opportunity to receive this award, the Caroline tum Suden/Frances A. Hellebrandt Award will become two separate awards, one for which graduate students only will be eligible and one for which postdoctoral



APS Section Chairs: (clockwise from bottom left) Ida Llewellyn-Smith, Craig Plato, Frank Belloni, P. Darwin Bell, Timothy Musch, Peter Lauf, Patricia Molina, Kathryn Sandberg, Nansie McHugh, and Angela Grippo.



APS President Irving Zucker, back left, presented certificates to APS Staff members. Back row: Zucker, Marsha Matyas, Michael Gentry, and Mike Quinn. Middle row: Ruth Freehling, Martin Frank, Damon Hurbon, and Maria Kuhrmann. Front row: Geraldine Marklin, Gale DeSouza, Charmon Kight, and Georgia Stine.

fellows only will be eligible. A member would only be allowed to receive each award once.

The International Committee recommended that APS establish an International Fellows Award to enable more physiologists from outside the US

to attend and participate in the EB meetings. Council approved this recommendation and the funding necessary to make 10 awards per year at \$500 per award. The awards will be presented to an early career physiologist working outside the United States. The recipi-

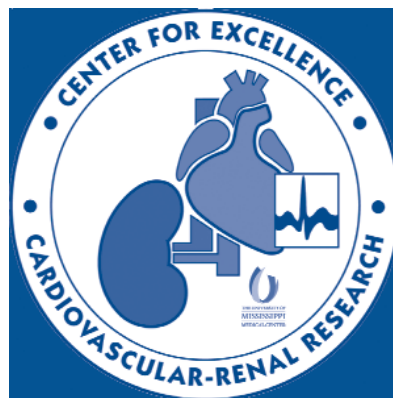
ents will be required to submit a copy of their abstract and to attend the EB meeting to present their work.

One of the highlights of the summer Council meeting is the employee appreciation reception. This year, APS President Irving Zucker hosted the reception on Tuesday, June 24 on the portico of the Lee Building on the FASEB campus. The reception provides an opportunity for members of Council and the committee chairs to interact with the APS staff. During the reception, Zucker thanked the staff for their hard work, and support that they provide to the Council and the committees.

During the reception, APS recognized those staff members who have served the Society for a significant period of time. This year, Zucker presented certificates to the following employees: a 25-year certificate to Ruth Freehling (Copy Editor); a 20-year certificate to Maria Kuhrmann, (Copy Editor); a 15-year certificate to Marsha Matyas (Director, Educational Programs); 10-year certificates to Michael Gentry (Online Production Editor), Coleen Kitaguchi (Systems Support Specialist), Geraldine Marklin (Membership Services Assistant), Michael Quinn (Information Services), and Georgia Stine (Membership Services Assistant); and five-year certificates to Gale DeSouza (Accountant), Damon Hurbon (Art Editor), and Charmon Kight (Administrative Assistant, Publications Dept.). ❖

JACKSON CARDIOVASCULAR-RENAL MEETING 2008

The Jackson Cardiovascular-Renal Meeting 2008 will be held October 15-18 at the University of Mississippi Medical Center in Jackson, MS. This meeting will assemble internationally recognized experts in cardiovascular, renal and metabolic diseases to present their latest research and to discuss future research directions. The meeting will be attended by basic, clinical and population scientists, and by practicing clinicians, residents, fel-



lows and students. Please visit the meeting website at: <http://cecr.umc.edu/> for complete information about the meeting, including registration, travel and hotel information.

Endorsed by the National Heart, Lung and Blood Institute, the Council for High Blood Pressure Research of the American Heart Association, and the American Physiological Society.

Why Do Professional Service Anyway? Do it for You!

Diane H. Munzenmaier
Medical College of Wisconsin

Diane Munzenmaier, Medical College of Wisconsin, was selected by the APS Trainee Advisory Committee as the first recipient of the APS Early Career Professional Service Award. Following are her thoughts on the value of professional service.

In this age of limited NIH funding, when we never seem to have enough time to get our grant resubmissions in or our manuscripts published, why would we want to waste precious hours on professional service? Funding pressures are at an all time high and there are never enough hours in the day to stay on top of all that needs to be done. Yet, most of us do some type of professional service, either within our institution, or for a national or international organization such as APS, or both. But what are the driving forces for doing this service and how should we decide which prospects are worthy of devoting our precious time to?

The obvious reason that many of us find ourselves on local, regional or national committees is to fill out our CVs. In order to impress Rank and Tenure, we have to be able to show that we have been involved in professional service of some type. So how do we attempt to fulfill this requirement? Often we find the committees that meet the least often and have the smallest work load, of course! But what does this really gain us, aside from a slightly beefier resume? Even the seemingly least labor-intensive committees can be an enormous time drain. Time is money, a most valuable currency when you have so little to spare, so it is

important that it is not wasted on inactive committees where nothing gets accomplished just so you can say that you have put in your time.

In the future, when nominating yourself for committee work or volunteering for different projects and responsibilities, be a little selfish. That is not to say that you shouldn't serve. Quite the contrary. But if you are going to serve, find a beneficiary for your service that you fervently believe in. Choose service wisely by selecting opportunities that will fulfill your own needs as well as those of others. What these opportunities are will obviously vary from physiologist to physiologist. Luckily, there are myriad possibilities to choose from. For me personally, the choices almost always have something to do with inspiring young minds to discover and appreciate the beautifully logical world that is the study of human physiology.

Physiology is not a natural discipline for students to gravitate to. It is quite difficult to grasp and defies rote memorization which goes against a student's familiarity and comfort with the way most subjects are taught. For those students who are willful enough to persist, they become amazed and enlightened by the logic and intricacies of the function of the human body. Eventually they begin to appreciate that physiology is everywhere and that it is involved in biomedical science at every level. The trick is to get them to open their eyes to this intriguing field before they have set their sights elsewhere.

I vividly remember the Anatomy and Physiology class I took my senior year in

high school and how we would dissect frogs and cats and fetal pigs in order to understand the gross anatomy of the various systems. Our teacher would then draw meticulously elaborate diagrams on the chalkboard depicting the histology of the various organ systems. He would explain the physiology of each system in great detail and describe how it perfectly matched the anatomy and how each tissue and organ system was so perfectly designed for its particular function. This was an enormous revelation to me! I had never before considered science to be anything more than something tedious and to be memorized. This was science that actually made sense to me and that I could relate to! That class and that teacher forever changed the way I looked at science in general, and the life sciences in particular.

Unfortunately, I had no idea back then how lucky I was to have that teacher in high school or how rare that opportunity was. I wonder if he had any idea how many lives and careers he must have influenced with that class. In these days of massive school budget cuts, how many public high schools still have A&P classes where each lab group of 4-5 students is allowed to dissect their own fetal pig? How many high schools even teach physiology at any level? How are students supposed to be inspired to study a discipline that they probably don't even realize exists? My memories of that experience and the realization of how it helped to shape my future are what motivate me to do my small part to introduce students to the wonders of physiology.

As scholars, we have a responsibility to serve and educate the public. This can be as simple an act as gently correcting family, friends, and even strangers when they begin spouting gross inaccuracies regarding the latest medical science breakthrough they heard about on TV. However, we all have the ability to have a much greater and more wide-reaching impact. Within our institution, we can serve as mentors to graduate students, medical students, and postdoctoral fellows. We can open our labs to undergraduate and high school students and even teachers during the summer so that they can benefit from our knowledge and experiences. And we can also

APS Early Career Professional Service Award

The APS Trainee Advisory Committee is pleased to announce that Diane H. Munzenmaier, Assistant Professor of Physiology at the Medical College of Wisconsin, has been selected as the first recipient of the APS Early Career Professional Service Award. The Committee was extremely impressed with her outstanding service contributions at all levels, from K-12 to undergraduate to graduate/medical education. Dr. Munzenmaier has been very active in her community, department, and institution. In addition, she has served nationally with

NIH and APS and internationally with the World Congress of Microcirculation.

The Early Career Professional Service Award honors a member of the Society at an early career stage who is judged to have made outstanding contributions to the physiology community and demonstrated dedication and commitment to furthering the broader goals of the physiology community. More information about the award can be found at <http://www.the-aps.org/awards/society/earlycareer.htm>. Deadline for 2009 is **January 23**.

find time, maybe as little as one day a year, to leave our “ivory tower” and take our show on the road.

Physiology Understanding (PhUn) Week was developed in 2005 to encourage physiologists to make connections with the public in order to share their knowledge and excitement about their chosen field. Physiologists-in-training come in all shapes and sizes. The obvious targets for this program are elementary, middle, and high school classes but you can even find aspiring physiologists at such unusual places as day care centers, museums, senior centers and nursing homes. Four-year olds are thrilled to find out about why their heart races when they run around the playground and eighty-year olds are fascinated to learn how their medications work. As for those K-12 students though, the sky is the limit! Be creative and come up with ideas about how you could take what you do and what you are interested in and bring it into the classroom. If you are excited about what you do, your enthusiasm will definitely rub off!

For some additional guidance, the APS PhUn Week website is packed with great ideas for interactive activities targeted to many different age levels. With the generous financial support of APS, the APS Education Committee and the APS K-12 Education Programs Coordinator, Mel Limson, have done an excellent job in working to expand this program each year so that more APS members can get involved to posi-

tively influence increasing numbers of students of all ages. Rather than being just another time drain, you might actually find it rejuvenating to take a little time out from the “rat” race to step back and remember what inspired and motivated you to get into this amazing field in the first place.

In the end, we are all physiologists because we are each deeply devoted to this discipline in some unique and profound way. We all feel a particular passion about understanding the wondrous

science of the human body. Allow your service to be an extension of this passion rather than a mindless waste of time that merely affords you another line on your CV. Find ways to best use your passion to aid and invigorate others. If you do, you will find that, not only are you providing others with extremely valuable service, but you are continually renewing that enthusiasm for physiology within you. In this way, the most profound service that you will end up providing is to yourself. ❖

Wake up your students to learning! Energize your teaching materials at the APS Archive of Teaching Resources



Graduate/Medical | Undergraduate | K-12

The Archive contains **FREE** lessons, labs, teaching methods and activities to engage students and add to your teaching repertoire.

Have a resource to share with the teaching community?

The APS Archive of Teaching Resources is a place to find great material to help teach. It is also a great place to submit your work. By submitting a resource, you will increase exposure of your teaching materials, get a peer review, and a citation reference!

The Archive currently holds over 2,000 resources with 50 new items under review in the summer review cycle.

Submit your learning objects by **December 1st** to be included in the winter review cycle.



search www.apsarchive.org

Introducing Ann M. Schreihofner, Chair of APS Central Nervous System Section

In April 2008, Ann M. Schreihofner succeeded William J. Martin as Chair of the Central Nervous System (CNS) Section. An APS member since 1993, she has actively participated on CNS Section steering committee in the capacity of CNS Joint Program representative (2004-2008) and CNS Section Awards committee (2007-present). In pursuit of her keen interest in providing mentoring to junior investigators, Schreihofner served on the Women in Physiology Committee (2002-2005), where she presented and served as a panelist in several APS workshops: "How to be a good mentor; how to be a good mentee," "Presentation Skills: Interviewing Skills," and "Down the road to funding: Getting that first grant." In addition, she co-organized the workshop "Mastering the Juggling Act: Laboratory, Life, and Leadership Roles." This year Schreihofner had the pleasure of participating as a panelist and discussion facilitator in the APS Professional Skills Course "Making Scientific Presentations: Critical First Skills" in Orlando, FL. Schreihofner serves on the Editorial Board of the Regulatory, Integrative and Comparative Physiology section of the *American Journal of Physiology* (2004-present) and as a peer reviewer for the American Heart Association (2005-present).

Schreihofner is currently an Associate Professor in the Department of Physiology at the Medical College of Georgia. She arrived as an Assistant Professor in 2001 and has prospered as an independent investigator with the support of the Department's chair, R. Clinton Webb. In 1989, Schreihofner received her BS in Psychology *magna cum laude* from Emory Univ. in Atlanta, GA, before going on to the Univ. of Pittsburgh, where she obtained a PhD in Neuroscience in 1994. At Pittsburgh, under the mentorship of Alan F. Sved, Schreihofner became dedicated to the pursuit of studies examining neural control of the circulation. In 1995, Schreihofner began postdoctoral studies at the Univ. of Virginia, Charlottesville, under the guidance of Patrice G. Guyenet. Schreihofner's research endeavors in neural control of the circulation have been recognized by the APS with the *Michael J Brody Young Investigator Award, New Investigator Award (CNS section, 2004)*, and *Shih-Chun Wang Young Investigator Award*. Recently, Schreihofner was selected to give the *Henry Pickering Bowditch Award Lecture* at Experimental Biology 2009. Her current work focuses on central



Ann M. Schreihofner

brain stem mechanisms contributing to altered autonomic control and hypertension associated with obesity and chronic intermittent hypoxia.

As chair of the CNS Section, Schreihofner plans to continue building the section members' involvement in the APS. The section has a large membership, and the steering committee is working to enhance their participation at the EB meeting. The CNS section has a rich history of outstanding Erlanger Distinguished Lecturers that offer topics of broad interest to CNS section members and those from other APS sections. In addition, CNS programming has provided an avenue to introduce neuroscience researchers to a growing presence at the EB meeting. In conjunction with the newly appointed CNS Joint Program Committee representative, Javier E. Stern, Schreihofner hopes that the programming of innovative topics and prominent investigators will encourage new and previously inactive members to find a place at EB. This has been a particular challenge for the CNS section, given the diverse interests of its membership.

As Chair, Schreihofner also hopes to encourage CNS section members to serve on APS committees. As part of the section's bylaws, primary members of the CNS section that serve on other APS committees are invited to participate in CNS steering committee meetings, providing another opportunity to voice opinions and shape contributions to the APS. The CNS section membership is highly

visible on many APS committees with J. Michael Wyss (Council Liaison); Steve W. Mifflin and Scott Carlson (Committee on Committee representatives); Michael F.A. Finley as a Liaison with Industry; Bill J. Yates and Jim Gnadt (Animal Care Committee); Anthony J.M. Verberne (Membership Committee); Celia Sladek (Publications); Colleen Cosgrove and Jessica Filosa (Women in Physiology); Ida Llewellyn-Smith as chair of the International Committee, Beverly Bishop (Senior Physiologist representative); and Lara R. DeRuisseau (Trainee Advisory). In addition, Schreihofner hopes the CNS section will be energized by the addition of several new members to the steering committee including Frank Barone, Scott Carlson, and Sean Stocker. Stocker will serve as Secretary-Treasurer and will be informing CNS section members through regular CNS Section Newsletters.

Schreihofner is committed to recognizing young investigators and trainees of the CNS section. Ida Llewellyn-Smith chairs the CNS section's Awards Committee, which reviews applications for the CNS New Investigator Award, CNS Research Recognition Awards, and the Van Harreveld Award. In an effort to ensure graduate students in the CNS section have a unique opportunity to be considered for an award, next year the CNS section is making the Van Harreveld Award available only to graduate students. In addition, trainees submitting abstracts to the CNS section will be eligible to be selected as a presenter in the Donald J Reis Memorial Symposium, which is co-sponsored by the CNS, Cardiovascular, and Neural Control of Autonomic Regulation Sections. Schreihofner challenges all eligible trainees and junior investigators to apply for CNS section awards. You have nothing to lose—it's time to get your name out there!

Information about the CNS section can be found on the APS website, including the roster of the current steering committee and associated CNS members with APS committee appointments, current and past CNS section newsletters, and information on CNS section awards. Members should consider signing up for the CNS section ListServ to receive important news related to the section. Schreihofner strongly encourages members to contact their section representatives with programming ideas for the Experimental Biology meeting or other APS conferences. ❖

New Regular Members

*Transferred from Student Membership

Guillermo M. Albaiceta

Univ. De Oviedo, Spain

Lisa Carney Anderson

Univ. of Minnesota

Patrick Gerald Arndt

Univ. of Minneapolis, MN

Tanja Babic*

Pennington Biomed. Res. Ctr., LA

Robert Barsotti

Philadelphia Coll. of Osteo. Med., PA

Zea Borok

Univ. of Southern CA, Los Angeles

Derek Patrick Brazil

Univ. Coll. Dublin, Ireland

Mark Robert Britton*

Wayne State Univ., MI

Mario Caba

Univ. Veracruzana, Xalapa, Mexico

Giuseppe Calamita

Univ. of Bari, Italy

Raul Cesar Camacho*

Merck Res. Lab., Rahway, NJ

Navdeep Singh Chandel

Northwestern Univ., IL

Shankar R. Chowdhury

Univ. of North. British Columbia, Canada

Thomas Coffman

Duke Univ. Med. Ctr., NC

Germaine G. Cornelissen-Guillaume

Univ. of Minnesota

Sheila Ruth May Costford*

Pennington Biomed. Res. Ctr., LA

Igor Danelisen

Edward Via VA Coll. Osteopath Med.

Clayton Thomas Dickson

Univ. of Alberta, Edmonton, Canada

Ioannis Dragatsis

Univ. of Tennessee HSC, Memphis

Kathryn M. J. Dunn*

Univ. of Vermont

Kathryn Noel Farrow

Northwestern Univ., IL

Deborah M. Garrity

Colorado State Univ., Fort Collins

Fayez K. Ghishan

Univ. of Arizona, Tucson

Nobuhito Goda

Waseda Univ., Tokyo, Japan

Joaquin Uranga Gonzales*

Penn State Univ.

Hyungchul Han

Colorado State Univ.

Young Soo Han*

Mayo Clinic, Rochester, MN

R. Luke Whitney Harris*

Univ. of Alberta, Edmonton, Canada

Ewen Munro Harrison

Univ. of Edinburgh, UK

Bin He

Univ. of Minnesota

Jufang He

Hong Kong Polytechnic Univ.

Arturo Hernandez-Cruz

Nat'l Autonomous Univ., Mexico

Tamara Dawn Hew-Butler

St Joseph's Hosp., Phoenix, AZ

Gary James Hodges

Univ. of Western Ontario, Canada

Johnny C. Hong

Univ. of California, Los Angeles

Mohammad Naimul Islam

Columbia Univ., NY

Tatehiro Kagawa

Tokai Univ., Isehara, Japan

Mark Kidd

Yale Univ., CT

Andor Joseph Kiss*

Miami Univ., Oxford, OH

Tertius A. Kohn

Univ. of Cape Town, South Africa

Lilach O. Lerman

Mayo Clinic, MN

Li-Yih Lin

National Taiwan Normal Univ., Taipei

Yajun Liu

Univ. of Missouri, Columbia

Denis Scott Loiselle

Univ. of Auckland, New Zealand

Alan E. Lomax

Queen's Univ., Kingston, Canada

Farah Dominique Lubin

Univ. of Alabama, Birmingham

Matthew Graeme MacKenzie

Univ. of Dundee, UK

Boris Martinac

Univ. of Queensland, Australia

Atsushi Masamune

Tohoku Univ., Sendai, Japan

Yasuo Matsumura

Osaka Univ., Japan

Christopher L. Mendias*

Univ. of Michigan

Edith J. Mensah-Osman

Univ. of Toledo HSC, Toledo, OH

Morales J. Michael

Univ. of Buffalo, NY

Cecilia Mundina-Weilenmann

Ctr. Invest. Cardio., Argentina

Thomas I. Nathaniel

Marywood Univ., Scranton, PA

Ora Ohana

Freie Univ., Berlin, Germany

Izumi Ohzawa

Osaka Univ., Japan

Rena Orman*

SUNY Downstate Med. Ctr., Brooklyn

Tito Pantaleo

Univ. of Florence, Italy

Octavia Melvina Peck Palmer*

Univ. of Pittsburgh, PA

Jose Francisco Perez-Zoghbi

Texas Tech Univ. HSC, Lubbock, TX

Tom Eric Porter

Univ. of Maryland, College Park

Masao Saotome

Hamamatsu Univ., Japan

Marielle Scherrer-Crosbie

Mass. Gen. Hosp., Boston

Mark Steven Shapiro

Univ. of Texas HSC, San Antonio

Yoshimi Shibata

Florida Atlantic Univ., Boca Raton

Dhirendra P. Singh

Univ. of Nebraska Med. Ctr., Omaha

Jonny St-Amand

Laval Univ. Med. Ctr., PQ, Canada

Barry Starcher

Univ. of Texas, Tyler

V. Nathan Subramaniam

Queensland Inst. Med. Res., Australia

Xiaowei Sun*

Univ. of Alabama, Birmingham

Zoltan Szalenyi+

Univ. of Pecs, Hungary

Anna E. Thalacker-Mercer

Univ. of Alabama, Birmingham

David W. Threadgill

Univ. of North Carolina, Chapel Hill

Rhian M. Touyz

Ottawa Health Res. Inst., Canada

Susan K. Tsivitse*

Univ. of North Carolina, Charlotte

Sandra Johanna Wallner

Medical Univ., Graz, Austria

Fei Wang

Baylor Coll. of Med., Houston, TX

Hehai Wang

Vanderbilt Univ., Nashville, TN

Jing Wang

Univ. of Alabama, Birmingham

Yang Wang

Hai Nan Med. Coll., China

Tyrone Washington

Univ. of Evansville, IN

John Andrew Wasserstrom

Northwestern Univ., IL

Judy R. Wilson

Univ. of Texas, Arlington

Sarah Witkowski*

Univ. of Maryland, College Park

Jun Yamamoto

Massachusetts Inst. Tech., Cambridge

Katsutoshi Yayama

Kobe Gakuin Univ., Kobe, Japan

Ella Wai Yeung

Hong Kong Polytec Univ., Kowloon

Yinzhong Zhang

Feinstein Inst. for Med. Res., NY

Zhenxiang Zhang

Lovlace Respiratory Res. Inst., NM

Jasenska Zubcevic

Univ. of North Texas, Fort Worth

Nicholas J. Zyromski

Indiana Univ., Med Ctr, Indianapolis
(+was listed incorrectly previously)

New Student Members

Acchia Albury

Univ. of South Carolina

Mazdak Bagherie-Lachidan

York Univ., Canada

Santosh Bhosale

Mahatma Gandhi Mission Coll., India

Christopher Busch

Towson Univ., MD

Amy Coleman

Univ. of Connecticut

Tiffany Collinsworth

Kent State Univ., NY

Anne Crecelius

Colorado State Univ.

Hongyan Dai

Univ. of Missouri

Steve Davidson

Univ. of Minnesota

Christopher Dearth

Univ. of Toledo, OH

Lisa Ferguson

Univ. of Texas, Austin

Daniel Gagnon

Univ. of Ottawa, Canada

Priscila Guimaraes

Univ. Fed. De Minas Gerais, Brazil

Liang Guo

Univ. of Florida

Keisuke Ida

Kent State Univ., NY

Debra Irsik

Univ. of Nebraska Med. Ctr.

Sumit Kar

Univ. of Nebraska

Tahir Khan

Southwestern Louisiana Univ.

Miguel Lars Garcia

Univ. of Veracruzana, Mexico

Elaine Lee

Univ. of Connecticut

Matthew Maready

Univ. of Mississippi

William McLamb

Florida Inst. of Tech.

Jessica Meir

Scripps Inst. of Oceanography, UCSD

Daniel Nelson

Brigham Young Univ., UT

Anthony Ocon

New York Med. College

George Panzak

Univ. of Pittsburgh, PA

Daniel Popa

Univ. of California, San Diego

Michael Roberts

Univ. of Oklahoma

Ruben Sloan

East Carolina Univ. NC

Blythe Towal

Northwestern Univ., IL

Nadir Ulu

Univ. Med. Ctr., Groningen, Netherlands

Rudy Valentine

Univ. of Illinois

Joao Veloso

Univ. of Brasilia, Brazil

Edith Walker

Louisiana State Univ. HSC

Ilana Witten

Stanford Univ., CA

Lindsay Wohlers

Univ. of Maryland

Jose Young

Georgetown Univ., DC

New Affiliate Members

Elaine F. Fanini

Collins College, Texas

David Scott

Goryeb Children's Hosp., NJ

Sharon Sutliff

Davenport Univ., MI

Carol B. Veil

Anne Arundel Comm. College, MD

Sheila M. Wicks

Malcolm College, Chicago, IL

Recently Deceased Members

Solange Akselrod

Tel Aviv, Israel

Hsiang-Tung Chang

Shanghai, People's Rep. of China

Philip W. Davies

Baltimore, MD

Pierre Haab

Fribourg, Switzerland

Edwin P. Hiatt

Wilmington, OH

Allen Isaacson

Wayne, NJ

Joseph Katz

Davis, CA

Jui S. Lee

Huntington Beach, CA

Thomas R. Noonan

Oak Ridge, TN

Arthur B. Otis

Gainesville, FL

Kaare Rodahl

Oslo, Norway

Robert F. Rakowski

Athens, OH

Lorrin A. Riggs

Hanover, NH

Richard C. Rose

Lake Bluff, IL

Hubert L. Rosomoff

Miami, FL

Herta Spencer

Hines, IL

Leah M. Staling

Hagerstown, MD

J. Newell Stannard

Valley Center, CA

James C. Thompson

Galveston, TX

John C. Vanatta, III

Dallas, TX

W. Lane Williams

Ridgeland, MS

APS Teachers Merge Student Research and Teaching

As part of the year-long 2008 Frontiers in Physiology Fellowship program, 11 science teachers from across the nation took a week-long break from their summer research experience in APS members' research laboratories at the end of July. The research teachers (RTs) convened for an intensive workshop week known as the "APS Science Teaching Forum" at the Airlie Center in Warrenton, VA.

Three APS members served as Physiologists-in-Residence, and included 2008 K-12 Outreach Fellows, Keisa Mathis (Louisiana State University Health Sciences Center, New Orleans) and TanYa Gwathmey (Wake Forest University School of Medicine), and APS Careers Committee member, Thomas Schmidt (University of Iowa Carver College of Medicine). Additionally, three past RTs led the instruction as Mentor/Instructors, and included Tonya Smith from Mayewood Middle School in Sumter, SC, Isabelle Camille from Coral Reef High School in Miami, FL, and Robert Manriquez from Stanley High School in Shreveport, LA. Martin Frank, APS Executive Director, welcomed and congratulated the research teachers for participating in the APS fellowship program.



Mentor/Instructors (far left), Physiologists-in-Residence (far right), and Research Teachers from across the country participated in the 2008 Science Teaching Forum as part of the year-long Frontiers in Physiology Fellowship program.

The teaching team facilitated sessions using APS curriculum units for middle and high school students. Additionally, the RTs explored inquiry-based teaching strategies, integrating technology, and addressing equity, diversity, and learning styles in the classroom. The RTs participated in

numerous hands-on laboratory and web-based activities, shared their summer research experiences, evaluated their current teaching techniques, and collaboratively developed strategies to implement teaching methods promoted both by the National Science Education Standards and each of their own respective state standards.

As part of the fellowship this fall, the RTs are developing, refining, and field testing their own inquiry-based lab activity that can be used in the science classroom. They continue to be mentored by their Mentor/Instructors. Some RTs will also be inviting their research host into their classroom sometime during the first week in November for a Physiology Understanding (PhUn) Week 2008 event (visit: <http://www.PhUnWeek.org>). The fellowship concludes with the RTs attending and participating in EB 2009 this coming April. Follow the progress of the 2008 fellowship year at: <http://www.the-aps.org/education/2008rts/index.shtml>.

The Frontiers in Physiology fellowship program has been sponsored by the APS over the last 18 years, impacting more than 400 teachers and APS members who have volunteered as research hosts and/or Physiologists-in-Residence. The program has received funding from the National Center for Research Resources (NCRR) Science



Darrell Coston (North Carolina) representing the heart pushes Jennifer Reis (Pennsylvania) as blood carrying oxygen molecules through a narrow vessel represented by two chairs controlled by Monica Erwin (Pennsylvania) and Regan Lawson (Colorado).



Karen Walton (South Carolina), Mike Griffin (North Carolina), and Jonathon Tuttle (Utah) designed and performed an experiment on the relationship between the radius of a tube and flow rate.

Education Partnership Award (SEPA), and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health.

For additional information about the fellowship, visit the program's new website at: <http://www.frontiersinphys.org>, and consider hosting and mentoring a teacher fellow next summer for the Frontiers in Physiology Professional Development Fellowship for science teachers. ❖



It's time to talk to middle and high school teachers in your community about...

Frontiers in Physiology
Professional Development Fellowship for Teachers
Six Star Science for Student-Centered Learning
Application Deadline: January 8, 2009

Teachers are seeking Research Hosts for Summer 2009

Applications are available online:

<http://www.frontiersinphys.org>

For more information, contact Mel Limson in the APS Education Office at: mlimson@the-aps.org

PhUn 2008 Week

FINAL CHANCE
Don't miss the fun for PhUn Week!
Visit a classroom
November 3 - 7, 2008
Download activities and
career presentations from:
www.PhUnWeek.org

The APS encourages all of its members to reach out to their local K-12 schools in November 2008 as part of *Physiology Understanding Week (PhUn Week)*. Don't miss out on exceeding last year's 32 events that reached more than 3,000 students! In 2007, more than 100 APS members and trainees in 24 states and Puerto Rico made PhUn Week a success. Join your fellow APS members in transmitting the excitement about science and physiology to precollege students through classroom visits with your lab groups. *PhUn Week* resources and freebies can excite youth and physiologists can make a difference!

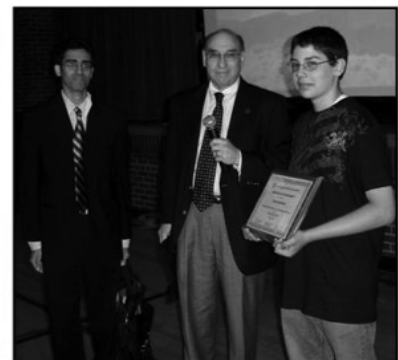
Connect and work with a teacher in your community for some last-minute *PhUn Week 2008* planning. Requests for resources and freebies were due on October 1st via the *PhUn Week 2008 Event Planner*, but supplies may still be available. Complete and submit the *Event Planner* to the APS Education Office by October 15th.

www.PhUnWeek.org

For more info, contact the APS Education Office at: phunweek@the-aps.org

Give an award at your local school science fair!

The APS sponsors awards at local and regional science fairs on a first come, first served basis. Any APS member who participates as a judge in a local or regional science fair at an elementary, middle, or high school is eligible to apply and receive APS support. Award package includes an APS pin, t-shirt, and Certificate of Achievement for the student with the best physiology project, and a *Women Life Scientists* book for the student's teacher.



To request an award package, visit the website below. If you have questions, contact Scarletta Whitsett (swhitsett@the-aps.org) in the APS Education Department.

www.the-aps.org/education/sciencefair

Starting a New Lab: Developing New Techniques and Hiring Personnel

Francisco H. Andrade
University of Kentucky

Congratulations, you've landed your dream job. Come next July 1, you'll be a brand new Assistant Professor, with your own office and lab space galore. All set and on the way to instant academic success, right? WRONG! The fun is just beginning... To paraphrase, the road to success is paved with pitfalls. And there is probably no greater pitfall than staffing and setting up a new lab: I would argue that most of your professional success depends on getting these two key elements right.

As a newly minted scientist, you will bring a number of methods to your new laboratory, the product of the training and experience that forms the foundation of your work. You may also need to establish unfamiliar techniques in order to tackle those novel ideas floating in your head. At the same time, you will realize that you need help. The research workload and competing obligations (teaching, service) require that you recruit capable personnel to assist you. These issues are closely related: laboratory methods and techniques depend to some extent on available personnel.

The "vision thing"

It all starts with your plan of what you want to do, the "vision thing." It is critical that you formulate this plan even *before* you start the job search. First and foremost, your vision focuses the types of jobs and institutions you look for. It will not do to apply for a teaching-intensive position when what you really want is to do research. Second, your plan will outline the mate-



Francisco H. Andrade

rial and personnel needs for your future research program. These are issues that will come into play during the negotiation for a start-up package: be ready for them. Therefore, this discussion will focus on establishing lab techniques and personnel hiring decisions, assuming that you have spent the last few months (years even) crafting a detailed plan for your first independent position.

Our most valuable resource

One underappreciated fact is that the most valuable and scarce resource we have is *time*: use it wisely. Careful and thoughtful planning will lead to good decisions, which in turn will save you precious time and will make you more productive.

Think about it: time spent establishing complex new techniques or training inexperienced staff is time not spent generating data for papers and grants. At the end of the day, papers and grants are valuable currency in the academic research realm. For better or worse, they document productivity, and more or less emphasis will be put on them depending on how research-intensive your new institution is. Time spent setting up techniques or training staff will NOT count toward promotion and tenure. However, training staff and retooling the laboratory have to be done repeatedly throughout your career. My point is that the time invested on those tasks must be optimized as much as possible. By the way, word selection is not ran-

dom: time is *invested*, and you minimize risk and maximize return on your investment by *planning*.

Setting Up Lab Techniques: Out With the Old, In With the New?

A new laboratory is an empty canvas; the care and thought you put into setting it up will determine whether you end up with a masterpiece of functionality or an inconsequential doodle.

Deciding on techniques

One of your first concerns must be to decide what techniques you need to have in place to do your experiments. There are two competing extremes: go with the things you already know to maximize productivity, or go for fancy new techniques to establish an independent track record. The first option is basically going with what is comfortable. It is easier to stay with the familiar methods learned during your pre- and postdoctoral training. Those are the methods that you use for the "now" questions: the experiments that are logical extensions of your recent work. The second option represents those new toys you would like to learn to use, techniques that bring a different perspective to or open a new direction for your studies. The issue is then to decide the balance of old and new that is right for your research. The choice is based on the direction you want to take your laboratory, tempered by the complexity and feasibility of the approaches, in turn influenced by the intellectual and material resources available at your new institution.

The first question that comes to mind is, when do you choose what techniques you want in your new laboratory? The day after you accept the job offer is too late! You must develop a vision of what you want to do as an independent investigator during the last stages of training. Certainly before you start to interview for jobs, you should have a fairly detailed plan, including what you will need for new techniques. This is very important because the negotiation for a recruitment package will include the allocation of funds for laboratory equipment and supplies, separate from salaries and benefits for the investigator and other personnel.

Francisco H. Andrade is Associate Professor in the Department of Physiology at the University of Kentucky in Lexington, KY. He received his PhD in Physiology from the University of Texas Health Science Center at San Antonio in 1994. He received postdoctoral training at Baylor College of Medicine in Houston, TX and at the Karolinska Institute in Stockholm, Sweden. In 1999, he was appointed Assistant Professor in the Department of Neurology at Case Western Reserve University in Cleveland, OH. In 2004, he moved to his current position at the University of Kentucky.

Acquiring new techniques

Some of the new techniques you may need can be acquired rather easily. Maybe it's just a piece of equipment, say an ultraviolet/visible light plate reader for enzyme measurements. You'll have to factor the cost of the equipment, service contract, plus whatever specialized supplies needed to use it. These items are typically easy to use (after some basic training and practice), robust (rarely break down), and, once in place, it is freely available to anybody in your laboratory. You may want access to more expensive equipment (confocal microscopy, real time PCR) available in institutional core facilities. At most places, training for you and your staff is provided by the core's personnel and access is shared with other users, sometimes limited to regular hours (sorry, no evenings or weekends). Talk with the core's staff to estimate user traffic (does it quadruple just before grant deadlines?) Keep in mind that you may have to pay sample processing and use fees; figure that out early and estimate how much you and your staff will use the equipment. There is also the cost of dedicated supplies (plates and reagents for real time PCR, for example) that you may have to consider. However, there is no initial purchase cost or service contracts to worry about. Then there are those specialized techniques that you have to contract out to a core facility within your institution or to an outside company providing the service. Really, really need that expensive and complicated genetically engineered mouse? Chances are you will be talking with these people to figure out costs, feasibility and time lines. Actual hands-on involvement of your laboratory staff will be minimal, if any at all. Finally, you can acquire methods by collaborating with your new colleagues. This is a great way to get useful data even before your laboratory is fully operational.

These are just some examples of the possibilities for setting up a new method in the laboratory. Once they are clear in your head, decide what is available and what is best for your laboratory, estimate the costs (equipment, supplies, personnel time), and include them in your start-up request. Be prepared to negotiate: is existing equipment optimal for your needs? Can you share with other users? Negotiation will progress faster if you have a realistic view of what your laboratory requires. In other words, can you justify what you request?

Again, you are the ultimate expert when it comes to deciding where your laboratory is going and how it will get there. Make sure you make an informed decision.

Hiring Personnel: Choices, Choices and More Choices

In a typical academic environment, there are four sources of research personnel: technicians, postdoctoral trainees, graduate students and undergraduate students. I will make the somewhat artificial distinction between *hiring* staff (laboratory technicians) and *recruiting* trainees (graduate and undergraduate students). Postdoctoral fellows and scholars fall somewhere in between: some institutions consider them staff (with full staff benefits), some consider them trainees (without full staff benefits). You will need to figure out the hiring policies for postdoctoral scholars at your new institution. Again, understanding your goals and planning are critical

Lab tech or trainee?

First, identify the tasks (with time-frame and level of complexity) to be done in the laboratory in the short- (<1 year), mid- (1-2 years), and long-term (>2 years). A good technician will be productive with little or no training. A graduate student will require one to two years of coursework and training; productivity will increase slowly over time. Postdoctoral trainees are somewhere in between but generally require less training and have a vested interest in productivity and attention to detail. Be careful and match the research tasks to the type of personnel assigned to them; failure to do so will frustrate your staff and waste everybody's time. Along these lines, you should clearly lay out the job expectations and objectives to prospective personnel (staff and trainees): avoid nasty surprises a few months down the line if things don't work out.

Make HR your friend

Make it a point to visit the Human Resources office during your recruitment interviews to get a primer on local hiring practices. Discuss the characteristics of the applicant pool in terms of available training and expertise levels. Once on the ground, when you decide to hire a technician, work closely with your contact person in Human Resources. They know the system and will help you and the applicants to go through the

process as expeditiously as possible. A word of caution: follow strictly the policies and guidelines provided by your Human Resources office. They are in place to protect the job applicants, the institution and you. Remember that there are severe legal and professional consequences to discrimination of any sort; adhering to the rules will keep everybody safe.

What level of technician?

One of your first considerations will be to identify the grade or expertise of your planned hire. Do you absolutely need a technician with 20+ years of experience in biochemical methods? Is your research simple enough that somebody fresh out of college can be trained to do it? As I mentioned above, the complexity of your experimental approach (your methods) will be a major determinant of your personnel needs. Human Resources will then help you to figure out the salary range for the required level of experience. This range will depend on the regional job market. Just be aware that there are pros and cons to either experience extreme: a long track record could mean "set in his ways;" inexperience could lead to "untrainable."

Some of those issues can be sorted out during the interview process; discuss with your colleagues how they would approach these issues. Don't be afraid to ask one of them to help with the interviews, just introduce your colleague as a close collaborator to the applicants. That will give you another, more detached opinion. Most importantly, check references! Letters are nice, but nothing beats a phone call to the previous supervisors for a (hopefully) candid perspective on the applicant. Beware if a reference refuses to provide more than "name, rank and serial number"! That is a strong signal to call other references for this applicant. Then, even if you have absolutely no misgivings and decide to hire somebody, check with Human Resources to see if your institution has a "trial period" (weeks to months) during which you (or the new employee) can terminate employment without prejudice. This trial or test period gives all parties a chance to determine whether there is a good fit between employer and employee.

Undergraduate vs. Graduate Students

As I said above, graduate and undergraduate students are recruited, not

hired. They are trainees, not staff. That means their role in your laboratory is different: they come first and foremost to *learn*. You have to instruct, nurture, and supervise them. And you decide who is accepted to the laboratory: you are not obligated to take *all* the students. How much time and effort can you invest (that word again) on them? In other words, how many students can have meaningful research experience in your laboratory at any given time? If a bright undergraduate student with loads of time for research knocks on your door, count yourself lucky and enjoy the project as it develops. However, most undergraduate students have multiple classes and (oftentimes) jobs to worry about. Their time for research and projects is limited and it is tempting to have them take care of all the menial jobs around the laboratory. I think it is more challenging, but eventually very rewarding to identify ways to involve these students in the actual experimental work. It may be something as simple as running electrophoresis gels, or light

microscopy, or basic molecular biology. These may not be full projects, but they are still ways for the students to get exposed to current research techniques and for you to get meaningful data: a win-win proposition.

In contrast to the undergraduate students, graduate students will have more and more time for research and will gain valuable experience as they progress. Ideally, your graduate students will be vital to your research: they will (eventually) become productive members of your team and will keep you on your (intellectual) toes. But never lose track of the fact that they are trainees and their needs for mentoring and professional opportunities go hand in hand with the research experience. You will need to spend time on your students to make sure they are well prepared for life after the PhD. It is a great ego boost when prospective graduate students ask to join your laboratory. Their mere presence validates your research: somebody else thinks your "stuff" is important! Before you give in to temptation and the clamor of the multitude, take a step back and consider this: can you handle the needs of those students and still fulfill your own

expectations for professional growth? If the answer is "yes," I bet it is because you have managed to merge the training of that student with the goals of your research projects: another win-win scenario for all involved.

A Final Word

The take home message from this and other commentaries on career development is to take charge of your professional life and be prepared. Each career path is unique, the result of the interplay of personal circumstances and the job environments. Therefore, it is not possible to deal with all the combinations and permutations possible for the different aspects of professional life. Instead, the main goal of this column is to make you think ahead and use your time wisely. An effective approach is to figure out where you are in your professional life now, where you want to be in one, five and 10 years, and plan accordingly. There is nothing wrong with ambition and enthusiasm, just be realistic: discussing your plans with friendly colleagues and mentors is a great way to get your feet back on firm ground.

To comment on this article, go to <http://www.the-aps.org/careers/careers1/mentor/startin-galab.htm>. ❖

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The advertisement features a close-up of a silver probe with a black handle. Below it is a control panel with a digital display showing 'CHANNEL 2'. The panel has several knobs and buttons, including one labeled 'PROBE SELECT' with options for NO, H₂S, HPO, GLU, O₂, and ADJ. The WPI logo is prominently displayed.



2008 APS Endocrinology and Metabolism Section Awardees: Front row (left to right): Michella Coelho, Lisa Lesniewski, Sharel Bindom, Julio Ayala, Sender Lkhagvadorj. Back row (left to right): Mary Conniff, Arnaldo Lopez-Ruiz, Gordon Smith.

Communications Update

As *The Physiologist* goes to press, we've issued new podcast episodes for July and August.

In Episode 11, we interviewed John Hawley, who found that consuming carbohydrates and caffeine following exercise refueled the muscles more rapidly. We also talked to Stanley Schultz about his discovery of how sugar is transported, a discovery that led to the development of oral rehydration therapy and rehydrating sports drinks.

Episode 12 included an interview with Timothy Cudd and Jay Ramadoss on their fetal alcohol syndrome study. And David Linden talked about his new book, *The Accidental Mind*, published by Belknap Press of Harvard University Press.

Please take the time to listen and subscribe to Life Lines by going to <http://www.lifelines.tv> or by looking up "Life Lines podcast" in the iTunes store. And tell your colleagues, students, friends, neighbors and family members. The podcast is a good way for the public to learn about physiology and to understand what it is that you do.

Journal Press Release Program

Our press release on caffeine and exercise, <http://www.the-aps.org/press/journal/08/25.htm>, received an overwhelming response. It was in the top three of most-read releases in July, according to our press release service, *Newswise*. It also generated at least 137 news articles around the world.

Among the newspapers and magazines that picked up on the news was *CBC* (Canada), *Backpacker* magazine, *Daily Telegraph* (Australia) and the *Sydney Morning Herald*. We also found the story on the websites of local Fox, ABC and NBC News affiliates.

A press release on the fetal alcohol syndrome study, found at <http://www.the-aps.org/press/journal/08/26.htm>, also received good coverage, including in *New Scientist* (UK), *Eureka! Science News* (Canada), *Science Daily* and *Medical News Today* (UK).

If you know of a study that is in *Articles in Press* and might be of interest to the general public, please drop a line to Communications Director Donna Krupa at dkrupa@the-aps.org or call her at 301-634-7209.

New Media: Online Videos and Current Events

The Communications Department worked with our IT Department to produce our first online video about current topics. It is an interview with *Journal of Neurophysiology* Editor-in-Chief David Linden. He provides his view of the journal and where he wants to lead it during his tenure. You can find his Editor's Message and the interview at: http://www.the-aps.org/publications/jn/editors_message.htm.

2008 AAAS/APS Mass Media Fellow

By Lindsay Chura

Healthcare and scientific advancements play an increasingly vital role in policy debates in America and around the world. As an AAAS/APS Mass Media Fellow at *US News & World Report* in Washington, my work spanned the domains of health and science and my understanding of what is required to effectively communicate science in the public sphere has been strengthened. In our increasing fast-paced society in which sound-bites dominate the media, the ability to explain scientific issues in a concise and accessible manner is becoming more important than ever before. A rising tide of public interest in topics ranging from climate change to alternative energy sources, stem cell research, genetic privacy laws, and nanotechnology will continue to drive policy debates, particularly in this presidential election year.

Many of the most dire challenges facing communities across the world, from global food and water shortages to the continued battle against diseases such as malaria and HIV, hinge on the ability of scientists to effectively communicate the risks of inaction in clear and unequivocal terms. At *US News & World Report*, I had the opportunity to do in



depth research on climate change, a topic that is arguably one of the best examples of an issue rooted in science with far-reaching policy implications. I delved into the extensive body of literature surrounding global warming, an area that lies far outside the scope of my graduate research, and I relished the opportunity to seek answers from leading authorities in environmental science, economics and public health. The magazine article that I wrote, entitled "An Atlas of Climate Change," was featured as part of a cover story on science and was the perfect crescendo at the conclusion of my fellowship.

Along with the opportunity to hone my writing and interviewing skills at *US News*, came an important responsibility. For the first time, I was in a position at a major news magazine in which my reporting had the potential to shape reader perception on a key issue of our time. The words of George Bernard Shaw, "The greatest problem with communication is the illusion that it has been accomplished," hold true today and have particular relevance to scientists. I believe that the scientific community as a whole needs to place greater emphasis on providing a clear rationale and context for the research undertaken in the lab. With a greater understanding of our research goals, members of the public will be empowered with information rooted firmly in scientific fact to consider alongside their health and political decisions.

As a Mass Media Fellow, I have developed a heightened sense of awareness of the importance of science outreach and my interest in health and science policy has been piqued. I feel very fortunate to have had the opportunity to participate in this program and greatly appreciate the support of the American Physiological Society. With my experience at *US News* behind me, I am now better equipped to communicate technical information more effectively, a skill that will be essential for my future pursuits in both the academic and policy arenas.

Lindsay Chura, a 2006 graduate of Mount Holyoke College, will begin her PhD this fall at Trinity College, University of Cambridge. Chura was named a 2008 Gates Cambridge Scholar by the Bill and Melinda Gates Foundation and was previously awarded a Fulbright Scholarship to Australia where she conducted clinical research in reproductive endocrinology. ❖

Attacks on Researchers Spark Condemnation

Two near-simultaneous attacks on University of California Santa Cruz (UCSC) researchers precipitated a nationwide discussion of the tenets and tactics of animal rights extremists. In the early morning of August 2, 2008, a firebomb destroyed a car parked at an unnamed researcher's home on the UCSC campus. At almost the same time, a firebomb was detonated at the front door of the off-campus home of UCSC researcher David Feldheim. The bomb melted his doorway and filled the home with smoke, forcing Feldheim and his family to escape from a second story window via a rope ladder. Authorities quoted in the San Jose *Mercury News* described the incendiary devices as "significantly larger than a Molotov cocktail." Just four days before, fliers were found at a local café listing the names, addresses and photographs of 13 Santa Cruz researchers and labeling them "animal abusers." Feldheim, who studies the brain's visual system in a mouse model, was on the flier; the unidentified researcher whose car was fire-bombed was not. Police are considering the bombings acts of domestic terrorism. The attack on the Feldheim home is considered attempted murder because the family was inside.

These incidents were the latest in a steady escalation of dangerous and menacing acts by animal extremists towards researchers in California and elsewhere. In February 2008 a firebomb charred the front door of UCLA researcher Edythe London. This was the second attack against London, who studies nicotine addiction. The preceding October, extremists used a garden hose to flood London's home, causing over \$20,000 in damage. In several previous incidents, firebombs were placed near the homes or cars of UCLA researchers, but none had actually detonated. In other incidents, a burning effigy was placed on the doorstep of another UCLA researcher's home, and six masked extremists tried to break into the home of a UCSC researcher during a birthday party for her child. In addi-

tion, although less widely publicized, *Inside Higher Education* reported that over 24 faculty and staff members at UC Berkeley have been harassed by extremists in the last year.

On the Monday following the Santa Cruz fire bombings, 300 people rallied to show their support, carrying signs with messages such as "Humans are animals too!" and "I ♥ biologists." The attacks generated widespread media attention for the topic of animal rights extremism and animal research in print, on television, the radio and in the blogosphere. NIH Director Elias Zerhouni issued a statement [http://www.nih.gov/about/director/08062008statement_santacruz.htm] strongly condemning the attacks and affirming the importance of animal research. He emphasized that research with animals is thoroughly regulated. "Threats to research using animals also threaten the health of the nation," Zerhouni declared, adding that "this form of terrorism cannot be tolerated."

The attention these incidents brought to the subject of researcher safety is partly credited with the sweeping success of California legislation designed to protect scientists. According to *Inside Higher Education* both the California Senate and Assembly passed their own version of the bill "overwhelmingly." The "Arguments For" section of the Senate bill [http://www.leginfo.ca.gov/pub/07-08/bill/as_m/ab_2251-2300/ab_2296_cfa_20080821_170030_sen_floor.html] states that it creates "new civil remedies for threats and other misconduct made against an animal enterprise engaged in its constitutional rights pertaining to academic freedom." These include making it illegal to publish the location of or information about researchers or their families with the intention that that information be used in a crime, and making it illegal to "enter the residential real property of an academic researcher for the purpose of ... interfering with the researcher's academic freedom."

The APS Science Policy Office has compiled a list of resources for scientists concerned about extremist attacks. It is available at <http://www.the-aps.org/pa/resources/security.htm>.

Update on SBIR/STTR Reauthorization

Following passage of legislation to reauthorize the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs in the House of Representatives, the Senate Committee on Small Business and Entrepreneurship unanimously passed a similar version of the legislation before adjourning for the August recess.

The SBIR and STTR programs are mandatory at all federal agencies that distribute more than \$100 million per year in extramural research funds, including the National Science Foundation (NSF), NASA and the National Institutes of Health (NIH). These agencies are currently required to set aside 2.5% of their extramural budgets for SBIR grants, and 0.3% for STTR programs.

As reported in *The Physiologist* in June 2008, the program is due for Congressional reauthorization this year, and the original legislation raised concerns because of a provision that would increase the percentage set aside for SBIR and STTR programs from 2.5 to 5.0% and from 0.3 to 0.6% respectively. An amendment offered by Representative Vern Ehlers (R-MI) prevented that action in the House version of the bill.

The legislation passed by the Senate's Small Business committee proposes to increase the set-aside for the SBIR program to 3.5% in increments of 0.1% over the next 10 years, but it included an exemption for agencies within the Department of Health and Human Services, including the National Institutes of Health. The legislation would also double the STTR program to 0.6% over the next six years. The full Senate has not yet voted on the bill. Once the Senate passes the measure, representatives of the House and Senate small business committees will need to work out any differences before sending a final version to the White House.

2007 APS Impact Factors Are Published by Thomson/ISI

Thomson/ISI has released its 2007 Science Edition of the Journal Citation Reports, which gives journal impact factors and rankings of 6,417 science journals. The 2007 impact factors of the journals of the APS, along with a comparison of the

past three years, are given in the table below. The table also shows the rank of APS journals in the physiology category, and each journal's rank in its related field, as well as each journal's cited half-life. ❖

Table 1. 2007 APS Journal Impact Factors and Rankings.

Journal	2004	2005	2006	2007	2007 Cited Half-Life	2007 Rank, Physiology (out of 78)	2007 Rank, Related Field	Related Field
<i>PRV</i>	33.918	28.721	31.441	29.600	7.6	1		
<i>Physiology</i>		2.113	6.268	6.954	2.6	3		
<i>NIPS</i>	3.306	3.949	5.241					
<i>AJP-Renal</i>	4.354	3.942	4.334	4.416	5.8	8	6/55	Urol & Nephro
<i>AJP-Cell</i>	3.939	3.939	4.250	4.230	6.3	9	46/154	Cell Bio
<i>AJP-Lung</i>	4.051	4.263	4.199	4.214	5.5	10	5/34	Respiratory
<i>AJP-Endo</i>	4.431	4.456	4.123	4.138	6.3	11	20/92	Endo & Met
<i>AJP-Heart</i>	3.539	4.636	3.789	3.973	6.1	13	12/74 13/54	Cardiac & Cardiovascular Peripheral Vascular
<i>AJP-GI</i>	3.479	3.560	3.724	3.761	6.6	18	12/50	Gastro & Hep
<i>JN</i>	3.592	3.802	3.685	3.684	8.6	20	56/210	Neuroscience
<i>AJP-Regu</i>	3.405	3.472	3.681	3.661	6.9	21		
<i>JAP</i>	2.824	3.853	3.652	3.632	>10.0	23	2/72	Sport Sciences
<i>Phys Gen</i>	3.855	3.037	3.178	3.493	3.7	25	66/154 50/132	Cell Bio Genetics & Heredity
<i>Advances</i>	1.291	1.043	1.260	0.984	4.8	65	6/23	Education

APS and PubMed Central

The American Physiological Society has started depositing articles published in any of the APS research journals into PubMed Central (PMC). Starting with the July 2008 issues, articles identified by the authors as being funded by the National Institutes of Health (NIH) will be deposited on behalf of the author(s) for release from PMC 12 months after publication, consistent with the NIH embargo period. The Society's decision to deposit NIH-funded articles helps authors comply with the public access policies of the NIH.

The NIH policy (<http://publicaccess.nih.gov/>) "requires investigators funded by the NIH to submit to PMC an elec-

tronic version of their final, peer-reviewed manuscript upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication."

Any NIH-funded manuscripts published in APS Journals starting with the July 2008 issues will be identified and tagged, and the final published version will then be sent to PMC. NIH-funded articles for which an *Author Choice* (<http://www.the-aps.org/authorchoice/index.htm>) fee is paid will be made available immediately, and those for which an *Author Choice* fee is not paid will be available after 12 months. In both cases, the final published version of

the NIH funded article will be hosted at PMC, rather than the original manuscript. Data feeds between PMC and the journals have already begun. APS will assume that if NIH funding is acknowledged in the article, that article is funded by the NIH.

APS is also working with the Wellcome Trust, Howard Hughes Medical Institute and several other funding agencies to accommodate their requests as well. APS has prepared some information and guidelines for authors of various funding agencies, which can be found at: <http://www.the-aps.org/publications/journals/nihpolicy.htm>. ❖

Moving?

If you have moved or changed your phone, fax or Email address, please notify the APS Membership Office at 301-634-7171 or Fax to 301-634-7241. Your

membership information can also be changed by visiting the Members Only portion of the APS Website at <http://www.the-aps.org>. ❖

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Kyoto Memorial Lec:

Susumu Tonegawa (USA)

Hagiwara Lec:

Albert J. Hudspeth (USA)

Tawara Lec:

Yoram Rudy (USA)

IUPS-Named Lectures

Wallace Fenn Lec: **Erwin Neher (Germany)**

IUPS President's Lec: **Akimichi Kaneko (Japan)**

Ernst Knobil Lec: **Bruce S. McEwen (USA)**

T. P. Feng Lec: **Sten Grillner (Sweden)**

Knut Schmidt-Nielsen Lec: **Brian M. Barnes (USA)**

Robert Pitts Lec: **René J.M. Bindels (The Netherlands)**

August Krogh Lec: **Tobias Wang (Denmark)**

Key Dates

Satellite Symposia
Submission

Until Dec 10, 2008

Call for Abstracts
Travel Grant Appl.

Sep 1 - Dec 10, 2008

Registration

Early: Sep 1, 2008 -
Apr 17, 2009

Late: Apr 18, 2009 -
Jun 30, 2009



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Animal Care and Experimentation

The Animal Care and Experimentation (ACE) Committee works within the framework of the advocacy goal in the 2006 APS strategic plan. This goal calls for the APS to drive understanding of and appreciation for physiology and to strengthen public and private support for physiological research. During 2007-2008, the ACE Committee was particularly involved in legislative issues because of repeated efforts by anti-

Timothy I. Musch, Chair

research groups to place new restrictions on research involving animals.

Animal Welfare Act Issues and the Farm Bill

Two provisions to amend the Animal Welfare Act (AWA) were added to the House and Senate farm bills just before passage. In each case, the measures were included in a block of amendments adopted on the floor without discussion or debate. One amendment would have banned Class B dealer sales of non-purpose bred dogs and cats, while the other would have prohibited demonstrating medical devices on animals. The APS opposed both measures because the AWA already provides authority to regulate the activities in question. In addition, efforts were already underway at NIH to commission an assessment of needs for Class B dealer supplied dogs and cats in medical research, which would have been pre-empted by the farm bill amendment. The sales demonstration prohibition was written so broadly that it would have covered any marketing-related activity using live animals to demonstrate the function of medical devices, including previously recorded videos. This could have hampered the dissemination of new technologies with applications for medical research as well as for direct patient care. Thanks to the efforts of APS and other organizations, Congress eliminated these potentially damaging provisions from the final version of the farm bill while approving an increase in the maximum fines for AWA violations from \$2,500 to \$10,000. (For more details on the 2008 Farm Bill, see "NAS to Study Need for Class B Animals, Dealers." *The Physiologist* 51: 159, 2008.)

When the ACE Committee met in Bethesda in September 2007, members also spent a day on Capitol Hill to discuss animal welfare issues with Members of Congress and legislative staff. Virtually every office they visited had already been lobbied by animal rights groups supporting new restrictions on research. ACE Committee members were often the first scientists who had visited these offices to provide the research community's perspective on the proposed restrictions. During the next several months, the APS Science Policy staff worked closely with other pro-research organizations to explain to Members of Congress how these issues are currently addressed in the Animal Welfare Act and the negative impacts of the proposed restrictions.

ILAR Guide Update

The major committee activity planned for 2008 was to make recommendations concerning an update to *Guide for the Care*

and Use of Laboratory Animals. The Institute for Laboratory Animal Research at the National Academy of Sciences has appointed a committee of experts to undertake an update to the current version of the *Guide*, which was published in 1996. As a first step, over the summer, the Committee began reviewing the *Guide* to identify areas that may need to be updated. The Committee's fall 2008 meeting has been timed to coincide with the September 26 meeting of the ILAR Committee to Update the *Guide*. This was intended to provide the ACE Committee insight into the direction and focus of the *Guide* committee.

Animals in Medical Education

In early 2008, the Physicians Committee for Responsible Medicine claimed victory in eliminating dog labs from all regular medical school physiology courses. Ironically, this announcement provoked a renewed debate on what such exercises contribute to student learning.

In 2004, the APS adopted a Position Statement on Animals in Teaching which pointed out that "study of living systems is an essential component of physiology instruction." It noted further that "active participation and discovery learning opportunities provided by teaching laboratories allow students to hone independent and life-long learning skills such as analytical and problem solving skills." It went on to say that "[a]nimal laboratories should be offered for valid educational reasons, where the use of the laboratory builds important knowledge, skills, and/or attitudes" and concluded by stating that "the American Physiological Society is committed to the continuing development of resources that enhance the student laboratory experience for all types of learners." The complete statement may be found at http://www.the-aps.org/pa/resources/policyStmnts/paPolicyStmnts_teaching.htm.

The ACE Committee and the APS Office of Science Policy will continue to monitor the debate over animals in teaching and will contribute as appropriate.

Addressing regulatory burden

Regulatory burden associated with the conduct of research is a topic of increasing concern to APS members. The ACE Committee has tried to address this problem in the area of animal research through active participation in discussions of regulatory issues. In 2007 and 2008, the Committee submitted comments on the USDA APHIS Animal Care Policy Manual and sent representatives to two major conferences on animal welfare regulatory issues. By encouraging the participation of active scientists in these conferences, the Committee hopes to temper the trend towards specific regulations and paperwork requirements for every aspect and detail of animal research.

In 2009, the ACE Committee will co-sponsor the Public Affairs symposium on this issue. The title of the symposium is "Scientists and Regulatory Burden: Navigating the Rugged Landscape."

Council accepted the Animal Care and Experimentation Committee report.



Kathryn Sandberg, Chair

Awards Committee Report

The Awards Committee's efforts focus on reviewing applications for six awards: APS Postdoctoral Fellowship in Physiological Genomics; Research Career Enhancement Award; Teaching Career Enhancement Award; Arthur C. Guyton Award for Excellence in Integrative Physiology; Shih-Chun Wang Young Investigator Award; and Lazaro J. Mandel Young Investigator Award.

Based on the number of applicants, the APS Postdoctoral Fellowship in Physiological Genomics is clearly the most attractive as it receives the most applications of all the awards. The number of applications for the APS Postdoctoral Fellowship in Physiological Genomics was down this year from 30 applications in January 2007 to 24 in January 2008. This represents a 20% decrease in applications from the preceding year.

The number of applications for the RCEA was 11 this spring, which represents an increase from the seven received in the fall of 2007 and the nine received in the spring of 2007. Only one application for the TCEA award was received for the spring 2008 award. This remains consistent with the number of applications received for the TCEA in the fall and spring of 2007. This award continues to attract few applicants.

The Committee tracks the gender distribution of applicants, recipients and the Committee composition. The gender distribution of the applicants for the 2008 APS Postdoctoral Fellowship Award was 50% women (12 women) and 50% men (12 men). The gender distribution of the Award winners was 100% men. The gender distribution of the applicants for the Spring RCEA was 27% women (3 women) and 73% men (8 men). The gender distribution of the Award winners was 20% women (1 woman) and 80% men (4 men). The gender distribution of the applicants and award winners for the Spring TCEA competition was 100% female as one woman applied and was recommended for an award.

The Committee will continue to track this information and discuss ways to increase the number of women applying for awards. The Chair plans to work on this issue with the Women in Physiology Committee.

Review Criteria: Standardized review and scoring criteria are employed for all of the awards. Such standardization makes identification of outstanding applicants grounded on objective and weighted factors, and facilitates the job of the Committee.

Awards Committee Meeting: The APS Awards Committee met at the Experimental Biology Annual Meeting in San Diego, CA. At that meeting, the Committee discussed ideas on how to increase the number of applications. A few changes in the review process were instituted at that meeting and include: shortening the application materials by requesting a four-page NIH-type biosketch rather than a full CV from the Mentor and Applicant; the median of the reviewers' scores will

also be calculated in addition to calculating the mean in order to minimize skewing due to outlying scores; each reviewer will have the opportunity to discuss an application and attempt to convince their peers of the applications' merits as long as the application is one of their top ranking three, even if all the other reviewers scored the application poorly; and for the RCEA and TCEA applications, reviewers will now read all of the applications (as long as the numbers of applicants remain roughly 7-12) so that reviewers can select their top three applicants from a larger pool.

2008 Award Recipients Postdoctoral Fellowship Award in Physiological Genomics

The Awards Committee received 24 applications for the Postdoctoral Fellowship Award in Physiological Genomics. Applications were generally of exceptional quality. Two Fellowships were awarded this year to: Ralph J. van Oort, PhD, Department of Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, TX; Sean M. Garvey, PhD, Laboratory of Atherogenesis, Division of Cardiovascular Medicine, Department of Medicine, The Robert M. Berne Cardiovascular Research Center, Univ. of Virginia.

The APS Postdoctoral Fellowship in Physiological Genomics has been established in recognition of the fact that many advances in genomics ultimately require a functional understanding in the context of the organism, and special training is needed to conduct this type of research. The ideal candidate is one who has completed outstanding work in a top-flight graduate program (e.g., molecular biology, genetics, etc.) and who has the intention of employing organ system approaches during his/her postdoctoral training. Alternatively, a well-trained graduate in integrative physiology might wish to expand his/her work through the use of molecular biological tools and genomics. A central criterion of the postdoctoral project requires the scientist to use the tools of cellular and molecular biology in the setting of the whole animal.

A candidate for this program should identify a laboratory within the United States and a sponsor who is an APS Member in good standing under whose supervision a project in organ system physiology and molecular biology/genomics can be combined. The laboratory host/sponsor must be a member of the American Physiological Society, and it is anticipated that award recipients will join the Society.

The award funds cover a two-year period and include an annual stipend for the first year of \$37,000, plus a trainee allowance of \$3,500; and a second-year stipend of \$39,000, plus a trainee allowance of \$3,500. The award does not include an indirect cost reimbursement. Adequate progress must be demonstrated by a written report submitted to the APS following the first year before a second year stipend and trainee allowance can be awarded.

The Research Career Enhancement (RCEA) and Teaching Career Enhancement (TCEA) Awards

For the April 2008 deadline, 11 RCEA and 1 TCEA applications were received. Five RCEA awards were made to: Maureen Basha, Department of Pharmacology and Physiology, Drexel Univ. College of Medicine, Philadelphia, PA; Jason R. Carter, Department of Exercise Science, Health and Physical Education, Michigan Technological University, MI; Michael S. Hedrick, Department of Biological Sciences, California State University, East Bay, Hayward, CA;

Alexander A. Mongin, Department of Neuropharmacology and Neuroscience, Albany Medical College, Albany, NY; and Thomas H. Reynolds, IV, Department of Exercise Science, Skidmore College, Saratoga Springs, NY.

One TCEA award was made to: Reem R. Abraham, Melaka Manipal Medical College (Manipal Campus), Manipal, Karnataka, India.

Young Investigator Awards

The APS has three Young Investigator Awards: Arthur C. Guyton Award for Excellence in Integrative Physiology, Shih-Chun Wang Young Investigator Award, and Lazaro J. Mandel Young Investigator Award. The 2008 due date for these awards is November 1, 2008.

Council unanimously approved a motion to tie the stipend for the Physiological Genomics Award to the NIH pay rate.



**Nansie Anne McHugh,
Chair**

Career Opportunities in Physiology Committee

Career Development at Experimental Biology 2008 Careers Symposium

In 2008 the Career Opportunities in Physiology, Trainee Advisory, and Women in Physiology Committees again coordinated the topics of their sessions to provide a complimentary set of career advancement sessions for physiologists. The

Careers Committee chose to focus its symposium on the career development of more senior physiologists. Committee members Rolando Rumbaut and Nansie McHugh organized the session, entitled, "Mid-Career Transitions: Choices and Challenges." It featured speakers with experience in government, academia, and industry. Attendees gave the presentations high "usefulness" ratings. The workshop drew a moderate-sized group of about 30 attendees. Based on information from the exit surveys, nearly half of those attending were established or new investigators and 29% were postdoctoral fellows, and less than 20% were graduate students. Therefore, the session attracted the career group for which it was designed.

2009 Careers Symposium

In 2009, the Committee will focus its EB symposium on gaining tenure and promotion in academia and industry. The session is being organized by Committee members Carolyn Sussman and Kamal Rahmouni, and is entitled, "Rising and Surviving: Elucidating Tenure and Promotion in Multiple Career Paths." The tenure and promotion process in both academia and industry are of crucial importance for career development, and cause intense stress among early career investigators in both settings. Yet many are confused and overwhelmed by these issues and at a loss where to find the critical information they require. The goal of this symposium is to elucidate these issues as they apply in several settings includ-

ing medical schools, universities, colleges, industry, government, and the military. The target audience is early career investigators in these settings as well as graduate students and postdoctoral fellows seeking information on the career development process in different career paths. Specific issues that will be addressed include publicized vs. unpublicized expectations, the changing face of tenure, transparency of the promotion process, advice speakers wish someone told them. Some of the speakers and topics of this symposium are: "Tenure and Promotion at Medical Schools," Paul Rothman, MD, Univ. of Iowa College of Medicine; "Tenure and Promotion at Universities," Marian R. Walters, PhD, Penn State Capital College; "Comparing Promotion in Academics and Industry," Richard Klabunde, PhD, Ohio University; and "Promotion in Industry," Magdalena Alonso-Galicia, PhD, Merck & Co., Inc.

Career Presentations at APS Conferences

In 2007, the Committee presented two workshops at the APS Conference, "Sex and Gender in Cardiovascular-Renal Physiology and Pathophysiology," using the materials from the Professional Skills Courses. The first workshop, "Making a great impression at a scientific meeting: Presenting your poster, presenting yourself," focused on how to effectively present a poster and how to introduce oneself at a scientific meeting. The second workshop, "Writing your first papers: The "ins" and "outs" of authorship," focused on how authorship on manuscripts is determined and engaged participants in an authorship case study. Presenters also shared an overview of the career development resources offered by the APS, including the new Professional Skills Courses. In the coming year, the Committee is developing a menu of career session topics and resources to share with those developing proposals for future APS conferences so that proposals can integrate APS-developed career materials from the start.

Summer Research Fellowship Program

The APS Undergraduate Summer Research Fellowship (UGSRF) Program was established in 2000 with the goal to excite and encourage undergraduate students worldwide to pursue a career as a basic research scientist. The UGSRF Program supports 24 full-time undergraduate students annually to work in the laboratories of established investigators. Faculty sponsors/advisors must be active members of the APS in good standing. These Fellowships provide a \$3,000 summer stipend to the student (10 weeks support), a \$300 grant to the faculty sponsor/advisor, and a \$1,000 travel award/reimbursement for the students to attend and present their data (if appropriate) at Experimental Biology or an APS Conference. For the first time in 2007, the UGSRFs completed interactive online assignments, exploring how to structure a research project/series of experiments and exploring/discussing physiology-related careers.

The 2007-08 UGSRFs completed their fellowship year by attending EB 2008 in San Diego. Of the 24 fellows, 18 attended EB and 19 submitted an abstract, with two students submitting more than one abstract. The 2007-08 UGSRFs, like those in the past, competed successfully in the David S. Bruce Excellence in Undergraduate Research Award program, winning one or more Bruce awards each year.

2008-09 Program Update

For the ninth year of the program, 48 applications were received, a decrease of 30% from last year. The quality of the applications was deemed very high by the Committee and

they were pleased to be able to recommend 24 students for fellowships; these students were subsequently approved by Council ballot. Thus, 50% of the applications were funded, which still allowed for high selectivity on the part of the Committee. Over the nine-year history of the program, the program has received 427 applications for the 132 awards granted, with the average funding rate less than one-third.

Undergraduate Orientation Session at EB

With support from the APS Council, the Committee launched the new Undergraduate Orientation Session at EB 2008. All undergraduates who submit a first author abstract to APS were invited to this special Saturday session. The session included “how-to” presentations on making the most of the EB meeting, making a poster presentation, and introducing oneself. It also served as the formal recognition session for the UGSRF’s and David Bruce finalists.

Careers Poster

In 2007, the Committee developed a new poster which will be distributed next summer. In the past, the APS poster directed students to the main page of the APS Careers Web. This did not allow staff to track how many persons came to the website due to the poster. The URL at the bottom of the new poster is unique and will allow the staff to track “hits” arising from the poster (as opposed to those from browsing the APS website). In addition, the Committee is exploring the possibility of including a small (e.g., 8.5” x 5.5”) insert of the new APS Careers Poster with physiology career information on the reverse side as a “blow-in” or page insert in undergraduate physiology textbooks.

Career Outreach PowerPoint Presentation Package

Elementary teachers, especially those involved in PhUn Week activities, recommended that APS develop physiology activities that are more interactive for early and upper elementary students as opposed to a “sit-and-listen” PowerPoint presentation. The Committee is working with the Education Office to develop offline physiology activities that are appropriate for use in early elementary (pre-reader) classrooms. For upper elementary students the Committee hopes to develop simple, interactive online activities that allow students to explore a physiology concept online. For example, students can change the speed at which a jogger (or research animal) runs and make predictions about how this will affect his/her heart rate and respiration. This activity would be coordinated with the current PhUn Week theme.

APS Local and Regional Science Fair Awards

This program, launched in December 2007, encourages APS members to make an APS physiology award at their local or regional science fair at the elementary, middle, or high school level. The program provides opportunities for students from elementary through high school to learn what physiology is and to become “associated with the field” through recognition of their work. The program also builds connections between APS members and their local schools. Finally, it encourages local fairs to promote physiology-based projects to their students, since there are potential awards to be won. Student winners receive an APS t-shirt and a certificate for the best physiology project. The teachers of the winning students receive the APS book, *Women Life Scientists: Past, Present, and Future* and an APS resource packet. Up to 100 awards are available each year on a first-come, first-served basis. The judge (or judges) must be an APS member in good standing who is willing to present the award on

behalf of the APS to the student with the best physiology project (one winning student per science fair). After the science fair the judge reports on the winner via an online report form and winners are posted on the APS website. In the first three months of the program, 16 requests were received for award packets. Pictures of winners can be seen at <http://www.the-aps.org/education/sciencefair/index.htm>.

APS Careers Web Site

The website was developed by the Careers Committee and launched in March 2003. It provides extensive resources for two major purposes: 1) to assist students and new and experienced physiologists in the development of their careers; and 2) to help the general public gain a better understanding of the work that physiologists do. The site includes separate sections and resources for elementary, middle/high school, undergraduate, graduate/professional, postdoctoral fellows, new investigators, established investigators, and the general public. Within each section, the user finds resource categories customized to their needs. The specific resources (such as biographies, hands-on experiments, career resources, etc.) are written at the appropriate educational level. It also serves as a dissemination site for the macromedia flash (PowerPoint plus audio) versions of EB career-related sessions developed by the Careers, Women in Physiology, and Trainee Advisory Committee. The Committee also is exploring the idea of building an online “career exploration” tool that can help students identify potential physiology careers that match their interests and talents.

Career Committee Activities

The Career Opportunities in Physiology Committee, along with the Trainee Advisory and Women in Physiology Committees, recognizes the need to provide career development resources and training at all career stages. The three committees continue to coordinate their efforts to expand the topics and focus of their EB sessions so that different career levels are targeted by the different committee-developed sessions.

Mid- and Late-career physiologists: In 2007-2008, the Committee expanded its focus to include career advancement issues. At the fall meeting, the Committee will discuss additional ideas for addressing the career development needs of both mid- and late-career physiologists and providing additional resources for them.

Physician-scientists: The Committee also made progress this year in considering how the APS can better attract and support participation by physician-scientists. At EB 2008, Rolando Rumbaut (MD/PhD) and Zachary Sellers (trainee member and MD/PhD student) distributed surveys and collected 131 responses with organizer approval from physician-scientists at two EB translational sessions. The survey asked career stage; degree(s) or degree(s) stage; whether the person is involved in clinical activities and if so, the percentage of time; how often the person attends EB; and any suggestions to promote clinician/scientist attendance at EB.

Council approved the proposed changes in the Committee charge.

Council unanimously approved the necessary funding to increase the UGSRF stipend to \$4,000 and travel allowance to \$1,300.

Council unanimously approved the necessary funding to for the development of an interactive website activities for elementary school children.



Chapter Advisory Committee

As a result of the Society's Strategic Planning meeting in 2006, a Task Force on Governance was created to review, among other items, the Society's Chapter program and consider whether changes should be made to the program. One of the task force's recommendations was that a Chapter Advisory Committee be created. During the Council's 2007 fall meeting, this recommendation was approved, and the

Peter K. Lauf, Chair

Chapter Advisory Committee (CAC) was created. The primary role of the Chapter Advisory Committee is to work to strengthen the existing program and encourage the creation of new chapters.

The CAC held its first conference call on March 19, 2008. The Committee also had an informal face-to-face meeting at EB, and had a second conference call on May 12. The Committee has agreed to hold an annual meeting at the EB meeting beginning in 2009.

Committee Activities

Bylaws. The Committee has developed and approved a Bylaws template that can be used by APS members when starting a new chapter, or for any existing chapter to use to update their current bylaws.

Local Outreach. The CAC will encourage the chapters to undertake community outreach activities, and to act as a grassroots organization on behalf of the Society by contacting and educating local representatives on issues important to APS, such as animal research and the issue of evolution. The chapters will also work with the local organizations of States United for Biomedical Research (SUBR) to help promote biomedical research a local level.

Chapter Documentation. The CAC is encouraging all chapters to keep a running history of the chapters in a permanent location. This will help provide continuity for the chapters. Since each chapter is set up as an incorporated state society, a tax report has to be filled with the IRS. The CAC will request that all chapters house this documentation in the permanent location, too.

Future Activities. The CAC will work on creating a Chapter Handbook which will help APS members when starting a new chapter, and will provide information for new chapter officers.

Council requested the CAC to review/revise the membership requirements and bylaws of the new Arizona chapter to make them consistent with those of existing chapters.



Committee on Committees

The Committee on Committees (CoC) is composed of representatives elected by the 12 APS Section Steering Committees and two Councilors who serve as Chair and In-coming Chair. Its primary duty is to nominate individuals to serve on APS standing committees and on outside bodies where the APS is represented. CoC members are dedicated to the concept that their role is twofold: to identify and promote members of their

Susan M. Barman, Chair

section who might serve on committees, but then to set aside sectional affiliations to nominate the best-qualified individuals to serve the Society. CoC members also promote diversity and the involvement of young APS members in the committee structure. A recurring problem is that one section (Comparative & Evolutionary) has not sent a representative to the CoC meetings in April in the past several years.

Application and Selection Process: An APS member interested in serving on a committee must self-nominate by completing a Candidate Information Form indicating prior activities relevant to the committee on which he/she wishes to serve, a statement of interest, information about prior APS service, citations to two recent publications, a statement of academic interests, and contact information of their endorser. A single Endorsement Form is completed by someone who knows the candidate and comments on their ability to carry out committee responsibilities. Both forms are available on the APS website under "committees" along with a listing of committee vacancies for the upcoming year and a link to the description of committee member responsibilities for most of the Society's standing committees. In addition to CoC members, the committee Chair also reviews the slate of nominees for that committee. At their meeting at Experimental Biology (EB), the CoC develops their recommendation for each committee vacancy, along with alternates, and submits this for approval by Council. New in 2008, Council considered the CoC recommendations at their meeting on the last day of EB rather than delaying the vote until the summer Council meeting. Approved nominees will begin their term of appointment in January 2009. CoC members are instructed to only consider those applications containing both the Candidate Information Form and Endorsement Form. In addition, they are asked to pay attention to the applicant's response to the query on the Candidate Form as to whether they have attended an EB meeting within the last three years. This is particularly important for those committees which have a face-to-face meeting at EB.

Characteristics of the 2007 Applicant Pool: The CoC was pleased with the pool of applications for committee vacancies this year. The number of applicants was down slightly from last year but a significant increase over 2006 (see Table 1). Four of the 12 Sections showed an increase in the number of members who applied for committee vacancies. Table 2 shows other char-

Table 1. Section Affiliations of Completed Nomination Packets and New Appointees.

Section	2006	2007	2008	New Appointees	All APS Members
Cardiovascular	12 (30.5%)	24 (21.5%)	24 (23%)	9 (16.5%)	22%
Cell & Metabolism	2 (5%)	6 (5.5%)	7 (6.5%)	6 (11.5%)	12%
Central Nervous System	5 (13%)	4 (3.5%)	6 (6%)	4 (7.5%)	9%
Comparative	1 (2.5%)	5 (4.5%)	3 (3%)	1 (2%)	4%
Endocrine/Metabolism	0	9 (8%)	8 (7.5%)	6 (11.5%)	8%
Environmental/Exercise	0	11 (10%)	18 (17.5%)	4 (7.5%)	9%
Gastrointestinal & Liver	3 (7.5%)	12 (11%)	2 (2%)	0	5%
NCAR	2 (5%)	6 (5.5%)	7 (6.5%)	4 (7.5%)	5%
Renal	6 (15.5%)	8 (7%)	7 (6.5%)	7 (13%)	7%
Respiration	0	7 (6.5%)	5 (5%)	2 (4%)	9%
Teaching	0	11 (10%)	7 (6.5%)	3 (5.5%)	3%
Water/Electrolyte	7 (18%)	9 (8%)	9 (8.5%)	7 (13%)	2%
No Affiliation	1 (2.5%)	0	1 (1%)	0	6%
TOTAL	39	112	104	53	10,274

Table 2: Other Characteristics of the Applicant Pool and New Appointees.

	2007	2008	New Appointees	All APS Members (%)
Under age 45	50 (45%)	57 (54%)	25 (47%)	33
Women	33 (30%)	37 (35%)	19 (36%)	23
Reside outside of the US	27 (24%)	10 (9.5%)	3 (5.5%)	23
Employed by Industry	3 (3%)	2 (2%)	0	2
Trainees		18 (17%)	8 (15%)	13*

*This number refers to student members. Some postdoctoral trainees are regular members of APS.

Table 3: Section Affiliation of APS Standing Committee Members (not including Committee on Committees, Liaison with Industry Committee, Section Advisory Committee, and Trainee Advisory Committee)

Section	2007	2008	2009	All APS Members (%)
Cardiovascular	28 (23.5%)	34 (25%)	28 (19.5%)	22
Cell & Metabolism	13 (11%)	11 (8%)	13 (9%)	12
Central Nervous System	10 (8.5%)	10 (7.5%)	10 (7%)	9
Comparative	3 (2.5%)	4 (3%)	4 (3%)	4
Endocrine & Metabolism	6 (5%)	7 (5%)	9 (6.5%)	8
Environmental & Exercise	12 (10%)	11 (8%)	12 (8.5%)	9
Gastrointestinal & Liver	8 (7%)	9 (6.5%)	9 (6.5%)	5
NCAR	9 (7.5%)	6 (4.5%)	9 (6.5%)	5
Renal	9 (7.5%)	10 (7.5%)	15 (10.5%)	7
Respiration	4 (3%)	5 (3.5%)	4 (3%)	9
Teaching	4 (3%)	7 (5%)	8 (3.5%)	3
Water/Electrolyte Homeostasis	13 (11%)	21 (15.5%)	22 (15.5%)	2
Total	119	135	143	10,274

Table 4: Other Characteristics of APS Standing Committee Members (not including Committee on Committees, Liaison with Industry Committee, Section Advisory Committee, and Trainee Advisory Committee).

	2007	2008	2009	All APS Members (%)
Under age 45	35 (29%)	38 (28%)	51 (35.5%)	33
Women	44 (37%)	41 (30%)	52 (36.5%)	23
Reside outside of the US	7 (6%)	12 (9%)	12 (8.5%)	23
Employed by Industry	5 (4%)	5 (3.5%)	4 (2.5%)	2
Trainees		10 (7.5%)	16 (11%)	13*

*This number refers to student members. Some postdoctoral trainees are regular members of APS.

acteristics of the applicant pool. Note that the percentage of the applicants that are under the age of 45 or women greatly exceeded their respective representation of the membership of the APS. Also, a large number of applications were from predoctoral (10) and postdoctoral trainees (8). The number of completed applications for each APS standing committee varied from 0 (Daggs and Senior Physiology Committees) to 22 (Education Committee). Six of the 13 APS standing committees with vacancies had nine or more applicants.

Results from 2008 Coc Meeting and Council Deliberations: During deliberations at their meeting on April 5, CoC members sought to instill diversity in the committee structure on the basis of sectional affiliation, geography, gender, and seniority from the qualified group of applicants. The Chair of the CoC brought a slate of nominees to the APS Council for further discussion at their meeting on April 9. Council approved 53 APS members to serve on committees beginning January 1, 2009. Table 1 and Table 2 show the section affiliation and other characteristics of these individuals, respectively. The CoC is particularly pleased with the approval by Council to increase the number of trainees participating as members of APS standing committees. Both the Awards and Conference Committees will now have a trainee member, Communications, Education, Membership, and Women in Physiology Committees will each have two trainee members. Also, Council accepted the recommendation of CoC to increase by one the number of regular members on Conference, International Physiology, and Women in Physiology Committees.

Table 3 shows the section affiliation of the APS Standing Committee members in 2007 and 2008 and the composition for 2009 based on the CoC and Council deliberations. Table 4 shows the composition of the committees in terms of representation by members that are under the age of 45, women, residing outside of the US, employed in Industry, and trainees. The Tables also compare the relative proportions of these groups on committees and within the entire APS membership.

In 2009 there will be 143 APS members serving on APS standing committees. In addition, the Committee on Committees, Joint Program, Liaison with Industry, Section Advisory, and Trainee Advisory Committees each have a representative from the 12 APS Sections, allowing for participation of 60 additional APS members in committee activities. Also, each of the sections has a Steering Committee. Thus, there are many opportunities for APS members to become

actively engaged in helping the Society achieve the goals it has set forth in its strategic plan.

Planning for 2009

The CoC hopes that many APS members will consider serving the Society as a member of one of its standing committees. Applications can be submitted via the APS website, and are due by January 15, 2009. Those candidates who were not selected to serve on a committee this year are encouraged to re-submit their credentials for consideration for the same or another committee in the next cycle. An individual who has been selected as an alternate for a committee will be re-considered next year without re-nomination.

Council accepted the Committee on Committees report.



Francis Belloni, Chair

Communications Committee

The overarching goal of the APS communications program is to enhance and enlarge the Society's presence on the web. Over the last 18 months, significant progress has been made in meeting this objective by improving the content and design of traditional APS communications vehicles (such as press releases) and breaking new ground with podcasts, a wiki platform, the first of YouTube-style videos and an overhaul of an existing consumer-based website. These efforts stem from the belief that the easier it is for the public to find, read and understand us and the materials, the better the chances are of developing individuals who appreciate the value of physiology. The information below offers a snapshot of the key activities, and provides a look at the Committee's future plans.

APS' Web Reach

Each month data is examined that relates to the "reach" of the APS. Reach is defined as the percentage of all internet users who visit a given site and is based on the data the

company collects from some 4.5 billion web pages from 16 million sites. For the six-month period November 18, 2007–May 18, 2008, the reach of the APS landing page remained relatively stable.

The APS Wiki

In developing the wiki, Committee members concluded that a three-part hybrid wiki was best suited for the Society's intentions. The first part is a content-focused wiki. The expectation is that APS members and the Sections will add their content to this portion of the wiki and that it will be posted on the primary consumer site. Once the content is migrated to the consumer site it will be "locked" and available to the public.

The second part of the wiki is processed-focused, meaning that it allows members to create content related to their area that will ultimately be included on the new PhysiologyInfo.org site. The third part of the wiki will be the standard "community wiki."

The goal is to model the site content much the same way as WebMD does, by offering trusted information about physiology that APS members, as the specialists, have "certified" as accurate. The tag line envisioned for the site is "PhysiologyInfo.org: The most trusted source of information about physiology on the web."

www.PhysiologyInfo.org

Virtually every organization has a website, which in turn is used for many purposes: to include advertising upcoming meetings, placing a call for papers, and notifying people about deadlines. However, none of these purposes fit the needs of the non-physiologist.

In order to present a clear and concise image of physiology to the non-scientist, and to present a more cohesive story and image about the science to the public, the Committee has begun revamping the existing public website that was launched in 2003. Its name and domain—<http://www.PhysiologyInfo.org>—will remain, as the name and URL are easy to understand and remember. The content for the site will be populated by the information derived from the wiki along with most of the items that currently exist on the APS press/public site. The goal is to have the revised site open to the public by the end of the year.

YouTube-Style Video

The rough cut of our first "YouTube" style video will be posted to the APS website once the final editing is complete. The video features an interview with Dr. James Bassingthwaite, a key member of the Physiome Project, who discusses the background and status of this effort.

Journal Release Program

Since the end of the 2008 Experimental Biology meeting, the Communications Department has resumed writing journal press releases. Several have been issued and media interest has been strong. The releases have led to media placements in the *New York Times*, *Washington Post*, *Telegraph* (UK), *MSN-Health & Fitness*, *the Toronto Star* and other outlets.

Life Lines: The APS Podcasting Series

Since the launch of the APS podcast series *Life Lines* (<http://www.lifelines.tv/>) in October 2006, there have been a dozen episodes created. Two of the podcasts featured the 2008

Bowditch and Cannon lecturers, in addition several EB08 symposia speakers. The topics have been as diverse as physiologists and their contribution to the air war during World War II, the physiology of marine animals, and the relationship between nanoparticles and disease. Our *Life Lines* attract new and returning listeners each month.

EB Media Coverage

The staff promoted 13 EB presentations in connection with this year's meeting. They included the effect of backpack straps on blood flow, the impact of maternal exercise on the fetus, and the effect of antioxidants on breast cancer in mice. Within the first week of the meeting, the studies and/or the APS had been mentioned on television stations some 560 times and articles appeared in *Nature*, *Newsweek*, *New Scientist*, and the *Washington Post*, among others.

APS' AAAS Mass Media Fellow

Lindsay Chura is this year's APS AAAS Mass Media Fellow. Chura graduated with distinction from Mount Holyoke College with a dual major in biology and psychology and in 2006 was one of 14 Americans to be granted a Fulbright Postgraduate Award. Chura will begin her PhD this fall at Trinity College, Univ. of Cambridge.

Council accepted the Communications Committee report.



P. Darwin Bell, Chair

Conference Committee

Traditionally, the APS conferences have been the responsibility of the Joint Programming Committee (JPC) in terms of solicitation, evaluation, and selection of proposals. Although this has worked adequately, APS conferences have not been the main focus of the JPC. In addition, as the responsibilities of the JPC have grown, it has become increasingly apparent that there was a need for a dedicated committee to oversee the APS conferences program. This need was addressed by the last APS long-range strategic planning committee, which proposed the formal establishment of the APS conference committee (APSCC).

The Committee has had extensive discussions regarding the history of the APS conferences both in terms of scientific content and financial costs. It was felt that conferences that had a somewhat broader range of appeal tended to be more successful. The Exercise and the Endothelial Meetings are examples of successful conferences. Although the members of the APSCC felt that organizing conferences on new and exciting topics should be strongly encouraged, it was also recognized that establishing a cohort of highly successful meetings that are held periodically would help to solidify the APS conference program and move it towards an equal foot-

ing with the Gordon and FASEB summer conferences. The by-product of enhancing the stature of the APS Conference Program would be to attract new and innovative conference proposals.

With regards to the financing of conferences, the Committee agreed that previous APS Conferences relied too heavily on invited speakers that were given funds for travel expenses, etc. Instead, APS Conferences should be abstract driven meetings with only a few invited speakers. This would help to reduce the overall financial obligations and hopefully provide revenue through registration fees. APSCC felt strongly that the APS funding should remain at \$30,000, but that organizers should be encouraged to try to obtain government and pharmaceutical support for the conferences. The organizers should be encouraged to use resources to support students, postdoctoral fellows and new investigators, and funds should be used to facilitate and encourage the participation of minorities and women in these Conferences.

The Committee reviewed the current conference application process. The Committee agreed that the application procedure was very labor intensive. Conference organizers were asked to plan the entire meeting and confirm all the invited speakers before submitting their proposals to the JPC. In an effort to make the submission process easier, an online submission form has been created. Only preliminary information is now required from the conference organizers. The conference proposals will be evaluated by the entire APSCC. Once the proposal is approved by the APSCC, it will be submitted to Council for final approval.

After a conference proposal has been approved the Conference Committee and the APS Council, two members of the APSCC will be assigned to that Conference. The APSCC members will work with the conference organizers to develop the program. This will allow the APSCC to have direct interaction in the development of the program and have some oversight into the scientific and financial planning of the meeting.

There are two APS conferences scheduled in 2009. The first conference is the ET-11: APS International Conference on Endothelin and is headed by David Pollock and Pedro D'Orleans-Juste. The second conference for 2009 is headed by Jane Reckelhoff and Christine Maric and is entitled: Sex Steroids and Gender in Cardiovascular-Renal Physiology and Pathophysiology.

Education Committee

Web-Based Professional Skills Courses

With support from the NIGMS Minority Opportunities in Research division, the APS is developing live, web, and CD-ROM short courses that focus on critical professional skills areas. Each course will include a strong focus on the interaction of racial/ethnic background and culture with the development of these skills. Students who complete the course(s) will: improve



Thomas A. Pressely,
Chair

their performance in specific professional skills areas; increase their understanding of how these skills can impact career opportunities and advancement in biomedicine; increase their understanding of how diversity issues, especially cultural influences and background experiences, can interact with the development of professional skills targeted by the course; and increase their knowledge of resources and materials that can further assist in their development of these key professional skills.

2008 Live Short Courses

In January 2008, the APS conducted its first "fee-based" live professional skills training courses for graduate and postdoctoral students. This was the first time both courses, "Writing and Reviewing for Scientific Journals" and "Making Scientific Presentations: Critical First Skills" were run concurrently. NIGMS provided travel fellowships for 26 minority students to participate in the courses. The writing and reviewing course focused on upper level graduate students and postdocs and the skills needed for writing and reviewing their first author manuscript for scientific journals in biomedicine. The presentation skills course was geared toward lower level graduate students and the skills needed to create and present their first author posters at meetings.

For 2009, there will be more active recruitment and advertising within the Society and through other organizations. The 2009 course will be January 14-17 at Disney's Contemporary Resort in Lake Buena Vista, FL. The focus for the Writing and Reviewing course in 2009 will be cell and molecular physiology, comparative physiology, endocrinology, GI physiology, and respiration.

Project Summary

The proposed project, "Mentoring Skills for Minority Neuroscientists," will use the proven APS course development model for Professional Skills Training (PST) to develop, field-test, evaluate, and disseminate both live and online interactive courses. The courses will be designed for graduate students, postdoctoral fellows (both basic and clinical), and new investigators and will focus on how to effectively mentor students and be mentored by an advisor. Both the live and online courses will emphasize issues related to minority scientists and to neuroscience but also will be applicable to students in broad areas of biomedicine. The APS has previously developed two highly successful PST courses: one

Council approved the recommendation that the Conference Committee respond to requests for endorsements of "outside" meetings and submit their recommendations to Council for final approval.

Council unanimously approved a recommendation that APS be a sponsoring society for the meeting Adult Skeletal Muscle: Clinical Problems, Molecular Targets.

on writing and reviewing for journals and the second on presentation skills and poster development.

Experimental Biology Activities

EB Refresher Course

The APS Refresher Courses are designed to provide both an intensive overview of content in one of the areas of physiology and opportunities to review new teaching methods and materials for physiology instruction. They are targeted especially for non-specialists who have teaching responsibilities in the refresher course's content area in medical education. The Refresher Course materials are also widely disseminated via the website and APS journals. The 2008 Refresher Course focused on respiratory physiology. It was organized by Britt Wilson and Robert Brock. The session was well-attended (approximately 100-130 attendees for each speaker) with many attendees staying for the entire session. The session presentations are being prepared for the web and *Advances* publication.

Support for Medical Science Educators

Meeting of the Medical Physiology Course Directors: At EB 2008, 16 medical physiology course directors met to discuss the planned changes in the USMLE and to share resources. The directors agreed this year to bring resources related to the APS Refresher Course topic and a number of directors brought resources on respiratory physiology to share via copies and via the website. The group plans to continue to meet and share resources.

Sharing Resources at IAMSE: In 2007, Committee member Britt Wilson staffed an exhibit at IAMSE and represented the APS. He shared information on APS membership, the Medical Physiology Course Directors Website, and the APS Archive of Teaching Resources. He also served as a liaison to IAMSE concerning the proposed USMLE changes. In 2008, Wilson will again exhibit for the APS and will also promote the Medical Physiology Learning Objectives.

APS Archive of Teaching Resources

As of June 1, 2008, the Archive includes more than 1,800 items and supports nearly 2,000 active users per month. In 2007, the average number of active users per month increased from 1,300 to nearly 2,000. The average number of total hits on the Archive increased by more than 10,000 hits per month over 2006. The usage of the Archive should increase even more in 2008 as the system becomes open to Google searches.

In 2007, the Archive switched to a new review schedule to better recruit and review materials submitted by educators. Review of materials submitted by individuals occurs biannually (June and December) and review of new K-12 materials generated by APS programs (e.g., *Frontiers in Physiology*) takes place in the fall and spring.

K-12 Materials Review: As part of a recent National Science Foundation (NSF) grant, the APS developed review criteria that will allow K-12 materials developed by *Frontiers in Physiology* Summer Research Teachers to be reviewed and added to the Archive. These criteria include not only scientific accuracy and appropriate use of animals and humans in laboratory activities (that is, the standard Archive review criteria) but also appropriate grade level, safety issues, and experimental focus. In 2007, 100 teacher-developed activities were reviewed for content, pedagogy, and safety by the Education Committee.

BEN Scholars: As part of the current NSF grant, the APS is collaborating with other BEN societies on an undergraduate faculty development program, called BEN Scholars. BEN Scholars are undergraduate faculty members in life sciences, who develop specific expertise in the use of digital libraries to enhance teaching and learning, how to contribute to a digital library, and how to conduct professional development activities for colleagues at their home campuses. In 2007, three of the 25 BEN Scholars submitted activities to the APS Archive. Overall, three Archive activities and one *Advances* article were accepted from 2007 BEN Scholars. In 2008, eight of the 25 BEN Scholars teach physiology.

Medical Physiology Learning Objectives (MPLO) Project

The MPLOs were developed jointly by APS and ACDP to provide guidelines for the breadth and depth of knowledge in the physiological principles and concepts that are considered minimal and essential for further progress in understanding mechanisms of disease and body defenses, particularly in medical training. The Committee will remind Sections to schedule the review/revision of their objectives. In addition, staff members will increase publicity of the learning objectives in 2008 to support the USMLE test development process.

David Bruce Awards

The David S. Bruce Awards were established in 2004 to recognize excellence in undergraduate research. They are made annually at EB to undergraduate students who have submitted both abstracts for the meeting and award application materials. In 2008, 68 applications for the David Bruce Award were received and 20 finalists were selected. From the finalists, the subcommittee selected seven David Bruce Awardees.

EB 2008 Undergraduate Poster Session

Since 2004, the APS has invited all undergraduate students who are first authors on abstracts submitted to APS EB sessions to present their posters at a special APS Undergraduate Poster Session. This session is typically held on Sunday afternoon and serves as the reception to announce the David Bruce Awardees. In 2008, approximately 200 APS members came to see the 120+ undergraduate posters and to talk with the students. Fourteen physiology departments paid a fee for table space to promote their graduate programs to the undergraduate students at the session, providing \$3,500 to help cover the session costs.

HAPS Collaboration

The APS collaborates with HAPS in a number of ways, including exhibiting and conducting workshops at HAPS meetings. From the 2007 HAPS Institute, 31 faculty-developed teaching resources were accepted into the Archive from 21 HAPS members. In 2008, Michael Levitzky of LSUHSC was the APS-sponsored keynote speaker for the HAPS Institute Course on Advanced Respiratory Biology and Dee Silverthorn served as the Instructor/Course Designer for the Institute course. The APS also provided lists of respiratory physiology teaching materials from the APS Archive. The Committee will continue to work with HAPS on future Institute courses for their 2009 meeting in Baltimore.

APS Summer Research Program for Teachers

The APS Summer Research program provides year-long fellowships for middle and high school science teachers from across the nation, engaging them in biomedical research, building connections with researchers, improving their teaching methods and curricular materials, and deepening the understanding of both teachers and students of how biomedical research is done and how animals are used in research. In 2007, the program supported 16 teachers from 14 states. These teachers completed their fellowship year by participating in EB 2008. Two teachers presented posters on their research.

In 2008, 11 teachers from 10 states worked in the laboratories of APS members. These teachers have already completed three online professional development units and attended the APS Science Teaching Forum in July 2008. Three APS members served as Physiologists-in-Residence at the Science Teaching Forum: Tom Schmidt, University of Iowa; TanYa Gwathmey, Wake Forest University School of Medicine; and Keisa Mathis, LSU Health Sciences Center. Gwathmey and Mathis are 2008 NIDDK K-12 Outreach Fellows.

EB Workshop for Teachers and Students

Education Committee Chair Thomas Pressley and APS member Robin Looft-Wilson coordinated the 2008 APS Workshop for High School Teachers and Students. More than 90 San Diego area teachers and their students attended the workshop along with APS members and 2007 Frontiers Research Teachers. The keynote talk, "Human Physiological Limits to Exploring Mars," was given by APS member, James Pawelczyk, Penn State University. Sixteen APS members served as tour guides during lunch where they took teachers and students through the exhibits and posters and shared a box lunch while discussing physiology careers.

In the afternoon student session students used the "Elvis Experiments" from the APS "Physiology of Fitness" unit to learn about factors affecting flow of liquids through tubing (radius, length, viscosity). While students were conducting their experiments, their teachers participated in a workshop activity on modeling the digestive system with common household items. Frontiers Mentor/Instructor Tonya Smith (South Carolina) led the teacher workshop. The Committee is planning to continue the program in 2009 in New Orleans.

Science and Engineering Fair (ISEF) Awards

Since 1992 the APS has presented awards to high school students presenting physiology research projects at the ISEF. Sponsored by Intel, the ISEF is the world's largest international pre-college science competition. The 59th Annual International Science and Engineering Fair (ISEF) was held in Atlanta, GA May 11-17, 2008. During the two evenings of awards ceremonies, more than \$4 million in scholarships, cash prizes, and awards were distributed in categories ranging from behavioral science to engineering and medicine.

This year's APS judging team leader was Robert Hester, University of Mississippi Medical Center. He was accompanied by Britt Wilson, University of South Carolina School of Medicine, and Douglas Eaton, Otto Froehlich, J. Wylie Nichols, and Peter Wenner, all from Emory University. The first place winner (\$1,000) was Harrison Phu Nguyen, 17, of Detroit Catholic Central High School, Novi, MI for his project titled "Combating Muscle Atrophy: A Novel Study of Myofibril Turnover in Sternopygus." Nguyen was also awarded a best of

category winner for Cellular & Molecular Biology presented by Intel Foundation receiving a fourth place award and \$500, he also received a second place award from the United States Air Force with a \$1,500 award. The APS Second Place winner (\$500) was Diya Dwarakanath, 17, of Westview High School, Portland OR. His project was entitled "Role of Calcium/Calmodulin-dependent Protein Kinases in BDNF-induced AMPA Receptor Trafficking."

The APS judging team selected the project of Dallas James Krentzel, 17, from Airline High School, Bossier City, LA for one of the APS Third Place awards. His project was entitled, "Is 4,4' Methylene-dianiline-Induced Vascular Toxicity a Model for Pulmonary Hypertension?" The second third place award was presented to Jourdan Brandt Urbach, 16, of Roslyn High School, Roslyn Heights, NY for his project entitled "The Effect of Extracellular Signaling Molecules on Oligodendrocyte Differentiation, Morphology, Proliferation, and Survival." Jourdan was also awarded a Tuition Scholarship ranging from \$6,000-\$9,000 from the University of the Sciences in Philadelphia. He also received a third place award of \$150 from the Patent and Trademark Office Society.

Physiology Understanding Week

The primary objective of Physiology Understanding Week is to increase student interest in and understanding of physiology in their lives and to introduce them to physiology as a possible career.

2007 PhUn Week Activities: The first nationwide Physiology Understanding Week was a tremendous success thanks to the many APS members who participated. The PhUn Week 2007 theme was exercise and health. Briefly, in 2007, all target goal numbers of events and participants (APS members, trainees, teachers, and K-12 students) were exceeded.

In November 2007, an online feedback survey was sent to the adult participants, generating a 52% response rate. When asked about potentially participating in PhUn Week 2008, 70% indicated "yes" and 30% indicated "maybe." No one said "no" to participating in future years. ADInstruments, Inc. (ADI) contributed materials and financial support for both the PhUn Week program and the PhUn Week Training Session at EB 2008.

EB 2008 PhUn Week Training Session: The second annual PhUn Week Training Session at EB 2008 focused on: recruiting APS members or teacher fellows for the PhUn Week 2008 program; demonstrating engaging, hands-on student activities that can be used for PhUn Week; and developing ideas for future PhUn Week themes.

Several participants in PhUn Week 2007 briefly presented their collaborations and visits to classrooms. Presenters on PhUn Week models and/or innovative activities developed from their local event included: David Holtzclaw, University of Nebraska Medical Center; Lisa Harrison-Bernard and Keisa Mathis, Louisiana State University Health Sciences Center; Catherine Uyehara, Tripler Army Medical Center in Honolulu, HI; Ana Rodriguez and Nildris Cruz, University of Puerto Rico Medical Sciences Campus; Clintoria Richards-Williams, University of Alabama, Birmingham; Diane Munzenmaier, Medical College of Wisconsin; Frontiers Research Teacher Lorraine O'Shea and Van Doze, University of North Dakota School of Medicine and Health Sciences; Jessica Clark, Washington University in Saint Louis School of Medicine; and Barbara Goodman, University of South Dakota Sanford School of Medicine.

IUPS Collaborations

21st Century Physiology Project: This project, headed by APS Council member, Dee Silverthorn, is revising a set of older IUPS and APS laboratory activities to incorporate more effective student-centered teaching methods and to update content in the activities. IUPS members are collaborating in the development process. APS members Tom Pressley and Rob Carroll worked with APS staff to review and revise several activities that are currently being field tested. Their subsequent submission and eventual acceptance to the Archive should facilitate international access, completing the major goals of this project.

Enhancing Teaching among US and International Members: APS is working to submit a number of proposals for the 2009 IUPS meeting and the planned IUPS Teaching Satellite meeting in Kyoto. Currently, Marsha Matyas serves as a member of the IUPS Teaching Group planning committee.

Council unanimously approved the necessary funding to increase the annual ISEF APS Special Awards for physiology projects to the required minimum total amount of \$3,500.



Peter D. Wagner, Chair

Finance Committee

During the spring meeting of Council, the Finance Committee Chair reported that the Society's financial condition remains strong through sound management and investment practices and continued success of the journals program.

2007 Budget

The Society employs a consolidated operating budget to manage overall operations. The consolidated budget is comprised of the individual budgets for the various cost centers; these include Publications, Membership and Meetings, Education, Science Policy, Communications, Marketing, and the Executive, Information Technology, and Business Offices. G&A costs (the sum of Executive, Information Technology, and Business Office expenses) are allocated to other Society offices based on each office's share of total salary expenses.

For 2007, the year ended with income of \$19.49 million and direct expenses of \$18.03 million. The Society ended the 2007 year with a net surplus of approximately \$2 million. There were several revenue and expense categories which were either over or under budget. Revenue categories that were over budget included journal-related income from page charges (\$700,000 over budget) and color fees (\$324,000 over budget). Conversely, grant income was \$268,000 under budget. The largest revenue category, income from journal subscriptions, was on budget. Expenses associated with printing the journals were under budget by \$433,000, and costs associated with maintaining journal editors' offices were under budget by \$432,000. In sum, approximately \$1 million of the surplus is attributable to increased publications revenues and

\$0.9 million to reduced publication expenses.

The Finance Committee reported that barring any significant changes, expenses are projected to grow slightly faster than revenue over the next three years. Using a linear extrapolation model, surpluses of \$336,000, \$185,000, and \$14,000 are projected for 2009, 2010, and 2011, respectively. The Society's journals program is its primary source of income, accounting for approximately 80% of all revenue. The journals program is structured to generate a return of 10% annually which is used to support other society programs. In 2007 the return was 26% (\$3,306,145 net revenue/\$12,505,803 total expenses). This high return was a result of Publications revenue items that were over budget, and Publications expense items that were under budget.

2008 Budget

The Council has approved a 2008 budget of \$18,578,000 in expenses. With revenue budgeted at \$19,137,500 (including the 4% investment allocation of \$1,380,500 and projected net revenue from Publications of \$2,247,500), the budget shows a surplus of \$559,500, a modest surplus for a revenue budget of almost \$20 million. The publications component again comprises around 80% of total income. The journals program is budgeted to generate a return of 17%.

Through the first four months of 2008, both revenue and expenses are under budget and the result is a net surplus of approximately \$99,000. This is, in essence, a seasonal imbalance between actual and budgeted revenue and expenses, and the Society is expected to be close to budget by year end.

Journal Subscription Pricing

The Journals Program, which generates about 80% of the Society's revenues, is asked each year to budget for a margin of 10%. In order to meet this mandate, the Publications Committee recommended, and the Finance Committee and Council both agreed, that 2009 subscription prices should be raised by 2.5%. While the subscription pricing model showed a need to increase prices only 1.2% in 2009, due to the uncertainty of certain market factors, the Publications and Finance Committees recommended, and the Council approved, an increase of 2.5%. A comparison of 2009 and 2008 domestic institutional prices is shown in the table below, reflecting the above percentage changes:

Long Term Investments

Our long term investments consist of both unrestricted reserves (about \$36 million at the end of 2007) and restricted funds (about \$8 million at the end of 2007). They are managed as a single investment pool referred to below as the managed accounts. However, it is only the unrestricted reserves from which 4% is drawn each year for the operating budget.

In the early 1990's, the reserves, on which the Society depends for approximately 7% of its operating revenue, almost doubled due to favorable market conditions. However, the down market of 2000-2002 caused the Society's reserves to decrease from \$30 million at December 31, 1999, to \$26 million at December 31, 2002. Beginning with the 2003 market turnaround, the Society's reserves balance has grown from \$26 million at December 31, 2002, to more than \$36 million at December 31, 2007. As directed by Council, the Society uses up to 4% of the value of its reserves annually as operating income. Only that amount required to offset the cash needed to support the Society's programs is withdrawn and the

Journal	2009			2008		
	Print + Online	Print Only	Online Only	Print + Online	Print Only	Online Only
<i>AJP Consolidated</i>	\$4,160	\$3,975	\$3,410	\$4,060	\$3,880	\$3,325
<i>AJP-Cell Physiology</i>	785	740	635	765	720	620
<i>AJP-Endocrinology & Metabolism</i>	540	515	445	525	500	435
<i>AJP -Gastrointestinal & Liver Physiology</i>	590	560	480	575	545	470
<i>AJP-Lung Cellular & Molecular Physiology</i>	530	500	425	515	490	415
<i>AJP-Heart & Circulatory Physiology</i>	1,080	1,025	880	1,055	1,000	860
<i>AJP-Regulatory, Integrative & Comparative Physiology</i>	740	720	610	720	700	595
<i>AJP-Renal Physiology</i>	540	515	445	525	500	435
<i>Journal of Applied Physiology</i>	1,320	1,265	1,080	1,290	1,235	1,055
<i>Journal of Neurophysiology</i>	490	475	410	480	465	400
<i>Physiological Reviews</i>	1,505	1,430	1,230	1,470	1,395	1,200
<i>Journal of Neurophysiology</i>	350	340	295	340	330	290
<i>Physiological Genomics</i>	295	275	235	290	270	230
<i>Physiology</i>	N/A	65	N/A	N/A	65	N/A
<i>Advances in Physiological Education</i>	N/A	120	N/A	N/A	115	N/A
<i>The Physiologist</i>						

remainder continues in actively managed investment accounts.

At its spring meeting, the Finance Committee reviewed the performance of the Society's investment managers. The Society's long-term investments are administered by six managers under the direction of the Society's investment consultant, Paul Powers of Smith Barney. Four of these managers handle about 2/3 of the total funds in equities portfolios. Two other managers handle the remaining 1/3 in fixed income instruments. As of December 31, 2007, the accounts had the following market values: APS Reserves \$36,172,496, APS Endowment Fund \$4,628,553, Giles F. Filley Memorial Fund \$830,660, Rife/Guyton Fund \$673,658, Caroline tum Suden Fund \$588,116, IUUPS Fund \$434,398, Perkins Memorial Fund \$363,504, Shih-Chun Wang Fund \$166,683 and the Lazaro Mandel Fund \$144,157. The return on the managed accounts was 5.82% for the year ended December 31, 2007. It should be noted that this figure is a net value after using reserves to supplement the 2007 budget and paying investment manage-

ment fees. The market value of the managed accounts at December 31, 2007 was \$44,002,225.

There was a discussion at the spring Finance Committee meeting regarding the Society's investment policy. Powers suggested the Committee consider changing two sections of the policy. The first change would be to modify the asset allocation portion of the policy which currently requires an asset mix of a "maximum 75% equities, minimum 5% cash, and remainder fixed income..." The suggested change would remove the minimum 5% cash requirement in order to provide more flexibility for the investment managers to take advantage of buy opportunities. The second change involves the current policy's stated goal of achieving "an absolute annual rate of return of: (1) at least 5 percent above the rate of inflation over a market cycle (three to five years), after payment of brokerage and management fees." Powers believes this is an unrealistic long term goal over time simply due to the fluctuations in the market.

Shown below are facsimiles of the Society's financial statements in the format presented by our auditors for the year ended December 31, 2007. Please note that these represent day to day operational income and expenses as well as income from our long term investments in a merged table. This means that these data are not directly comparable to the standard operational budget pages usually seen by Council.

APS Statement of Financial Position as of December 31, 2007

ASSETS

Cash and cash equivalents	\$ 638,831
Investments	49,791,121
Accounts receivable	1,693,676
Pledges receivable, net	239,855
Accrued interest receivable	226,216
Advances to section editors	418,323
Prepaid expenses	135,116
Inventories	30,974
Furniture, fixtures, and equipment	256,116
Total assets	53,430,228

LIABILITIES AND NET ASSETS

Accounts payable	\$ 1,776,410
Unearned revenue	
Subscriptions	6,257,936
Dues and other	682,920
Total liabilities	8,717,266
Net Assets:	
Unrestricted	43,886,167
Temporarily restricted	814,295
Permanently restricted	12,500
Total net assets	41,712,692
Total liabilities and net assets	\$ 53,430,228

APS Statement of Activities for the year ended December 31, 2007

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Operating revenue:		-		
Subscriptions	\$ 10,069,670	-	\$ -	\$ 10,069,670
Author charges	4,849,021	-	-	4,849,021
Membership dues	856,773	-	-	856,773
Grants	726,956	-	-	726,956
Conferences and meetings	702,721	-	-	702,721
Contributions	91,543	410,612	-	502,155
Advertising	223,316	-	-	223,316
Back issues	30,859	-	-	30,859
Other income	338,908	-	-	338,908
Net assets released from restrictions	<u>200,426</u>	<u>(200,426)</u>	<u>-</u>	<u>-</u>
Total Operating Revenue	<u>18,090,193</u>	<u>210,186</u>	<u>-</u>	<u>18,300,379</u>
Operating expenses:				
Publications	12,505,797	-	-	12,505,797
Society general	2,608,784	-	-	2,608,784
Society programs	1,122,668	-	-	1,122,668
Education	1,014,722	-	-	1,014,722
Marketing	<u>314,090</u>	<u>-</u>	<u>-</u>	<u>314,090</u>
Total Operating Expenses	<u>17,566,061</u>	<u>-</u>	<u>-</u>	<u>17,566,061</u>
Operating change in net assets	524,132	210,186	-	734,318
Net realized gain on investments	2,919,546	-	-	2,919,546
Net unrealized gain on investments	(1,306,597+)	-	-	(1,306,597)
Interest and dividends	1,495,735	-	-	1,492,735
Investment management fees	<u>(445,286)</u>	<u>-</u>	<u>-</u>	<u>(445,286)</u>
Total Investment Income	2,660,398	-	-	2,660,398
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Change in net assets	3,184,530	210,186	-	3,394,716
Net assets, beginning of year	<u>40,701,637</u>	<u>604,109</u>	<u>12,500</u>	<u>41,318,246</u>
Net assets, end of year	<u>\$ 43,886,167</u>	<u>\$ 814,295</u>	<u>\$ 12,500</u>	<u>\$ 44,712,962</u>

2007 Audit

The Society's annual audit was once again conducted Grant Thornton, LLP, and a copy of this audit was given to the Finance Committee in the spring. Grant Thornton audited the Society's financial statements in accordance with general accepted auditing standards. Grant Thornton rendered an unqualified opinion that the Society's statements presented fairly, in all material respects, the financial position of the Society at December 31, 2007 and 2006. In addition, due to the amount of Federal support received (in excess of \$100,000) an audit of the Society is required in accordance with Office of Management and Budget (OMB) Circular A-133 *Audits of States, Local Governments, and Non-Profit Organizations*. The A-133 audit includes certain tests in accordance with *Government Auditing Standards*. Grant Thornton's tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*, and the audit report noted no material internal control weaknesses.

Summary

The APS continues to do extremely well financially. The results for 2007 showed an unexpected surplus of slightly less than \$2 million primarily as a result of higher than expected revenues and lower than expected expenses in the journals program.

Council accepted the Finance Committee report.



Ida J. Llewellyn-Smith,
Chair

International Physiology Committee

Background

The primary duties of the International Physiology Committee include establishing communication and facilitating interchange between the APS, other physiological societies, and their individual members, developing programs to enhance the role of APS on the international scene and developing mechanisms for promoting interactions and exchanges of APS members and foreign scientists.

The Latin American Initiative

Events funded in 2008

APS launched the Latin American Initiative (LAI) in 2000 with the aim of strengthening the ties between APS, sister Physiological Societies in Latin America, and physiologists working in the Americas. Since its inception, the LAI has been handled by the International Physiology Committee. Each year, the initiative supports four courses/workshops/symposia that are carried out in Latin American countries with participation of APS members. The budget for each course/workshop/symposium is \$5,000. The International Physiology Committee received seven applications in 2007 for LAI funding in 2008.

Improving the Numbers and Quality of LAI Applications

Committee members involved in reviewing LAI applications expressed disappointment in the number of applications received over the last 3-4 years and in the quality of some of the applications. The Committee agreed that the guidelines for applications for LAI funding should be revised to give applicants a better idea of what information was required to maximize the chances of obtaining LAI funding. Revision of the guidelines was done in conjunction with the development of an on-line application process. All applications for LAI funding must now be made through the APS awards site <http://www.the-aps.org/awardapps>. The deadline for receipt of applications continues to be in June.

New Initiative: International Travel Awards

In 2007, the International Physiology Committee recommended that Council create an International Fellows Award to enable more physiologists from outside the US to attend and participate in EB meetings. Council asked the Committee to develop the proposal further and to indicate how it could be differentiated from other programs for which international students and fellows are eligible.

The Committee has analysed data on the numbers of international applicants and international winners of Section Awards in 2007. There are 50 categories of Sections Awards with some categories having up to three winners. Although 23.1% of APS members are international, only about 15% of applicants for Section Awards in 2007 were international and only about 12% of awards were won by international applicants. This data indicates that international participants at the EB meetings are significantly under-represented as both applicants for Sections Awards and as winners of these Awards. The Committee recommended that the APS establish a new category of Society Award, the "International Travel Award" to enable up to 10 early career physiologists working outside the US to attend the Experimental Biology Meeting and present their work.

Increasing International Membership in APS

International membership in APS has been relatively constant since 2002, hovering between 2,000 and 2,300. This lack of growth in international membership may reflect the fact that APS has not yet designed a strategy to attract more members in this category. APS is known worldwide for its best-practice programs such as mentoring young physiologists through the activities of the Women in Physiology Committee, for the democratic way in which it disperses resources to APS Sections and for supporting it members through initiatives like free color in APS journals. The International Physiology Committee would like to see APS achieve similar status in relation to its support of international members. It is necessary for APS to define the needs of international members and to ensure that that international members value their association with APS and the services that APS provides.

Increasing the International Profile of APS

APS already has good collaborative links with the Physiological Society (UK) and with the Australian Physiological Society and has a record of joining with these societies in sponsoring activities, such as the Beijing Joint Conference of Physiological Sciences 2008. These activities have benefited members of the participating societies with less cost and effort than would have been involved in "going it

alone." Obvious targets for future partnership arrangements are the Canadian Physiological Society and the Physiological Society of Japan since both of these countries provide high numbers of international APS members. In light of the growing global importance of China and India and despite the low numbers of APS members from China and India, it would also be worthwhile to consider increasing links with the Chinese Physiological Society and the Physiological Society of India.

Council unanimously approved the necessary funding for a new International Travel Award for early career physiologists working outside the US to attend the Experimental Biology Meeting.

Council approved having the Committee conduct an online survey of international members to determine how the Society could better serve its international members.



Ronald Lynch, Chair

Joint Program Committee

Experimental Biology 2008

The 2008 EB Meeting was held in San Diego April 5-9 under the meeting-wide theme of "Today's Research: Tomorrow's Health." All scientific and poster sessions were well-attended and overall enthusiasm for the meeting remains high. The primary participating societies were: APS, ASPET (pharmacology), ASN (nutrition), ASBMB (biochemistry), ASIP (pathology), AAI (immunology), and AAA (anatomy).

The APS portion of EB 2008 featured two unopposed Techniques and Technology in Physiology Workshops on Saturday entitled "Mining the Metabolome" and "Exercising the Metabolome."

APS also sponsored four "Cross-Sectional" Symposia entitled "Systems and Computational Biology: A Direction for Physiology in the 21st Century," "Regulatory Mechanisms in Diseases of Epithelial Transport," "Using Nanotechnology to Answer Physiological Questions," and "Role of Endogenous Hydrogen Sulfide Signaling in Health and Disease."

As in past meetings, APS hosted five guest societies: the Microcirculatory Society (MCS), the Biomedical Engineering Society (BMES), American Federation for Medical Research (AFMR), the Society for Experimental Biology and Medicine (SEBM), and the Association of Latin American Physiological Societies (ALACF).

Out of a total of 7,738 volunteered abstracts submitted by the deadline of November 7, 2007, 2,582 (33%) were programmed by APS; a decrease of 5% from EB 2007 when only six societies met. Eight hundred and eight abstracts were submitted by the late-breaking deadline of February 6, 2008. Of that, 153 (19%) were submitted to APS for programming.

Meeting attendance was excellent. The total meeting attendance was 15,546. This is comparable with EB/IUPS 2005 meeting, also held in San Diego, which included the same six

primary participating societies plus IUPS, and had a total attendance of 15,868. The EB08 attendance figure represents 13,420 registered scientists (including 281 high school students and teachers and 761 undergraduates), There were 2,024 exhibitors and their guests, 30 press and 72 scientific guest registrants.

APS programmed 311 sessions in total: 184 poster sessions, 60 symposia, 44 featured topics, 17 lectures, three workshops, and one refresher course, one poster discussion and a movie entitled "Flock of Dodos: The Evolution-Intelligent Design Circus," which served as the back-drop for the Claude Bernard Distinguished Lectureship presented by Randy Olson.

The Physiology InFocus program entitled, "One Physiology," was organized by Hannah V. Carey and included four symposia scheduled throughout the meeting. These were entitled "Physiology and Global Health," "Physiological Basis of Ecosystem Health," "Global Physiological 'Omics': Microbes to Medicine," and "Physiology and Lifestyle."

The lectures included the 12 Section Distinguished Lectureships, the MCS Landis Award Lecture, the WEH Section Young Investigator Award lecture, the Physiology in Perspective—The Walter B. Cannon Memorial Award Lecture, presented by Barbara A. Block; The Henry Pickering Bowditch Award Lecture, presented by Stephanie W. Watts; and The Walter C. Randall Lecture in Biomedical Ethics, presented by Jerrold Tannenbaum.

Experimental Biology 2009

The JPC met at EB 2008 to begin organizing EB 2009. EB 2009 will be held Saturday, April 18 through Wednesday, April 22 in New Orleans, LA. The meeting will mark the departure of AAI as a programming entity at EB now and for the foreseeable future.

Attendance is anticipated to be around 11,000. The abstract deadline will be November 5, 2008. EB 2008 will again provide for a late-breaking abstract deadline, anticipated sometime in February 2009.

The JPC received 17 Cross-Sectional symposium proposals of which four were approved: "Novel Insights into Nitric Oxide Signaling," "ENaC/ASIC Proteins as Cardiovascular Sensors," "Breaking the Diffraction Barrier in Imaging of Molecules in Living Cells," and "Adrenal Corticosteroid Effects in the Central Nervous System on the Long-Term Control of Blood Pressure."

In addition, two Techniques and Technology workshops will be scheduled on the first day of EB 2009; one will cover intravital microscopy and the other will be a repeat and expansion of the EB 2007 chronic instrumentation in conscious small animal workshop.

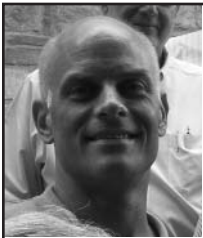
The Physiology InFocus program, organized by APS President Irving H. Zucker, is entitled "Integrative and Systems Physiology: An Approach to Understanding Organ Systems and Disease," and will feature a series of four symposia: "A Systems Approach to Disease Mechanisms," "Cardiac Ion Transport and Arrhythmias," "An Integrative and Systems Analysis of Membrane Transport," and "Omics: The changing Face of Integrative Physiology."

As is customary, the meeting will also feature sessions organized by the APS Publications Department, Careers in Physiology Committee, Public Affairs Committee, Women in Physiology Committee, Education Committee, Liaison with Industry Committee, and Trainee Advisory Committee.

Finally, the meeting will include two offerings from The Physiological Society (UK). One wholly sponsored by *The Journal of Physiology*, entitled, “*The World Within: Impact of the Intestinal Microbiota on Whole Body Physiology and Pathophysiology*,” and the other jointly sponsored by APS and TPS entitled “*Rapid Effect of Steroid Hormones*.”

Council accepted the Joint Program Committee report.

Liaison With Industry Committee



**Craig Frederick Plato,
Chair**

Symposia 2008

At EB 2008, the LWIC sponsored a symposium titled: “*IBS and Chronic Constipation: Mechanisms and Novel Treatments*,” held on the afternoon of April 7, 2008. This symposium focused on mechanisms of two GI disorders that affect 15-25% of the US population, as well as novel treatments being developed for these debilitating diseases. Speakers were Michael D. Gershon, William E.

Whitehead, Charles Baum and Caroline B. Kurtz. The topics covered included: enteric nervous system and IBS and constipation, IBS and chronic constipation: clinical studies and treatments; treating chronic constipation and IBS-C; the role of CIC-2, and Guanylate cyclase activation restores GI function. This is the eighth symposium sponsored by the Committee. We are pleased to report that the feedback on the symposium was quite positive. Peak attendance was ~90 people, and attendees related that they enjoyed and appreciated the mix of academia and industry provided in the symposium. Moreover, the topic has not been previously presented as an oral symposium at EB, and the symposium was perceived as timely and up-to-date due to recent events in the treatment of these diseases. Several attendees requested that a similar symposium is hosted every other year.

At EB 2008, the LWIC co-sponsored the Translational Physiology symposium entitled, “Recent Advances in the Renin-Angiotensin-Aldosterone System for the Investigation and Treatment of Hypertension,” held on the morning of April 6, 2008. This symposium displayed the “bench-to-bedside” scope of translational research by highlighting recent findings from transgenic mice, local renal angiotensin II production and function, as well as clinical trial data and the advance and clinical application of a renin inhibitor. Speakers were Tom Coffman, L. Gabriel Navar, R Townsend, and A Charney. The topics covered included: insights into the role of the RAAS in hypertension from transgenic mice; the renal intratubular/interstitial renin-angiotensin system in hypertension; insights into the role of the RAAS in hypertension from clinical trials; and the renin inhibitor aliskiren for the treatment of hypertension. This was the second translational symposium organized by the Committee. We estimate attendance to the symposium was at least 150 people. In addition, the

Translational Group passed out surveys to the meeting attendees to obtain feedback on the content of the presentations.

The 8th Annual Physiologists in Industry Mixer was held April 6, and was well-attended. Promotional documents were distributed at the mixer, which may be beneficial for recruiting potential new members. In addition, the slide deck created by the Committee was projected in the room allowing some discussion and mentoring of new scientists on Drug Discovery and Science in industry. The LWIC Committee would like to continue to distribute these handouts at the next year’s mixer and include information on APS Websites, APS benefits, education and career programs, APS committees’ nomination forms, as well as educational materials used by Industry scientists.

Novel Disease Model Award

The award typically recognizes one graduate student (\$500) and one postdoctoral fellow (\$800) submitting the best abstract describing a disease model that is novel or promises application to the drug discovery process. Three students and five postdocs applied (a total of five abstracts were received in 2007, an increase by three from last year). The top two abstracts included a student and a post-doc, and awards in both categories were given.

Symposia 2009

The LWIC wishes to continue its annual tradition of sponsoring high quality symposia relevant to industry and academic scientists, the committee proposed a symposium on “*Molecular Imaging of Physiological Processes in Drug Discovery*” for EB ’09. The symposium is chaired by Craig F. Plato and has commitments from four leading scientists in the field. The Committee also proposed a Translational Physiology symposium on “*Fibrosis: Signaling, Physiology, and Therapies*.” The symposium will be chaired by Kelly R. Pitts and has commitments from three leading scientists in the field.

Council approved the necessary funding for an LWIC mixer at the EB meetings on an annual basis.

Membership Committee



**John B. Buckwalter,
Chair**

The Committee recommended that the student membership category be eliminated and that two new membership categories are created: graduate student and undergraduate student. Council had approved including undergraduates as student members during their 2007 summer meeting, but the Committee requested a separate membership category because the five-year limit of the student membership is too restrictive for undergraduate students who will transition to graduate students before being eligible for regular membership. Any matriculated undergraduate student, as demonstrated by submission of verification of student status, who has an interest

in physiology, would be eligible for an undergraduate student membership. Any doctoral or masters program student who is actively engaged in physiological work would be eligible for the graduate student membership.

The Committee recommended to Council that the eligibility requirements for emeritus membership be revised to add a 10-year Regular membership requirement. The following bylaw change would be required:

SECTION 5. Emeritus Members. A regular member may apply to Council for transfer to emeritus membership if that person (1) has reached the age of 65 and is retired from regular employment or (2) has been forced to retire from regular employment because of illness or disability and (3) *has been a Regular member in good standing for a minimum of 10 years.* An emeritus member may be restored to regular membership status on request to Council.

As instructed by Council, the Committee will consider whether physiologists from underdeveloped countries should be provided with membership at reduced rates and if so, which countries should be eligible for the benefit. The Committee will provide a recommendation to Council on this issue.

Council unanimously approved a recommendation to eliminate the student membership category and create two new membership categories: graduate student and undergraduate student.

Council unanimously approved a requirement that a member must have been a regular member for ten years before being allowed to become an emeritus member.



Chris Baylis, Chair

Perkins Memorial Award For International Physiologists Committee

Applications for the Award are accepted in the spring and fall, with application deadlines of April 15 and December 15. For the April 2007 deadline, the Committee received three applications, and two were funded. For the December 2007 deadline, the Committee received three applications and funded one.

This was the first year that applications were submitted and reviewed using the online application process. This streamlined process was a complete success.

One of the questions asked on the application is how the candidate learned of the award. Most indicated that they saw the award online or learned about it from their host scientist; one applicant indicated that he learned of it from colleagues.

The Committee received six applications during 2007, three of which were funded.

Council accepted the Perkins Memorial Award for International Physiologists Committee report.



Patricia Molina, Chair

Porter Physiology Development Committee

The goal of the Porter Physiology Development Program is to encourage diversity among students pursuing full-time studies toward the PhD (or DSc) in the physiological sciences and to encourage their participation in the American Physiological Society. The program provides one to two year full-time graduate fellowships. The program is open to underrepresented ethnic minority applicants who are citizens or permanent residents of the United States or its territories. Since 1967 the program has provided support to 109 trainees.

2007-2008 Porter Physiology Fellowship Program

In 2007-2008, the program provided funding for five fellows: Antino R. Allen, Indiana Univ.; Dolores F. Doane, Univ. of Illinois; Zeliann Rivera, Univ. of Arizona; Brandi A. Thompson, Univ. of Michigan; and Lizette Warner, Mayo Clinic.

2008-2009 Porter Fellowships: New and Renewal Applications

The number of new applications received for Porter Fellowships continues to increase. A total of 18 new and three renewal applications were submitted. The stipend paid to the Porter Fellows for 2008-2009 will be \$20,772, consistent with the NIH scale. This allowed the Porter Fund to present a total of eight awards for the 2008-2009 Program.

Program Enhancements

In 2007, the APS Council approved several enhancements to improve the Porter Physiology Fellowships. The goal of these enhancements is to increase the overall impact of the fellowship on the student's career and their long-term interactions with the APS. These enhancements are being implemented for the first time with 2008-2009 Porter Fellows. Each Fellow will complete an entry and exit survey to provide better formative feedback and information on short term program impacts; staff will send an individual press release for each fellow to their hometown paper and institutional press office to provide additional visibility of the program and the fellows; each Fellow will be expected to do the following professional development activities in order to successfully complete their fellowship: submit an abstract to EB, attend EB, attend an APS professional skills training (PST) live workshop or online course or complete a comparable course, and participate in at least one APS outreach opportunity during their two-year fellowship period.

Minority Travel Fellows Program

This program is designed to encourage highly qualified underrepresented minority students to pursue professional careers in physiological/biomedical sciences. Since its inception in 1987, the APS-NIDDK Minority Travel Fellowship Program has awarded 665 travel fellowships to 470 under-

graduate, graduate, and postdoctoral students and to faculty members at minority institutions. In addition to travel support, the program provides meeting mentors, an EB orientation session, the Porter Reception, a networking breakfast, and a luncheon honoring the travel fellows.

2007-2008 Travel Awards

Five travel fellows received funding to attend the summer APS conference in 2007. In January 2008, the Committee selected 53 travel fellows to attend EB 2008 in San Diego, CA. Travel fellows received funding to attend the APS Intersociety Meeting, "The Integrative Biology of Exercise V."

2008 Porter Reception

As in the past, the Committee has held a reception for Travel Fellows, their meeting mentors, and past and current Porter and Travel Fellows. This was initiated with the goal of building stronger connections between minority students and the larger community of APS scientists, especially other minority scientists. The Porter reception again this year was extremely successful. A number of Council members, including the APS President, Hannah Carey, past Presidents Dale Benos and Doug Eaton, and incoming President, Irving Zucker, were on hand to meet the students and welcome them to the meeting.

Annual Biomedical Research Conference for Minority Students Awards

The APS, along with more than 280 graduate institutions, government agencies, foundations and professional associations, exhibited at the 2007 meeting in Austin, TX, promoting graduate study in physiology and the APS programs for minority students. The APS provided \$2,000 for cash awards for the most outstanding undergraduate presentations in physiology research.

APS K-12 Minority Outreach Fellowship

The APS K-12 Minority Outreach Fellowship, launched in 2006, seeks to foster communication between minority graduate and postdoctoral students and middle/high school minority life sciences students. The program capitalizes on the relationships that the NIDDK Minority Travel Fellows Program and Porter Physiology Fellowship program builds with minority graduate and postdoctoral students and the relationships that the Frontiers in Physiology program builds with minority middle/high school teachers. In its second year, the program supported two fellows, Jessica Clark, Washington Univ. School of Medicine and Clintoria Richards-Williams, Univ. of Alabama, Birmingham.

New Initiatives

The Committee hopes to play a more active role in monitoring the participation of minority physiologists and trainees in Society governance and activities and to promote participation where possible.

Public Affairs Committee



Michael Portman, Chair

The APS Public Affairs (PA) Committee continues to work within the framework of the 2006 APS Strategic Plan, with particular focus on PA activities in relation to the Society's efforts to drive understanding of and appreciation for physiology and strengthen public and private support.

Leadership interactions with FASEB

Throughout the past year, William Talman has been serving as the APS representative to the FASEB Board of Directors and Michael Portman (Public Affairs Committee Chair) has taken on the role of Science Policy Committee (SPC) representative. In addition to Talman's regular activities on the FASEB Board, he was also elected to serve a two-year term on the FASEB Public Affairs Committee. This committee meets twice a year to review public affairs strategy, set priorities and carry out long term planning. As a member of the Science Policy Committee, Portman sits on the Clinical Research subcommittee, which has recently worked on issues such as the new requirements for registering clinical trials, and tracking the career outcomes of trainees in clinical research.

Committee meetings

The PA committee held its first face-to-face meeting in Bethesda, MD in October 2007. One of the main topics of discussion was peer review at the NIH, and the committee decided on three action items: 1) gathering data on study section composition; 2) drafting an editorial on peer review issues; and 3) recognizing APS members who serve as peer reviewers for NIH. The committee has begun to gather data on some NIH study sections to determine whether the membership is skewed towards less experienced investigators, which could be problematic for peer review. The committee will continue to track several study sections over time to see if there is a trend that warrants the attention of the committee. The effort to draft an editorial has been put off until the changes currently being implemented at NIH are farther along.

Members of the committee also discussed ways to increase the Society's advocacy efforts and presence on Capitol Hill. One suggestion was to work with other APS committees to get our members to meet with their Members of Congress while they are here for other APS activities. Another suggestion was a series of local seminars or workshops on advocacy for scientists.

At the conclusion of the committee meeting, seven members went to Capitol Hill to meet with Members of Congress and their staff to discuss funding for biomedical research.

At its 2008 fall meeting, the committee plans to focus on the growing amount of regulatory and administrative burden that investigators have to deal with. There will also be Hill visits.

Peer Review Activities

An ongoing topic of consideration for the committee has been the peer review system at the NIH. During the past year, the committee generated a response to the request for infor-

Council accepted the Porter Physiology Development Committee report.

mation (NOT-OD-07-074) put out last summer by the NIH, as well as a response to the February 2008 Final Draft Report from the NIH Director's Office. While some initiatives have already been piloted, others will be put into practice in the coming months and the committee plans to monitor and provide feedback as necessary.

Experimental Biology 2008: Summary of PA Events in San Diego

The public affairs committee sponsored a symposium at EB 2008 in San Diego entitled "What Every Scientist Needs to Know about Ethical Issues in Biomedical Research." The session was chaired by Jane Reckelhoff, and the speakers were Michael Mann (Univ. of Nebraska Medical Center), Michael Kalichman (Univ. of California, San Diego) and Jeffrey Khan (Univ. of Minnesota). Attendance was good and the speakers addressed a wide range of topics including scientific misconduct, data handling, conflict of interest and the ethical issues associated with the development of new technologies.

Another PA event at EB was a session featuring Lawrence Tabak and Keith Yamamoto, who have been chairing the Advisory Committee to the Director's Working Group on Peer Review. They discussed the changes that were recommended in the Final Draft Report on peer review that was issued in February. Attendance at this event was very good (standing room only) and there was a line of several people to ask questions throughout the discussion period. Members of the FASEB leadership and the APS were on hand to raise points of concern that will hopefully be reflected in the implementation of the report's recommendations. There has been significant concern about a disconnect between the NIH leadership and the scientific community, mainly because NIH is making policy changes at a rapid pace without allowing adequate time for the scientific community to consider the changes and generate responses.

Experimental Biology 2009

This year the committee has chosen to focus on the topic of regulatory and administrative burden for the symposium at EB 2009. Together with the APS Animal Care and Experimentation (ACE) committee we have submitted an abstract for the Joint Programming Committee's consideration entitled "Scientists and Regulatory Burden: Navigating the Rugged Landscape." Speakers have not yet been selected, but there are several organizations that we could draw from including the Federal Demonstration Partnership and the Council on Government Relations. The session will be chaired by Portman and committee member emeritus Joseph R. Haywood.

Other Science Policy Activities 2007-2008

(All documents are available online at <http://www.the-aps.org/pa>).

Appropriations testimony: submitted to House and Senate on the FY 2009 budgets for the National Institutes of Health (Labor-HHS-Education subcommittee), the National Science Foundation and NASA (Commerce, Science, Justice subcommittee), and the Medical and Prosthetic Research Program at the VA (Military Construction and Veterans Affairs subcommittee).

Genetic Nondiscrimination: The APS is a member of the Coalition for Genetic Fairness, which was successful in getting Congressional passage of the Genetic Information

Nondiscrimination Act (GINA) after more than 10 years of stalled efforts. The APS submitted a letter in support of the legislation in its final days of consideration.

SBIR Reauthorization: As the House of Representatives considered reauthorizing the Small Business and Innovative Research (SBIR) program this year, some Members of Congress wanted to increase the funding set-aside at agencies including the NIH and NSF 2.5 to 3%. This would have diverted funds from investigator initiated research at a time when funding is already painfully tight. Thanks to an amendment sponsored by Representative Vernon Ehlers (R-MI) the increase was stricken from the legislation. Representative David Obey (D-WI) supported the Ehlers amendment in remarks on the House floor which highlighted the potential danger of increasing the set-aside in the current fiscal climate. The APS sent letters thanking both Congressmen for their work on behalf of the scientific community. This issue is likely to resurface this fall when the Senate considers SBIR reauthorization. Congress must either extend the current authorization or pass a new bill before the current law expires on September 30, 2008. The most recent version legislation in the Senate proposes doubling the SBIR set-aside to 5% over a number of years. The bill has not yet been passed out of the Small Business Committee.

Council approved the necessary funding for an advocacy effort to prepare for the 111th Congress.

Council approved the necessary funding for a one-time event to bring several APS members to Washington, DC for a series of meetings with newly elected Members of Congress.

Publications Committee

Scientific Impact/ Attractiveness to Authors

Impact factor: The 2007 Journal Impact Factors, published by ISI in 2008, made a strong showing once again with most of the journals showing increases.

Manuscripts received: Manuscript submissions were up 7% across the *AJP* journals, and 4% across all the journals, in 2007.



Kim E. Barrett, Chair

Time to first decision: Time to first decision averaged 25 days in 2007 across all the monthly original research journals.

New peer review system: New software for online peer review (eJournalPress) was chosen in 2007. This change also allowed the Publications Committee, with the input of the Editors, to streamline the review forms and make article types more consistent across the journals.

Neuroscience Peer Review Consortium: The *JN* is participating in the one-year trial of this consortium, which started in January 2008. This will allow reviews to be transmitted from a journal that rejects an article to another neuroscience

journal upon the author's request. The goal is to reduce the load on reviewers and editors and speed the publication of research results.

Time to Publication: The average time to publication for all the May 2008 issues of the research journals was 2.1 months.

Supplemental Material: A total of 396 data supplements were published in 2007; 50 of them were video clips. Approximately 27% of the non-video data supplements were published in *Physiological Genomics*. Access to supplemental data is free—a reader can view supplemental data without a subscription to the journal, even if they cannot view the entire article.

Member benefits: APS members started receiving free online access to all journals, including the Legacy Content, in 2002. Members also receive a print subscription to *Physiology*, *The Physiologist*, and *Advances in Physiology Education*. Color charges are waived for all members who are first or last authors of a paper containing color figures.

Classic Articles: As an outgrowth of the Legacy Content project, the Classic Articles Collection was rolled out on the APS web site in August 2004. Each commissioned essay is linked to its classic article, which is made free online in the Legacy Content. *Advances* continued to publish a series of articles that describe ways in which the Classic Articles can be used for teaching.

Preprints policy (Nature "Proceedings"): *Nature Preceedings* is a new publication that posts citable preprints of non-peer reviewed articles, but claims these do not preclude publication in a peer-reviewed journal. However, APS does consider this kind of posting pre-publication.

Signed reviews policy: APS has never had a policy regarding signed reviews. While it is not encouraged, if reviewers sign their reviews, they will allow the signatures to go to the author at the Editor's discretion.

Dissertations in free online sites: Students can allow their dissertations to be sold and distributed by Proquest, but they do not have permission to allow Proquest to make them free online. The following will be added to the response to such permission requests: "Proquest may produce and sell copies of your dissertation on demand, but may not make your dissertation available for free internet download."

2009 Subscription Prices: Based on the cost plus 10% model we have used since setting 2002 prices, staff recommended to the Committee that prices be increased 2% in 2009, with the intention of announcing this smaller than usual price increase, which was made possible partly by the collection of Open Access fees through APS's AuthorChoice program. Members of the Committee and the Finance Committee questioned the need to decrease the increase in prices that much (the increase was 4.6% in 2008), so a compromise of 2.5% was recommended by the Publications Committee and accepted by the Finance Committee and the Council.

AuthorChoice: The APS AuthorChoice program was developed to allow authors the ability to provide immediate free access to their work. For a growing number of our authors, providing open access is a condition of funding. The APS AuthorChoice program was opened to all APS research journals in July 2007. For a fee of \$2,000 on top of other author fees, (\$3,000 for review articles in research journals, which have no other author fees), an article will be made free im-

mediately and can be uploaded to PMC to meet funding requirements. Twenty-one authors request this option in 2007, which is 1% of all accepted articles during that period, and 10 articles during January-May 2008.

Consortia: APS continues to respond to requests from consortia of libraries or multi-site institutions, giving them a 5-15% graduated discount for 6-31+ online subscriptions, if we are not losing subscription dollars by doing so. Sales were made to 41 consortia and multi-sites in 2007, up from 34 in 2006. APS also signed an agreement with SPCNet, which will "package" the journals from FASEB and other publishers and present them to consortia and library networks.

Increase in color charge fee: The color charge to nonmembers was increased to \$350 as of July 1, 2006, and to \$400 as of July 1, 2007.

Open Access

Patient Access: Since November 2005, the public can request articles through the Patient Access link on the journal home pages. About five requests per week are received.

NIH policy: At the end of 2007, the Congress passed an Appropriations Bill that included language making the NIH Public Access Policy mandatory. This means that all NIH-funded articles must be uploaded to PMC and released to the public within 12-months of publication. The Committee approved the concept of the APS uploading articles for authors, 50% of which are NIH-funded. NIH has also recently distributed a new policy to its intramural researchers, forcing them to sign an NIH Publishing Agreement, and telling them **not** to sign any publisher's agreement. APS has sent a query to the NIH, indicating that the APS Mandatory Submission Form does more than transfer copyright, and does not transfer copyright from government employees.

Wellcome Trust policy: Wellcome and other UK funding agencies now require their funded researchers deposit their articles in PMC with a mandatory OA date six months after publication. Because that is earlier than APS' free access policy, APS allows authors to use its AuthorChoice program to meet this obligation.

Harvard policy: The Committee reviewed the recent decision by Harvard's college of arts and sciences encouraging authors to add language to the copyright transfer agreements that allows them to post articles in an institutional repository open to the world. The Committee reiterated its decision not to allow author-provided addendums to our copyright policy, the Wellcome Trust addendum being one exception.

Book Committee

The Book Advisory Committee, chaired by Ron Terjung, is making progress on having parts of the Handbook series updated, namely the Respiratory and Exercise Handbooks.

Council accepted the Publications Committee report.



**Pamela K. Carmines,
Chair**

Sectional Advisory Committee

Meeting Activities 2007-2008

Over the past year, the Sectional Advisory Committee (SAC) met three times, which included a formal teleconference in December 2007, the annual meeting at EB on April 4, 2008, and an additional teleconference in May 2008. During these meetings the Committee discussed the Stop-gap Measure for unfunded postdoctoral NIH grant requesters; assignments for the Lectureship Series at EB08; issues concerning Council recommendation for Primary/Secondary membership within sections; financial issues relevant to sectional programming (Distinguished Lecture/Featured Topics) at the Annual Meeting; APS allotment of symposium and featured topics; increasing trainee presentations on featured topics; embellishing trainee development awards; SAC interactions with APS Public Affairs initiatives; sectional initiatives for local conferences; and sectional reports.

Section Affiliation Changes

At their fall 2007 Council Meeting, Council approved the cessation of tertiary sectional membership. Members may affiliate with three sections: one as their primary interest area and two as secondary. Sections may allow primary and secondary members to have full benefits of sectional membership (voting, serving on committees, etc). The SAC concurs with this decision and will re-evaluate the sectional *statements of operational procedures* to incorporate guidelines to insure involvement of secondary members in the programmatic activities of the respective sections.

Trainee Development Award

David Brooks of the WEH section submitted a draft for a Trainee Development Award (TDA) which would allow successful candidates to attend trainee development courses, even of other societies. There was general consensus to raise the award to \$2,000. However, there was question about the appropriateness of having predoctoral candidates competing with junior faculty. It was agreed to request funding for four awards each, in three categories: predoctoral, postdoctoral (one to five year of degree) and junior faculty (within five years of assistant professorship). It was suggested that this be reviewed by the Awards Committee. The awards would be granted quarterly.

Interactions with Public Affairs Committee

At the SAC meeting at EB08, Michael Portman, Public Affairs Committee Chair, Alice Ra'anana, APS Director of Government Relations/Public Policy, and Rebecca Osthus, APS Science Policy Analyst, provided an update on activities of the Public Affairs Committee. The SAC commented that some of the recommended changes that NIH is thinking about are unusual such as eliminating the scoring of grants so that reviewers can no longer tell if an application is a revised appli-

cation. Portman commented that APS did address this issue in a formal letter to NIH.

Osthus also reported that the Public Affairs Committee is interested in recognizing members who serve on review committees and asks the group for input on how to do that. After considerable debate it was approved by SAC that APS add a question on the annual dues notice: "Have you served on an NIH Review Board over the past year?"

Sectional Reports

The majority of sections have put greater emphasis in solidifying the steering committee infrastructure to insure a more cohesive operational plan for selecting student awards, and enhancing programming within sections and across sections for the annual meeting. Some sections are also including foreign members to increase the interaction of the international community.

Enhancing trainee (pre-and postdoctoral) insolvent in has been a high priority across the sections. Many of the sections are exploring better ways to improve the quality of selecting student awards (evaluating posters, etc.) as well as soliciting sponsors for student awards.

The most encouraging and exciting transformation that has occurred within and across sections is the more proactive stance that has been taken in improving the program quality of the meetings.

Council unanimously approved the necessary funding to increase the distinguished lectureship ancillary functions allocation from \$2,000 to \$4,000.



Beverly P. Bishop, Chair

Senior Physiologists Committee

Seven senior physiologists (Charles Tipton, Harvey Sparks, Julio Cruz, Ronald Freeman, Virendra Mahesh, Vernon Bishop, and Beverly Bishop) comprise the Senior Physiology Committee. One of the primary duties of each Committee member is to "develop and maintain liaison with emeritus members and members about to retire."

This liaison is accomplished by submitting, on behalf of the Society, a personal 70th, 80th, 90th, or 100th birthday greeting. Thus, each committee member makes about three dozen mailings in the course of the year. Each greeting includes an invitation for the senior recipient to inform APS about his current activities, interests and whereabouts, and requests "words of wisdom" for younger colleagues. The historical and philosophical commentaries evoked by this invitation provide the material subsequently published in "Senior Physiologist's News" in each *The Physiologist*. By the end of this year the Senior Physiologist Committee members will have sent birthday wishes to 84 members reaching age 70, to 90 members reaching age 80, to 29 members reaching age 90, and to five members reaching

the age of 100! From these greetings, 28 response letters have been received and published in *The Physiologist*. Responses from recipients of these birthday greetings are extremely positive and enthusiastic. Whether retired or still working in their labs, the majority of seniors obviously retain their passion for science. They express in innumerable ways how fulfilling they have found life and how important APS has been during their careers.

Another responsibility of the Senior Physiologists Committee is to review applications and recommend to Council the annual awardees of the \$500 G. Edgar Folk, Jr., Senior Physiologists Award. This award is designed to support the scientific activities of a senior member. Unfortunately, the Committee received no applications in 2007.

More recently the Senior Committee has been charged to "be alert to senior physiologists who have written autobiographic or historic accounts of interest to physiologists." This activity is in concert with the recently stated goals of the *APS Living History of Physiology*.

Council accepted the Senior Physiologists Committee report.



Angela J. Grippo, Chair

Trainee Advisory Committee

TAC Trainee Survey

In 2004, the Trainee Advisory Committee (TAC) conducted the first TAC Trainee Survey to determine what each segment of APS trainees (graduate students, postdoctoral fellows, and new investigators) saw as important issues that the Society should address. The TAC conducts survey every three years to update APS' information on the needs of trainees. The survey is not limited

to APS members but casts a broader net to solicit information from the many trainees who are involved in APS activities and meetings.

In 2007, the survey was revised and implemented online. Recipients who received the email about the survey were encouraged to pass the email along to other trainees and new investigators at their institutions. More than 600 trainees completed the survey including 306 graduate students, 231 postdoctoral fellows, and 80 new investigators.

When asked what their interest was in receiving professional development on different topics, the top choices for all three groups were "mentoring and being mentored" and "writing grants." This finding has already been used in the development of a proposal to NINDS for a grant to provide support for a new APS Professional Skills Training course on mentoring. In the survey results, postdoctoral and graduate students also rated "writing scientific manuscripts" highly. Graduate students also rated "giving a talk/symposium" highly as a professional development need.

EB Symposia

Experimental Biology 2008

The 2008 TAC Symposium was entitled, "Marketing Yourself on Paper for Academic Positions," and was organized by Lacy Holowatz and Eric Berglund. It included presentations on developing academic cover letters, a research statement and a teaching philosophy along with an interactive session on developing one's teaching philosophy.

Experimental Biology 2009

In 2009, the TAC symposium will focus on "Mentoring Strategies: Beyond the Bench." Committee members Karen Sweazea and My Helms are organizing the session which will include talks on mentoring both students and employees.

Trainee Email Newsletter

The TAC sends out a trainee email newsletter monthly to keep all interested trainees advised of relevant APS and other news, notice of award opportunities, postdoctoral position openings, articles of special interest to trainees, etc. The TAC also issues a special e-newsletter issue containing a list of all relevant career sessions for trainees at the EB meeting. Each Committee member distributes the special list via their Section listservs.

Trainee Web Page

In 2006, the TAC launched an APS Trainee Website (<http://www.theaps.org/trainees/>) with a prominent link from the APS home page. The site provides information on APS programs and services as well as links and information on current topics of interest to trainees and new investigators.

In 2008, the TAC worked to update and expand the Trainee Webpage resources. The new page has drop down menus, information and links for each APS Section, a scrolling list of announcements, and rollover graphics at the bottom of the page offering instant synopses and hyperlinks to information on awards, symposia, professional development opportunities, and more. Each Section's trainee-relevant activities will be highlighted for one month at the top of the website.

APS Trainee Community and Professional Service Award

The Early Career Professional Service Award honors an early career stage APS member (graduate student, postdoctoral fellow, Assistant Professor or equivalent position) who is judged to have made outstanding contributions to the physiology community and demonstrated dedication and commitment to furthering the broader goals of the physiology community. The TAC serves as the selection committee for the award. This award of \$1,000 was given for the first time at EB 2008.

The TAC received 14 nominations for the award and selected Diane H. Munzenmaier, Assistant Professor of Physiology, Medical College of Wisconsin, as the first recipient of the APS Trainee Community and Professional Service Awardee. Munzenmaier received her award at EB 2008.

TAC Representative Outreach to New Members

In 2006, the TAC began requesting a monthly list of new student and postdoctoral members from the Membership Office so each TAC Section representative could offer a personal welcome to new members. This system has worked well with most representatives contacting new trainee members soon after their acceptance into Society membership. In addition to a personal greeting, each new member is encouraged

to: 1) sign up for his/her Section listserv; 2) sign up for the Trainee Listserv; 3) download and review the Professional Skills Listing; and 4) visit the Trainee Webpage.

Outreach to Undergraduates

TAC members are actively involved in APS efforts to encourage undergraduate student involvement in research and in EB activities.

Council has recently approved a recommendation from the Membership Committee allowing undergraduate students to hold a student membership in APS. To assist the membership Committee with this new group of students, the TAC subcommittee on undergraduate outreach has compiled a list of suggested benefits that will be relevant to new undergraduate members in APS. These will be forwarded to the Membership Committee for their consideration.

TAC members attended the EB 2008 Undergraduate Poster Session and engaged many of the undergraduate students in discussions of their research. In addition, in 2008, TAC members also collaborated with the Career Opportunities in Physiology Committee on the new EB Undergraduate Orientation Session, presenting some of the orientation talks and interacting with undergraduate students at the session tables.

Communication with Other Organizations

As part of its duty to "bring relevant matters to the attention of Council," the TAC monitors activities of other trainee-related organizations (such as the National Postdoctoral Association) and communicates with these organizations on issues directly relevant to APS members.

The TAC learned of a new National Postdoctoral Association (NPA) effort to promote a recommended "curriculum" for postdoctoral fellows. The NPA identified six areas that should be addressed in postdoctoral training: scientific knowledge; research skills; communication skills; leadership/management; responsible conduct of research; and professionalism. TAC member Jessica Clark attended the annual NPA meeting. The NPA asked for input on the draft listing and the TAC responded to their request with feedback from several committee members.

Council unanimously approved revising the TAC member appointments so that a replacement member is selected in the spring in the final year of a member's term.



Jane F. Reckelhoff,
Chair

Women in Physiology Committee

Schmidt-Nielsen Distinguished Mentor and Scientist Award

This award, first given in 2004, honors an APS member who has made outstanding contributions to physiological research and demonstrated dedication and commitment to excellence in training of young physiologists whether by mentoring, guiding

and nurturing their professional and personal development, developing novel education methods/materials, promoting scientific outreach efforts, attracting individuals to the field of physiology, or by otherwise fostering an environment exceptionally conducive to education in physiology. The award was established to recognize Bodil M. Schmidt-Nielsen, distinguished physiologist and the first woman President of the Society.

Fourteen nominations were received for the fifth Bodil Schmidt-Nielsen Distinguished Mentor and Scientist award. Members of the Women in Physiology Committee reviewed the nominations and selected Joey P. Granger, Univ. of Mississippi Medical Center as the 2008 awardee. Granger gave a talk on mentoring entitled: "Mentoring: A Lifelong Process," and an article based on the lecture will be published in *The Physiologist*. The lecture was followed by a buffet luncheon to which were invited APS Council members, the former Schmidt-Nielsen Awardees, Granger's nominators and mentees, awardees of the various APS award programs (tum Suden, Minority Travel, Porter Fellows, etc.), other trainees, and guests specified by the awardee. More than 100 physiologists attended the award presentation.

Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards

These awards provide monetary (\$500) prizes and complimentary registration for graduate students and postdoctoral fellows of either gender who give presentations at the EB meeting. To be considered for the award, the candidate must be the first author of an abstract submitted to APS and must be a student or regular member of APS at the time of application; the membership requirement was implemented in 2008. This is one of a limited number of student awards that allow international applicants.

The Women in Physiology Committee received 110 applications for the 2008 Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards. The number of applications has been steadily increasing over the past few years. At its EB meeting, the Committee discussed whether previous tum Suden awardees should be allowed to apply for the award a second time. As shown in the table below, more than a quarter of the awards each year on average go to students or postdocs who have already received a tum Suden award in a previous year. Two students have won the award three times. The Committee voted that students should not win the award a second time; the Committee feels it is important to provide opportunities for more students and postdocs to win this prestigious award than to allow students to win it multiple times.

Career Mentoring Website

The APS Career Mentoring Website provides resources for both women and men trainees who are looking for information and assistance in developing and maintaining a good mentoring relationship with more senior and junior scientists. The website includes not only links to mentoring articles and resources, but access to EB workshop materials, discussion forums, and guidelines for successful mentoring. The Committee stimulates discussion at the website through the development and publication of topic papers in *The Physiologist* with continuing discussions at the website.

MentorNet Mentoring Program

MentorNet (www.mentornet.org) is an award-winning (2001 Presidentia Award for Excellence in Science, Mathematics,

and Engineering Mentoring) nonprofit e-mentoring network that addresses the retention and success of those in engineering, science, and mathematics. It especially, but not exclusively, focuses on women and other underrepresented groups. All APS trainee members are eligible to participate as proteges. All APS members and all physiologists are eligible to participate as mentors. The Committee launched the APS MentorNet collaboration in October 2007. To date, 16 students and 32 mentors have signed up for the program. The Committee will continue to recruit students and mentors in the coming year and anticipates additional program growth as students become aware of the program.

EB Mentoring Workshop

Each year the Women in Physiology Committee co-sponsors an EB workshop with the ASPET Committee on Women in Pharmacology. APS and ASPET alternate roles in taking the lead on the content and scheduling of the session.

For EB 2008, APS was the lead organization. The Committee selected "Gainfully Employed: From Launching a Job Search to Navigating Negotiations," as the topic. This was chosen to complement the Trainee Symposium topic of "Marketing Yourself on Paper for Academic Positions." The organizers were Sinya Benyajati and Colleen Hegg (APS) and Jelveh Lameh (ASPET).

The 2009 workshop will be coordinated by ASPET. The topic will be "Pathways to Leadership: Developing Critical Skills." The ASPET organizers are Holly Brevig and Andrea del Tredici, and the APS organizer is Barbara Alexander.

Women Serving on Committees/Sections

The Women in Physiology Committee annually reviews the number of women serving on APS Committees and Section

Steering Committees. Women members currently comprise about 25% of the APS membership (22% of the regular membership and 45% of the student membership). The Committee will continue to monitor these numbers.

FASEB Excellence in Science Award

The Excellence in Science Award was established by FASEB in 1989 to recognize outstanding achievement by women in biological sciences. All women who are members of one or more of the FASEB societies are 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. The award includes a \$10,000 unrestricted research grant, funded by Eli Lilly and Company. The Chair of the Women in Physiology Committee serves as the APS representative to the FASEB selection committee for the award.

For the 2008 award, 56 applications were received, of which eight were primary APS members. Mina J. Bissell, University of Berkeley, Berkeley, CA (member of ASBMB and SDB) was selected as the 2008 award recipient. The Committee will continue to work with APS members to enhance their nomination packets. In addition, the Committee is discussing strategies to increase the number of APS women who are National Academy of Science members, as that is a critical element for successful candidates for this prestigious award. ❖

Council approved the creation of two separate awards from the current Caroline tum Suden/Frances A. Hellebrandt award- one for which graduate students only will be eligible and one for which postdoctoral fellows only will be eligible. A member would only be allowed to receive each award once.

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Postdoctoral Positions

Postdoctoral opportunity: A position is available to study molecular renal physiology at the level of the single tubule with a specific focus on the ontogeny, regulation and metabolomics of transepithelial ion transport. A variety of experimental approaches will be used including in vitro micro-perfusion and patch clamp analysis of isolated nephron segments, studies frequently paired with fluorescence imaging microscopy using functional dyes (pH, Ca²⁺, Na), standard molecular biologic techniques applied to single tubules and micro-biochemical assays. The laboratory is funded by the NIH and functions as a national core resource for investigators with questions relevant to epithelial ion transport. As such, the successful candidate will have the opportunity to actively collaborate with many national and international investigators. Ideal candidates will have earned their PhD in physiology, biomechanical engineering or a related field. Previous experience with live animal research as well as microdissection, microperfusion, micro-puncture, and/or electro-physiological techniques is preferred. Applicants should be highly motivated with excellent oral and written communication skills and the ability to work both independently and as part of a team. The accepted candidate will be expected to present research findings at scientific meetings; he/she will have the opportunity to pursue funding in related areas. Salary will be based upon experience and NIH salary levels. To apply, please send a letter of application (summarizing research interests and career goals), curriculum vitae, and the names and contact information (Email addresses and phone numbers) of three references to: Dr. Lisa M. Satlin, Departments of Pediatrics and Medicine, Mount Sinai School of Medicine, Box 1664, One Gustave L. Levy Place, New York, NY, 10029. Email: lisa.satlin@mssm.edu.

Postdoctoral Position: The Center for Human Movement Studies at the School of Applied Physiology of Georgia Tech (<http://www.ap.gatech.edu/>) is inviting applications for a postdoctoral position to work on a project "Sensorimotor Control of Locomotion after Peripheral Nerve Injury." The scope of the project will include investigations of 1) mechan-

ical response of the local musculoskeletal system to peripheral nerve injury and repair; 2) short-term compensation of muscle coordination during the recovery from self-reinnervation of selected ankle extensors in the cat, and 3) contribution of proprioception from intact muscles to adaptation of the motor patterns to the loss of feedback in selected ankle extensors. The research will involve close collaboration with the groups of Dr. Arthur English (Emory University) and T. Richard Nichols (Georgia Tech). The Center for Human Movement Studies has a six-camera Vicon system, three small Bertec force platforms, and equipment for in vivo recordings of activity, force and fascicle length in selected muscles and for peripheral nerve stimulations and recordings. The appointment will start immediately and be for two years initially and renewable up to a total of four years. Successful candidate is expected to have a background in human/animal movement science, biomedical engineering, neurophysiology or related fields. Experience in motion analysis, animal surgery and chronic physiological recordings is beneficial. Existing research programs at the School of Applied Physiology use a systems physiology approach to study movement and mobility at all levels, from molecule to organism. Research areas include muscle and exercise physiology, neural control, biomechanics, and prosthetics and orthotics. Opportunities for collaboration exist on campus and with the Emory School of Medicine, Georgia State University and the Atlanta VA Medical Center. Georgia Tech is one of the top 10 US public research universities and is situated on an attractive 400-acre campus in the heart of Atlanta, a culturally-rich and dynamic city. Please send CV, research summary, and contact information of three references to Dr. Boris I. Prilutsky at boris.prilutsky@ap.gatech.edu.

Postdoctoral Research Position: Neural Control /Exercise Physiology; A postdoctoral research position is available immediately at the Heart and Vascular Institute at Pennsylvania State University College of Medicine in Hershey, PA. Our group focuses on animal models of the neural control of the cardiovascular and respiratory systems during exercise. Specifically, we are examining the responses of thin fiber

muscle afferents to exercise and, second, we are examining the differential sympathetic responses to exercise. We are offering a highly competitive postdoctoral salary, benefits and an outstanding research environment. Applicants with an interest in integrative, cardiovascular, electrophysiology or exercise physiology are invited to contact: Marc Kaufman, PhD by Email: mkaufman@hmc.psu.edu. Penn State University is committed to affirmative action, equal opportunity and the diversity of its workforce. [AA/EEOE]

Postdoctoral research position (Cardiovascular Molecular Imaging): Postdoctoral research position available, effective immediately, in cardiovascular imaging program, Section of Cardiovascular Medicine, Yale University School of Medicine. Looking for candidate to work on NIH-funded projects involving cardiovascular molecular imaging. Position in multidisciplinary laboratory focused on targeted molecular imaging of myocardial angiogenesis, post-infarction left ventricular remodeling, coronary physiology, and myocardial mechanics. Laboratory employs small and large animal models of ischemia/reperfusion to develop non-invasive imaging approaches for assessment of myocardial angiogenesis and remodeling. NIH-funded projects involve cardiovascular imaging of large and small animals with multiple modalities, including; 3D echocardiography, single photon emission computed tomography (SPECT), microSPECT, microCT, angiography, and magnetic resonance imaging. Applicant should hold PhD and/or MD degree, and have strong background in bioengineering, cardiovascular physiology with some experience in animal surgery, and imaging. Yale is an Equal Opportunity/ Affirmative Action Employer. Applications from women and members of minority groups are encouraged. If interested, please send a statement of research interests, curriculum vitae, and the names of three references to Albert J. Sinusas, MD, Professor of Medicine and Diagnostic Radiology, Director of Animal Research Laboratories, Section of Cardiovascular Medicine, Yale University School of Medicine, PO Box 208017, New Haven, CT 06520-8017. Email: albert.sinusas@yale.edu.

Faculty Positions

Assistant/Associate Professor of Neuroscience: Ross University School of Medicine, located on the beautiful Caribbean island of Dominica in the West Indies, invites applications for a faculty post as Assistant/Associate Professor of Neuroscience. Our mission is to prepare highly dedicated students to become effective, successful physicians in the United States. Basic science coursework is taught in Dominica and students then complete their clinical studies in the United States. After passing all prerequisite examinations, Ross graduates are licensed to practice medicine in all 50 states of the US. Ross University School of Medicine is a division of DeVry, Inc (NYSE:DV) Education is the primary focus of the faculty. The academic year is divided into three semesters with a new class of students admitted each semester. Lectures and other educational responsibilities continue throughout the year. Effective teachers are sought, particularly individuals who are interested in improving medical education and who work well on a team. Research opportunities exist, primarily in the area of medical education.

Essential Duties and Responsibilities: 1) the preparation of course material (handouts etc.); 2) the delivery of effective lectures; 3) the preparation, administration, marking and reporting of examinations; 4) undergo training to qualify as a facilitator in the problem-based learning program; 5) supervise educational activities of students under actual or simulated situations; 6) prepare instructional plans and career analyses to reflect current changes in the field; 7) advise individuals or groups of students in academic matters and exercise professional judgment in referring students to appropriate personnel; 8) develop new instructional materials and teaching techniques with participation in on-going reviews and revision of curriculum planning; 9) actively participate in relevant professional activities in order to improve teaching and subject matter competence; 10) serve on faculty committees as appointed or elected, and confer with advisory groups in order to modify course content; 11) prepare, administer and evaluate examinations to assess the devel-

opment of student accomplishments; 12) participate in other activities as assigned by the department chair or executive dean. **Qualifications:** content expertise in physiology; ability to relate physiology to clinical scenarios; experience in computer-assisted delivery of course content; excellent communication skills in English; strong teaching skills and experience or evidence of potential; interest in medical education; desire for self improvement; flexibility and ability to work well on a team **Education, Experience, Knowledge and Skills:** 1) PhD, MD or MD/PhD degree in physiology; 2) enthusiastic teacher with previous teaching experience at a North American or United Kingdom medical school Ross University offers a competitive annual potentially tax-free salary, relocation assistance to and from the island, a deferred compensation program, medical benefits and 35 days of

Assistant/Associate Professor: The Department of Pharmacology and Physiology, Drexel University College of Medicine, invites applications from qualified individuals with a PhD, MD or equivalent degree for a tenure-track educator faculty position at the Assistant or Associate Professor level. We seek an individual to serve as a medical educator who will be enthusiastically committed to the teaching of physiology to medical and graduate students. Applicants with interests in curriculum development and innovative teaching methods are especially encouraged to apply. Drexel University College of Medicine has two medical school curricula consisting of an integrated and a problem-based program. The individual filling this position will be the course director for the problem-based learning program. There are opportunities to use simulation techniques and to facilitate small groups within the medical curriculum. Drexel University College of Medicine has separate tenure and promotion criteria for medical educators, clinicians, and researchers. Criteria for promotion and tenure in the educator track are based on excellence in teaching as well as scholarly activity including publications and research that preferably deals with educational approaches to the teaching of physiology. The department has graduate programs in Pharmacology and Physiology

and in Drug Discovery leading to the MS and PhD degrees. For more information please consult the following websites for Department of Pharmacology and Physiology (<http://www.drexelmed.edu>;) and on medical education at Drexel University College of Medicine (<http://webcampus.drexelmed.edu/>). Applicants should submit curriculum vitae, a statement of teaching philosophy and teaching interests, and the names of three references to Carolann.Imbesi@Drexelmed.edu. Review of applications will begin immediately and continue until the position is filled.

Assistant Professor: The Department of Physiology at Dartmouth Medical School invites applications for a tenure-track appointment at the level of Assistant Professor. Faculty members in the Department of Physiology have established research programs in areas broadly defined as neuroscience, endocrinology, immunology, respiratory control, cardiovascular and renal physiology. We seek a person interested in the Neurobiology of the Control of the Cardiovascular and/or Respiratory Systems. Individuals holding a PhD and/or MD, or equivalent degrees, with postdoctoral experience and using innovative combinations of molecular, genetic, cellular and systems approaches are encouraged to apply. Applicants should have demonstrated excellence in research and the potential for securing and sustaining independent and collaborative extramural funding. We expect a commitment to teaching in the Cardiovascular and/or Respiratory section of the medical school year-one course in Physiology and in the graduate school curriculum. Consideration of applications will commence immediately and continue until the position is filled. Interested applicants are encouraged to submit (preferably electronically in PDF format) a cover letter, curriculum vitae, a statement of research directions and teaching plans, and complete contact information of five references to: Hermes H. Yeh, PhD, William W. Brown Professor and Chair, c/o Terry T. Hall, Department of Physiology, Dartmouth Medical School, One Medical Center Drive, Lebanon, NH 03756. Terry.T.Hall@dartmouth.edu Dartmouth College is an Equal Opportunity/Affirmative Action Employer; women and minorities are encouraged to apply.

Assistant/Associate/Full Professor:

Be one of four new tenure track professors in allied medicine at the Ohio State University to contribute to the growth of our PhD program in health and rehabilitation sciences. The Ohio State University's School of Allied Medical Professions seeks four tenure-track Assistant/Associate/Full Professors to contribute to the growth of our PhD program in Health and Rehabilitation Sciences. Candidates must have an established extramurally funded research program or strong evidence of potential for developing such a program. Applicants must be credentialed or be able to contribute to one of our programs: Athletic Training, Circulation Technology, Health Informatics and Health Information Management, Health Sciences, Medical Dietetics, Laboratory Medicine, Occupational Therapy, Physical Therapy, Respiratory Therapy, or Radiologic Sciences. We are located in a major academic medical center and an extensive university that offer nearly limitless possibilities for collaboration and innovation. Join our faculty of successful scientists, master clinicians, and professional leaders and advance our reputation as a leader in Allied Health education and scholarship. For information see: <http://amp.osu.edu/futurefaculty>.

Faculty Positions in Physiology:

The Department of Physiology at Johns Hopkins School of Medicine seeks outstanding individuals with creative, rigorous and integrative research approaches to key physiological processes. Over the next three years, several junior tenure-track faculty positions will become available in the Physiology Department. Suitable candidates must have a PhD and/or an MD degree and have exceptional promise or a proven record of research achievement. Physiology integrates the growing body of information on molecular and cellular processes into functionally relevant contexts that translate into important medical advances. Presently, the Department covers a wide range of interests including membrane physiology and the biophysics of transport, computational biology, and the development and analysis of genetic disease models. We are especially interested in individuals who relate the properties of individual proteins to tissue and organ function, to development and to pathogenesis.

Individuals who use genetic, computational or other models to study integrative physiology are encouraged to apply. Successful candidates will complement the research activities within the Institute for Basic Biomedical Sciences (see <http://www.hopkinsmedicine.org/ibbs/index.html>) and will actively participate in the graduate program in Cellular and Molecular Physiology as well as medical education. Further information about the Physiology Department is available at <http://physiology.bs.jhmi.edu/>. Applicants will be assessed on an ongoing basis, with higher priority given to those who apply by 11/30/08. Applicants should provide one electronic (PDF) preferred, document that includes a curriculum vita, statement of research plans, copies of relevant publications and names with contact information of three to five referees to: physiologyrecruitment@jhmi.edu, subject line "Faculty position in Physiology." The Johns Hopkins University School of Medicine is an affirmative action/equal opportunity employer that embraces diversity.

Instructors: Mercy College of Health Sciences, located in Des Moines, IA, is a faith-based institution, guided by our mission and our core values: knowledge, integrity, compassion, reverence and excellence. Our primary purpose is to prepare students for service and leadership roles in health care. We are affiliated with Mercy Medical Center in Des Moines. Mercy College is central Iowa's only Catholic College, and is accredited by The Higher Learning Commission, North Central Association of Colleges and Schools. The commuter campus is easily accessible by major highway with nearby affordable housing for faculty and students. We currently have openings for instructors with experience teaching general anatomy and lab instruction, physiology and/or pharmacology. Qualified candidates must hold a PhD and have experience teaching in a higher education environment. Interested applicants should apply at the Mercy Medical Center website: <http://www.mercydesmoines.org>. Mercy College of Health Sciences is an equal opportunity employer and values the strength that diversity brings to the workplace.

Physician-Scientist Faculty: The Division of Pulmonary Medicine at the

Price Center for Genetic & Translational Medicine, Albert Einstein College of Medicine (AECOM) of Yeshiva University in New York City has an opening for an exceptional basic or translational physician-scientist or scientist with vision. The position requires the applicant bring truly innovative ideas, and significant extra-mural research grants or concrete evidence of such promise for procuring grant funding. The candidate program demands the study of a focused aspect of lung disease biology, physiology, pathogenesis, preventatives, diagnostics, or therapeutics. The environment at AECOM is outstanding for both fundamental and translational scientists, with strong basic departments, and robust translational talent and machinery. A competitive compensation and start-up package is routine. Applicants should respond to this notice by submitting a cover letter and NIH-format biosketch to: Simon D. Spivack, MD, MPH, Division Chief, Pulmonary Medicine, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. Email: sspivack@aecom.yu.edu [EOE]

Exercise and Nutrition Tenure Track Faculty Position:

The Department of Nutritional Sciences at the University of Missouri invites applications for a tenure-track position focusing on obesity and the metabolic syndrome. The newly expanded Department of Nutritional Sciences now spans three colleges within the University (Agriculture, Medicine, and Human Environmental Sciences) and has a mission focused on an interdisciplinary approach to the obesity epidemic. The University is noted for interdisciplinary research programs. We are seeking an outstanding scientist to work in our expanding human exercise and nutritional academic and research programs with a focus on obesity/metabolic syndrome/diabetes. Position qualifications include a PhD, MD/PhD, or MD with postdoctoral experience and a translational research focus. Preference will be given for candidates seeking an appointment at the rank of assistant professor, but outstanding investigators may be considered at the rank of associate or full professor. The successful applicant will be expected to develop an outstanding research program and contribute to Department teaching activities. This

person would be involved in campus-wide research initiatives relative to exercise and nutrition in obesity, metabolism, and the metabolic syndrome. Located midway between St. Louis and Kansas City, Columbia is a vibrant university town that is consistently ranked among the top small cities to live in America. Please send curriculum vitae, a narrative of research and educational interests, and the names and contact information of three references to:

Chair, Nutrition/Exercise Search Committee, Department of Nutritional Sciences, Colleges of Medicine/HES/CAFNR, 217 Gwynn Hall, University of Missouri-Columbia, Columbia, MO 65211; or by electronic submission (strongly preferred) to: umchesnsjobs@missouri.edu. Active review of applications will begin October 1, 2008, and the search will continue until the position is filled. The University of Missouri is very interested in promoting a diverse work environment and has programs in place, such as an NSF ADVANCE grant, to promote diversity on campus. The University of Missouri-Columbia is an Equal Opportunity, Affirmative Action Employer, and complies with the guidelines set forth in the Americans with Disabilities Act of 1990. Visit the University of Missouri-Columbia's website at <http://www.missouri.edu/>. Please direct ADA accommodation requests to our coordinator at 573-884-7278 (V/TTY).

Basic Science Educator: Background: The Medical College of Georgia and the University of Georgia are embarking on a bold plan to address the physician workforce issues of the State of Georgia, the creation of a new four-year campus, located at the University of Georgia, and supported by MCG under its LCME accreditation. This new campus, scheduled to matriculate its first class in 2010, will initially reside on the UGA campus in Athens. After 2011, the program is expected to move to the state of the art facilities of the Navy Supply Corps School, just a few miles from the UGA campus, which is being transferred to UGA following its scheduled closing as a military base. **General Responsibilities:** The MCG-UGA partnership seeks experienced basic science educators with evidence of a high level of professional achievement in medical education, to teach first- and second-

year students at the Athens campus. These faculty must have a keen interest in medical education and will focus on development, implementation, and teaching a highly integrated, organ-system based curriculum, with a strong clinical basis, taught in the context of a community-based model of medical education. Basic science faculty will have joint appointments in the MCG medical program's Basic Medical Sciences department and an appropriate University of Georgia department. We are seeking faculty with expertise in the following basic science disciplines: physiology, biochemistry, anatomy, human genetics, cell biology and neuroscience. **Qualifications:** Candidates must have a doctoral level degree, prior teaching experience in a medical or biomedical educational program, and excellent communication skills. Evidence of teaching excellence is essential, and experience with small group, team-based and/or case-based teaching is desirable. Faculty with active research programs are encouraged to apply, although current research activity is not a prerequisite. Academic rank and salary will be commensurate with experience. **Campus Information:** The University of Georgia (UGA), established by the Georgia General Assembly on January 27, 1785, is America's first state-chartered university and the birthplace of the American system of public higher education. UGA has been ranked by *US News & World Report* as one of the top 20 public universities in America in seven of the last eight years. The university's main campus in Athens, GA, covers 605 acres and includes 313 buildings. Perennially rated as one of the nation's top college towns, Athens offers a vibrant place to work and live. With Atlanta 70 miles to the west and August 90 miles to the east, Athens offers good proximity to both cities while maintaining a small-town culture and feel. The favorable climate supports an eco-friendly campus, and UGA is currently undergoing a major multi-step plan to convert much of the campus into pedestrian friendly green space. Applicants should send a letter of interest and CV to: Linda Boyd, DO, Associate Dean for Regional Campus Coordination, Medical College of Georgia, 1459 Laney Walker Blvd., CB-1817, Augusta, GA 30912. Email: lboyd@mcg.edu. Tel.: 706-721-9774 or 2812. [AA/EOE]

Assistant Professor of Physiology: The Department of Physiology, Chicago College of Osteopathic Medicine at Midwestern University (Downers Grove IL; <http://www.midwestern.edu>) invites applications for a tenure-track faculty position currently available at the rank of **Assistant Professor**. Applicants must have a PhD, at least two years of postdoctoral training, excellent oral and written communication skills and a commitment to the education of future health-care professionals. The 12-month faculty position based in the Chicago College of Osteopathic Medicine (CCOM) is supported by a competitive salary and benefit package that is funded fully by the institution. Quality physiology instruction to health profession students is integral to the mission of the Physiology department. The successful candidate will participate in team-taught physiology courses for Osteopathic Medical, Pharmacy, and Health Sciences students and in the research training of Master's level graduate students. Development of a well-focused, externally funded research program is expected. Modest startup funds and dedicated lab space are provided. The research area is open. Current strengths in the department include cardiac electrophysiology and central and peripheral neural control of the cardiovascular, respiratory and gastrointestinal systems. MWU is a NIH R15 (AREA) eligible institution. Additional sources of funding at MWU currently have included R01, R03 and R21 mechanisms, AHA, ADA, other private foundations and industry. Downers Grove is a prosperous western suburb of Chicago and there is easy train and expressway access to the academic, cultural and recreational amenities of the city and greater Chicago-land area. Review of applicants will begin in October 2008 and will continue until the position has been filled. Interested persons should submit electronically (pdf file to kohaga@midwestern.edu) a curriculum vita that includes teaching experience, a brief summary of research interests and future research plans, and the contact information for three references to: Kathleen O'Hagan, PhD, (kohaga@midwestern.edu), Department of Physiology, Chicago College of Osteopathic Medicine, Midwestern University, 555 31st Street, Downers Grove, IL 60515.

Assistant Professor of Biology: Animal Physiologist Truman State University Position Title: Assistant Professor of Biology (Animal Physiology); Available August 18, 2009; Nine-month, tenure-track appointment. Responsibilities: We seek an animal physiologist who is strongly committed to quality teaching and maintaining an active research program involving undergraduates. We are especially interested in candidates whose research specialization is in the biomedical sciences. Examples include (but are not limited to) animal reproductive physiology, endocrinology, cardiovascular physiology, and neurobiology. Teaching expectations include cell biology, physiology, and upper-level elective course(s) in the area of research specialization. There may also be the opportunity to teach introductory biology. Competitive start-up funds and a research laboratory in our new science building will be provided. Requirements: *Required Qualifications:* PhD in Biology, or related field, by August 2009; academic preparation specifically related to animal physiology; evidence of teaching effectiveness or evidence of potential teaching effectiveness; research experience in animal physiology, as evidenced by peer-reviewed publications or successful grants; research specialization that appeals to undergraduate students; evidence of effective communication skills *Preferred Qualifications:* previous experience mentoring undergraduate research students; previous teacher-scholar experience at a liberal arts institution. Rank and Salary: Assistant Professor. Salary is commensurate with experience. Truman offers a benefits package including life, health, and disability insurance, retirement contributions, and partial reimbursement for moving expenses. Program: The Biology Department is part of the College of Arts and Sciences at Truman State University. The department has 25 faculty members, approximately 500 undergraduate majors, and a small Master's of Science program. The department also offers courses in Truman's Liberal Studies Program. Teaching and research are mutually supportive activities at Truman; candidates should be strongly committed to the 'teacher-scholar' model in a liberal arts and sciences institution and to maintaining both quality teaching and an active research program involving undergraduates and MS students. A

research laboratory in our new Science building and competitive start-up funds will be provided. Truman faculty members also serve as academic advisors and have service responsibilities within the University. For more information about the Biology program, please visit <http://biology.truman.edu/>. The University: a vibrant community of teacher-scholars with a highly-selective student body, Truman is a residential university focused on providing its 5,800 students with broad liberal arts experiences and depth of study in 47 undergraduate majors, 45 minors (including Environmental Studies), and six graduate programs. Truman is Missouri's only public liberal arts and sciences university and is nationally recognized for the quality of the educational opportunities and its leadership in the assessment of student learning and continuous improvement. For the 10th consecutive year, Truman has been recognized as the No. 1 Public University in the Midwest Region (Master's Category) by *US News & World Report*. Located in Kirksville, Truman plays a vital role in the life of a rural community served by commuter air service and Amtrak. More information about Truman State University can be found at <http://www.truman.edu> and faculty positions at <http://academics.truman.edu/jobs>. Application: Send a letter of application; current curriculum vitae; statement of teaching philosophy and commitment to the liberal arts and sciences and student development; statement of research interests and goals; three recent letters of recommendation; and all graduate and undergraduate transcripts (copies acceptable, official copies of graduate transcripts required prior to hiring) to: Dr. Jon C. Gering, Animal Physiology Search, Department of Biology, Truman State University, 100 East Normal, Kirksville, MO 63501-4221; Tel.: 660-785-4597. Qualified applicants must be eligible to work in the United States. The deadline for applying is **October 27, 2008**. [AA/EOE]

Tenure-track positions in Cardiovascular Research: Announcing a major research initiative centering on the new Department of Integrative Biology and Physiology at the University of Minnesota Medical School, Twin Cities, with the recruitment of Joseph M. Metzger, PhD, as Head. The Department has launched a major recruiting initiative focused on the car-

diovascular sciences to build upon existing strengths, including those of Drs. John Osborn and Doris Taylor. We seek outstanding faculty candidates in integrative systems biology of the cardiovascular system open to all ranks (Assistant, Associate, Full Professor). The Medical School has committed significant new resources to build excellence in cardiovascular biomedical sciences, the most dramatic being recent funding for the new Lillehei Heart Research Building on campus (http://www.alumni.umn.edu/Minnesota_Biomedical_Research_Program.html). Successful candidates will have an innovative and exciting research program that embraces biological complexity from molecular building blocks to the living organism with a focus on cardiovascular biology in health and disease. Areas of interest are basic science directed at inherited and acquired cardiovascular diseases including atherosclerosis, hypertension, coronary artery disease, arrhythmias, cardiac hypertrophy, myocardial ischemia, heart metabolism/energetics, heart failure and diabetes/obesity/metabolism. Applications include gene and stem cell based discovery and therapeutics for cardiovascular performance and repair. Programs should feature a strong molecular/cellular/genetic component with major emphasis on organ and whole animal function, including imaging and state-of-the-art physiological analysis. Research programs in integrative biology and systems biology utilizing mathematical modeling and computational approaches are also sought. A commitment to excellence in teaching is essential. Minimum requirements are a PhD, MD or MD/PhD with three or more years postdoctoral training. Senior faculty candidates must have a strong record of outstanding publications and a significant record of NIH funding. These leaders will play key roles in the future recruitment and development of the Department. Applicants should apply on-line (<http://employment.umn.edu> - requisition number 156389) and include a curriculum vitae, summary of research accomplishments and future research and grant plans (no more than three pages), and arrange for three letters of reference to be sent to: IBP Faculty Search Committee, Department of Integrative Biology and Physiology, University of Minnesota, 6-125 Jackson Hall, 321 Church Street SE, Minneapolis, MN 55455. [EOE]

Research Positions

Inhalation Engineer: Center for Interdisciplinary Research in Cardiovascular Sciences and Center for Respiratory Biology and Lung Disease. Research Assistant Professor (Non-tenure track, full time) in the Department of Physiology. Primary Responsibilities include: 1) daily operation of the Inhalation Exposure Facility (equipment calibration, cleaning, aerosol generation/measurement/documentation, coordination and execution of exposures); 2) handling/monitoring of animals during exposure. 3) data generation/collection for all exposures (real time aerosol profiling); 4) training of supporting personnel (technicians, graduate students, post-docs); 5) oversight and coordination of support personnel assisting in the Facility operation; 6) contribution to all written scientific materials/documents associated with the Facility (abstracts, posters, manuscripts and grants). The ideal candidate should have a PhD in engineering (preferably aerosol engineering) and evidence of research productivity (peer-reviewed publications). However, candidates with extensive experience in the technological operation of inhalation facilities and a background in biophysical sciences are encouraged to apply and would qualify for appointment at the rank of Instructor. Review of applications will begin on September 8, 2008, and will continue until the position is filled. Applicants should submit [electronic submission preferred] a statement of research interests, current curriculum vitae and the names and contact information of three references to: bmoran@hsc.wvu.edu. Please contact Brenda Moran at 304-293-4865 or at the Email listed above if you have any questions or problems. [AA/EOE]

Research Nutritionist: GS-0630-12/13/14, \$65,315-\$119,314 per annum. The USDA, Agricultural Research Service (ARS), at the Grand Forks Human Nutrition Research Center in Grand Forks, ND, is seeking a permanent, full-time Research Nutritionist for the Nutritional Determinants of Health Management Unit. The incumbent will serve the public and conduct basic and applied research define the effects of diet, eating patterns and physical activity on appetite, food preferences and

choices, nutritional status, body composition and metabolic fitness. Incumbent will also develop methods to evaluate energy metabolism, assess appetite, and monitor physical activity levels. Utilize existing and generate new knowledge of dietary and physical activity behaviors and theories of behavior change to develop research hypotheses; evaluates potential interventions, selects and implements the most promising interventions, and interprets outcome. Incumbent reports research results from both independent and multi-disciplinary team-based research in peer-reviewed journals, popular publication and at professional meetings. The Center focuses on health roles of foods and food factors, with emphasis on food habits, physical activity, and other lifestyle factors relevant to obesity prevention and maintenance of healthy body weight. A comprehensive benefits package includes paid sick leave and annual leave, life and health insurance, a savings and investment plan (401K type), and a Federal retirement plan. For more information on the research program and/or position, please contact Isela Losek at 701-795-8370. Complete information and application procedures may be obtained at <http://www.afm.ars.usda.gov/divisions/hrd/vacancy/VAC2.HTM>. To have a printed copy of the vacancy announcement mailed to you, call 701-795-8370. Send applications to: USDA, Agricultural Research Service, Human Resources Division, Attn: Keli A. Martin, 5601 Sunnyside Avenue, Stop 5106, Beltsville, MD 20705-5106, Fax: 301-504-1535; Email: scirecruit@ars.usda.gov. Applications must be marked ARS-X8W-0250 and postmarked by September 25, 2008. US Citizenship is required and must be verified prior to entrance on duty. [EOE]

Interdisciplinary: Supervisory Research Nutritionist/Research Psychologist/Research Physiologist: (Research Leader) GS-0630/0180/0413-14/15, \$91,781-\$140,355 per annum. The USDA, Agricultural Research Service (ARS), Nutritional Determinants of Health Management Research Unit of the Grand Forks Human Nutrition Research Center in Grand Forks, ND, is seeking a permanent, full-time scientist to serve as Supervisory Scientist and Research Leader. The incumbent will be responsible for conducting independent

research and leading a multidisciplinary research unit focused on food habits, physical activity, and other lifestyle factors relevant to obesity prevention and maintenance of healthy body weight. The incumbent plans, implements, and reports the results of research on the roles of mediating factors for individuals that influence behaviors, including eating and physical activity behaviors, important to achieving and maintaining a healthy body weight. A comprehensive benefits package includes paid sick leave and annual leave, life and health insurance, a savings and investment plan (401K type), and a Federal retirement plan. For more information on the research program and/or position, please contact Isela Losek, at 701-795-8370. Complete information and application procedures may be obtained at <http://www.afm.ars.usda.gov/divisions/hrd/vacancy/VAC2.HTM>. To have a printed copy of the vacancy announcement mailed to you, call 701-795-8370. Send applications to: USDA, Agricultural Research Service, Human Resources Division, Attn: Keli A. Martin, 5601 Sunnyside Avenue, Stop 5106, Beltsville, MD 20705-5106, Fax: 301-504-1535; Email: scirecruit@ars.usda.gov. Applications must be marked ARS-X8W-0247 and postmarked by September 25, 2008. US Citizenship is required and must be verified before entrance on duty. [EOE]

Supervisory Research Nutritionist/Research Physiologist/Research Chemist: (Research Leader) GS-0630/0413/1320-14/15, \$97,781-\$140,355 per annum. The USDA, Agricultural Research Service (ARS), at the Grand Forks Human Nutrition Research Center in Grand Forks, ND, is seeking a permanent, full-time, Supervisory Research Scientist and Research Leader for the Micronutrient Absorption and Metabolism Research Unit. The incumbent will be responsible for conducting independent research and leading a multidisciplinary research unit focused on the role of foods in maintaining a healthy body weight and preventing chronic disease (e.g., diabetes, cardiovascular disease, cancer, and osteoporosis). The incumbent plans, implements, and reports the results of research on the impact of bioactive components of foods on metabolic endpoints related to physiologic, immune and/or cognitive function, and/or risks of obesi-

ty, non-insulin dependent diabetes, cardiovascular disease, and/or cancer. The incumbent plans, implements and reports the results of research designed to elucidate the specific nutritional/health values of foods, particularly those produced in the Northern Plains. A comprehensive benefits package includes paid sick leave and annual leave, life and health insurance, a savings and investment plan (401K type), and a Federal retirement plan. For more information on the research program and/or position, please contact, Isela Losek at 701-795-8370. Complete information and application procedures may be obtained at <http://www.afm.ars.usda.gov/divisions/hrd/vacancy/VAC2.HTM>. To have a printed copy of the vacancy announcement mailed to you, call 701-795-8370. Send applications to: USDA, Agricultural Research Service, Human Resources Division, Attn: Keli A. Martin, 5601 Sunnyside Avenue, Stop 5106, Beltsville, MD 20705-5106, Fax: 301-504-1535; Email: scirecruit@ars.usda.gov. Applications must be marked ARS-X8W-0249 and postmarked by September 25, 2008. US Citizenship is required and must be verified prior to entrance on duty. [EOE]

Interdisciplinary: Research Physiologist/Research Nutritionist/Research Biologist: GS-0413/0630/0401-12/13/14, Salary Range of \$65,315-\$119,314 per annum. The USDA, Agricultural Research Service (ARS) at the Grand Forks Human Nutrition Research Center, Grand Forks, ND, seeks a permanent, full-time research scientist to join a developing team to solve the problem of obesity and related illnesses. This scientist will develop a research program involving physical activity and dietary interventions to promote physiological function and health in the context of maintaining a healthy body weight. Incumbent will conduct independent and multidisciplinary, team-based research to evaluate the efficacy and effectiveness of physical activity, dietary and behavioral interventions to prevent obesity and maintain healthy body weight and will have the opportunity to develop/enhance skills in conducting human studies for the US population. A comprehensive benefits package includes paid sick leave and annual leave, life and health insurance, a savings and investment plan (401K type), and a Federal retire-

ment plan. For more information on the research program and/or position, or to have a printed copy of the vacancy announcement mailed to you, please call Isela Losek at 701-795-8370 or access information on-line at <http://www.afm.ars.usda.gov/divisions/hrd/vacancy/VAC2.HTM>. Send applications for announcement ARS-X8W-0248 to: USDA, Agricultural Research Service, Human Resources Division, Attn: Keli A. Martin, 5601 Sunnyside Avenue, Stop 5106, Beltsville, MD 20705-5106, Fax: 301-504-1535; Email: scirecruit@ars.usda.gov. Applications must be marked ARS-X8W-0248 and postmarked by September 25, 2008. US Citizenship is required and must be verified before entrance on duty. [EOE]

Graduate Research Opportunity: Exercise Physiology/Metabolism or Biomechanics; Positions available for several highly motivated graduate students to study exercise physiology/metabolism or biomechanics at the University of Southern California, Los Angeles. In exercise physiology, our research focuses on metabolism (carbohydrates and lipids) and its regulation during exercise, with aging and in pathological conditions (type I diabetes, type II diabetes and obesity). In biomechanics, our research focuses on the mechanisms humans use to generate and control momentum during multi-joint movements (athletic, ergonomic and clinical populations). Courses for doctoral students are offered within and outside of the department in areas including biomedical engineering, computer science, integrative and evolutionary biology, physiology, gerontology and statistics. Doctoral students enter one of two interdisciplinary degree programs available at USC: Biomedical Engineering (biomechanics) or Integrative and Evolutionary Biology (biomechanics and exercise physiology). All graduate students receive appointments as teaching or research assistants with stipends, health benefits and tuition remission. These may be renewed on an annual basis. Students are also encouraged to apply for graduate fellowships. If you are interested in learning more about the biomechanics program, please contact Dr. Jill McNitt-Gray at mcnitt@usc.edu. If you are interested in learning more about the exercise physiology/metabolism program, please contact Dr. Lorraine Turcotte at turcotte@usc.edu.

Research Scientist: Renal Research Institute of New York Medical College Department of Medicine invites applications for a Research Scientist position (supported by private funding) to study urine proteome. Prior experience in protein chemistry is required. Interested candidates should Email CV and reference letters to: Professor Michael S. Goligorsky, MD, PhD, New York Medical College, Department of Medicine, Valhalla, NY 10595. Email: michael_goligorsky@nymc.edu.

Animal Physiologist/Neuroscientist: The Department of Biology at Rhodes College seeks qualified applicants for a tenure-track or tenured faculty position to begin in August of 2009. Candidates must have a PhD and a strong interest in teaching and engaging students in research at the undergraduate level. We especially seek candidates with the experience to guide our recently established Neuroscience Program. Normal teaching responsibilities will include an upper-level animal physiology course and a neuroscience course, each with laboratory, plus participation in the introductory biology course covering organismal biology or a neuroscience senior seminar. Information about the Department of Biology may be found at <http://www.rhodes.edu/biology>. Rhodes' location provides opportunities for research collaboration with investigators at St. Jude Children's Research Hospital and the University of Tennessee Health Science Center. Review of applications will begin October 1, 2008 and continue until the position is filled. Applicants should submit a letter of application including a statement of teaching philosophy and a research plan, a curriculum vitae, and three letters of recommendation to the following address. Electronic submissions will not be accepted. Gary Lindquister, PhD, Department of Biology, Rhodes College, 2000 N. Parkway, Memphis, TN 38112. Tel: 901-843-3564; Email: glindquister@rhodes.edu. Founded in 1848, Rhodes College is a highly selective, private, coeducational, residential college located in Memphis, TN. We aspire to graduate students with a lifelong passion for learning, a compassion for others, and the ability to translate academic study and personal concern into effective leadership and action in their communities and the world. We encourage applica-

tions from candidates interested in helping us achieve this vision. Memphis has a metropolitan population of over one million and is the nation's 18th largest metropolitan area. The city provides multiple opportunities for research and for cultural and recreational activities. We are an equal opportunity employer committed to diversity in the workforce (<http://www.rhodes.edu/about/376.asp>).

Administration Positions

Chair of Physiology: Ross University School of Medicine is accepting applications for the Chair of Physiology. Physiology, along with the other pre-clinical basic sciences, is taught on our Caribbean campus on the beautiful island of Dominica in the West Indies. The campus provides the latest teaching facilities and technology and utilizes modern medical education philosophy and teaching approaches to produce well-trained physicians. Following successful completion of Step 1 of the USMLE, our students carry out their clinical studies in the United States. After passing all prerequisite examinations, Ross graduates are licensed to practice medicine in the US. Ross University School of Medicine emphasizes curricular innovation and medical education research. Since 2004 Ross has placed more individuals into US medical residencies than any US medical school. Ross University School of Medicine is a division of DeVry, Inc (NYSE:DV). **Job Description:** The chair of physiology will lead the department in providing excellent instruction in physiology as part of a well-integrated medical curriculum. This will include development and incorporation of evolving educational knowledge and utilization of new technologies. **Duties and Responsibilities:** Oversee the overall operation of affairs related to the department of physiology; recruit, interview, and hire faculty within the department of physiology; mentor and provide support for faculty members toward promotion within the department; evaluate and recommend to the dean merit raises of faculty based on performance; supervise the implementation of policies and procedures for educational and administrative affairs and maintain currency of procedures and programs; participate in faculty and chairs meetings with the dean; make recommendations regarding

appropriate faculty appointments to committees at the request of the dean; foster faculty participation in integration of the curriculum; hold regular departmental meetings; prepare annual budget for the department; facilitate departmental contribution to continuing medical education and clinical grand rounds; participate in teaching within the department and in Problem Based Learning; advocate for: *a*) integration of material among the basic science disciplines as well as with the clinical sciences; *b*) incorporation of active learning (including use of audience response systems); *c*) utilization of adult learning methods; *d*) use of technology such as eLearning; contribute to curricular development; work to achieve improvement in departmental performance on student test scores, especially those with national norms; participate in learning about the science of education; establish departmental goals aligned with institutional goals; assign faculty appropriately to cover curricular needs; contribute to community; promote academic scholarship in self and faculty within department. **Skills and Abilities:** We are seeking an individual with a record of outstanding achievement as a scholar and evidence of teaching success and/or senior-level academic administrative experience. The individual must be able to effectively communicate issues vital to the university both verbally and in writing both within the institution and to outside constituencies such as business and governmental leaders. The position requires a well-organized and self-directed individual who is a team player with the ability to think strategically, build consensus, and engage the faculty, staff, and administration in collegial and constructive decision making. Experience with assessment programs and a record of leading successful curricular and programmatic changes based upon assessment results will be considered a major asset. The desire and ability to advance the university in curricular and other academic initiatives is important for this position. A demonstrated ability to utilize and incorporate technological innovation to advance and support learning is an important asset. **Required Credentials and Education:** earned MD or PhD degree from an accredited institution of higher education; a strong record of scholarly achievement and progressive teaching/leadership; medical education experience in a US medical school. The

candidate should qualify for the level of full professor. Ross University offers a competitive annual salary, relocation assistance to and from the island, a deferred compensation program, medical benefits, and 35 days of paid annual leave along with opportunities for professional development. For further information concerning this position, you may contact the search committee chair at mthomas@rossmed.edu or the faculty recruiter, Laura Welke, at 732-978-5300 ext: 3602. **To apply**, please visit our website <http://www.rossu.edu>; select Careers and complete our online application process. [EOE]

Dean of the Division of Kinesiology:

The University of Michigan at Ann Arbor invites nominations and applications for the position of Dean of the Division of Kinesiology. From its beginning as the Department of Physical Education over 100 years ago, to the formation of an independent academic unit in 1984, the University of Michigan has been home to one of the leading programs in the study of human movement in the United States. During the past 25 years, important research and scholarship have continued to grow, along with program offerings. Now, with 29 full-time faculty and more than 800 undergraduate and 50 graduate students, the Division of Kinesiology offers undergraduate programs in Athletic Training, Movement Science, Physical Education, and Sport Management, and graduate programs including three Masters' programs and a comprehensive PhD program. The Division of Kinesiology is one of the 19 academic units within the University of Michigan headed by a dean. Reporting to the Provost and Executive Vice President for Academic Affairs, the next Dean of the Division of Kinesiology will be a recognized leader in the field, setting the intellectual tenor and scholarly standards for Kinesiology. S/he must draw on administrative acumen and academic rigor to position the Division at the forefront of an increasingly competitive field, and maintain and expand upon the Division's commitment to excellence in education and research. In addition, the Dean will secure diverse resources for the Division through deft fund-raising. **Qualifications:** The ideal candidate is a dynamic and energetic leader with administrative experience and exceptional judgment along with the vision and commit-

ment to take an already excellent unit within an internationally recognized research university to a leadership position as the nation's preeminent Kinesiology program. Enthusiasm for continuing and enhancing Kinesiology's collaboration with the other schools and units within the university is essential. Candidates will demonstrate a strong commitment to diversity in all its forms and the capacity to be an able and energetic fundraiser. An earned doctorate in a relevant discipline is required, with a notable record of scholarly accomplishment and other qualifications appropriate for appointment as a full professor in Kinesiology. Nominations and/or applications, accompanied by a letter of interest, current curriculum vitae, and the names and contact information of three references, should be submitted to: Marjorie Stockford, Julie DeSorgher, Auerbach Associates, Inc., 385 Concord Avenue, Suite 103, Belmont, MA 02478. Electronic submissions preferred: email caitlin@auerbach-assc.com. The

University of Michigan, as an affirmative action/equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action.

Chair of the Department of Integrative Physiology: at the University of North Texas Health Science Center at Fort Worth. The Graduate School of Biomedical Sciences Department of Integrative Physiology at the University of North Texas Health Science Center at Fort Worth (UNTHSC) is seeking applications for the position of Professor and Chair of the Department of Integrative Physiology. Candidates must possess a MD, DO, PhD or equivalent doctoral degree, have academic leadership experience or potential and a proven record of funded research in the areas of cellular and molecular physiology. The candidate would be expected to recruit and hire several new faculty and to lead the Department into national prominence.

The Department of Integrative Physiology currently has 11 full-time faculty, two research faculty and 25 graduate students. The current core of the department's research and training is the physiology and pathophysiology of the cardiovascular system. The research and training activities ongoing are currently supported through multiple federal and non-federal grants. Additional information may be obtained at the following website: <http://www.hsc.unt.edu/departments/intphysio/>. Interested applicants should submit their CV, a letter of interest, and the names and contact information of at least three references online at www.unthscjobs.com. In addition, applicants should send a statement of career objectives electronically to Dr. James W. Simpkins at: jsimpkin@hsc.unt.edu. Applications will be entertained and reviewed until the positions have been filled. [AA/EOE]. UNTHSC is an EEO/Affirmative Action institution. ❖

People & Places

Sigmund Appointed to Research Chair



Curt D. Sigmund, professor of internal medicine and molecular physiology and biophysics in the University of Iowa Roy J. and Lucille A. Carver College of Medicine, has been named the Roy J. Carver Chair in Hypertension Research.

The five-year appointment was effective July 1.

The endowed chair was established through gifts to the UI Foundation by the Roy J. Carver Charitable Trust of Muscatine to support research in cardiovascular medicine at UI.

Sigmund is internationally known for his research examining the genetic basis of hypertension, renal and neural mechanisms causing hypertension and the regulation of blood vessel function.

He has been a UI faculty member in internal medicine and molecular physiology and biophysics since 1991 and leads the Roy J. Carver Program of Research Excellence in the Functional Genomics of Cardiovascular Disease and the UI Center for Functional Genomics of Hypertension, which currently is funded with a five-year, \$10 million grant from the National Institutes of Health. He also is director of the UI Transgenic Animal Facility.

Frank C. Barone is currently a Visiting Professor of Neurology and Director of Basic Research in Cerebrovascular Disease, at SUNY Downstate Medical Center, Brooklyn, NY. Prior to this position Barone was a Professor in Discovery Translational Medicine at Wyeth Research, King of Prussia, PA.

Michael F. Bergeron is currently Director at Sanford USD Medical Center Sioux Falls, SD. Bergeron was formerly an Assistant Professor at Medical College of Georgia, Augusta GA.

Lothar A. Blatter has moved to Rush University Medical Center, in the Department of Molecular Biophysics and Physiology, Chicago, IL. Prior to this position Blatter was a Professor at Loyola University, in the Department of Physiology, Maywood, IL.

John W. Calvert has joined the Emory University School of Medicine, Assistant Professor, Department Surgery, Crawford Long Hospital, Atlanta, GA. Prior to this position, Calvert was a Postdoctoral Fellow at Albert Einstein College of Medicine.

Chad Clayton Carroll is currently an Assistant Professor in the Department of Physiology at Midwestern University, Glendale, AZ. Prior to this position Carroll was Postdoctoral Fellow in the Human Performance Lab at Ball State University, Muncie, IN.

Jeffrey S. Gilbert is currently an Assistant Professor in the Department of Physiology and Pharmacology at the University of Minnesota Medical School, Duluth, MN. Prior to this position Dr. Gilbert was an Instructor in the Department of Physiology at University of Mississippi.

Angela J. Grippo is currently an Assistant Professor in the Department of Psychology at Northern Illinois University, DeKalb, IL. Prior to this position Grippo was Postdoc Fellow in the Department of Psychiatry and Brain Body Center at University of Illinois, Chicago, IL.

Chad R. Hancock is currently an Assistant Professor in the Nutrition, Dietetics and Food Science at Brigham Young University, Provo, UT. Prior to this position Hancock was Postdoctoral Fellow in the Department of Internal Medicine and Applied Physiology at Washington University, St. Louis, MO.

Mark J. Holness has joined Barts and the London School of Medicine and Dentistry Institute of Cell and Molecular Science London United Kingdom. Prior to his new position Holness was at Queen Mary University, Department of Diabetes & Metabolic Medicine.

Thomas J. Jones is currently an Assistant Professor, NEOUCOM, Department of Pharmaceutical Sciences, Rootstown, OH. Prior to this position, Jones was a Visiting Assistant Professor, University of Toledo, Department of Pharmacology, Toledo, OH.

Meghan Kelly is currently Postdoctoral Fellow, in Centre of Inflammation and Metabolism at the University of Copenhagen, Copenhagen, Denmark. Prior to this position Kelly was Predoc Fellow, Section of Endocrinology Diabetes and Metabolism at Boston University School of Medicine, Boston, MA.

Ryuta Kinugasa is currently a Research Assistant, Waseda University, Tokorozawa, Japan. Prior to this position Kinugasa was Postdoctoral Researcher, University of California, San Diego.

Nathan K. LeBrasseur is currently a Senior Principal Scientist at Pfizer Global Research & Development Groton, CT. Prior to his new position LeBrasseur was a Postdoctoral Fellow in the Department of Medicine at Boston University School of Medicine, MA.

Thomas Joseph Mariani is presently Associate Professor, University of Rochester Center for Pediatric Biomedical Research Rochester, NY. Mariani was formerly at Brigham & Women's Hospital, Assistant Professor Department of Pulmonary Medicine, Boston, MA.

Bradley K. McConnell is presently an Assistant Professor at the University of Houston, College of Pharmacy, Department of Pharmacological & Pharmaceutical Sciences, Houston TX. McConnell was previously at the University of Maryland Department of Physiology, Baltimore MD.

Tara L. McIsaac is currently a Professor in the Department of Biobehavioral Science at Teachers College/Columbia University, New York, NY. Prior to this position McIsaac was Postdoc Research Associate in the Department of Kinesiology at Arizona State University, Tempe, AZ.

Kevin Milne is currently an Assistant Professor, University of Windsor, Department of Kinesiology, Windsor, Canada. Prior to this position Milne was a Postdoctoral Fellow, University of Western Ontario, Department of Kinesiology, London, Canada.

Joseph P. Mizgerd is currently a Professor, in the Pulmonary Center at Boston University School of Medicine, Boston, MA. Prior to this position Mizgerd was Assistant Professor, Department of Physiology Program, Harvard University School of Public Health, Boston, MA.

Risuke Mizuno is currently at Kissei Pharmaceutical Co., Pharmacology R & D, Azumino-City, Japan. Prior to this position Mizuno was an Assistant Professor, Shinshu University, Department of Physiology, Matsumoto, Japan.

Rikuo Ochi is currently an Adjunct Professor in the Department of Biochemistry and Molecular Biology, University of South Alabama, Mobile, AL. Prior to this position Ochi was Visiting Professor in the Department of Physiology at New York Medical College, Valhalla, NY.

David L. Osborne is currently an Associate Professor, Texas Tech University, The Paul L. Foster School of Medicine, El Paso, TX. Prior to this position Osborne was Associate Professor, State University West Georgia, Department of Biology, Carrollton, GA.

Lee Joseph Quinton is currently at the Boston University School of Medicine, Pulmonary Center, Boston, MA. Prior to his new position Quinton was at Harvard University School of Public Health, department of molecular and Integrative Science, Boston MA.

Usha Raj is currently Professor and Head of Pediatrics at the University of Illinois, Chicago, IL. Prior to this position Raj was a Professor in Pediatrics, Harbor-University of California, Los Angeles, CA.

Marcella A. Raney is currently an Assistant Professor, Occidental College, Los Angeles, CA. Prior to this position Raney was a Professor, University of Southern California, Los Angeles.

David Rutlen recently affiliated with the University of Arkansas for Medical Sciences, Department of Cardiovascular Medicine, Little Rock AR. Rutlen had been associated with the Medical College of Wisconsin, Department of Cardiology Milwaukee, WI.

Susumu Sakata, a Professor, recently moved to Kio University, Faculty of Health Science, Nara-ken, Japan. Prior to this position, Sakata was Associate Professor, Nara Medical University Department of Physiology II, Nara, Japan.

Sorachai Srisuma is currently an Instructor at Brigham and Women's Hospital, Department of Physiology, Boston, MA. Prior to this position Srisuma was a Postdoctoral Research Fellow, Mahido University, Department of Pulmonary & Critical Care Medicine, Bangkok, Thailand.

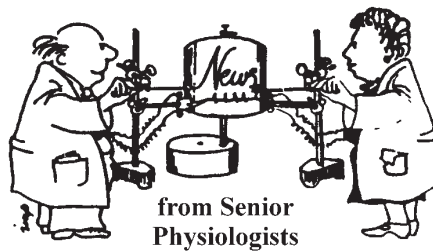
Karen Sweazea is currently an Assistant Professor, Arizona State University, Polytechnic, Mesa, AZ. Prior to this position Sweazea was a Postdoctoral Fellow, University of New Mexico, Albuquerque. ❖

Letter to Beverly Bishop

Francis P. Chinard writes: "Thank you for providing me with the opportunity to report on activities I might be engaged in on entering my tenth decade. Geographically, at this writing, I happen to be on Martha's Vineyard enjoying a mercilessly hot, hazy and humid period but happily with occasional wafts of fresh, cool air. My usual habitat is Montclair, New Jersey, close to Newark where sits my academic institution: the New Jersey Medical School of the University of Medicine and Dentistry of New Jersey. I still carry on appointment there, Emeritus Distinguished Professor of Research Medicine and Physiology. The title is essentially non-functional except for some ceremonial occasions and a few lectures and elective course offerings. The institution has had some tribulations since (not because) I joined it in 1968 and may yet see some trials.

"My current activities include writing essays on the parlous state of the medical profession. Having retrogressed from being a provider to becoming a consumer of medicine I have 'expertise' on both sides of the fence. I can best summarize my views by suggesting that traditionally trained physicians are members of an endangered species and that abandoning the patient-physician relationship may be fatal to the medical profession. Physiology will, of course, remain but its impact may be delayed as its concepts and those of pathophysiology get buried in snowstorms of technical reports.

"Other current efforts derive from several series of elective courses ranging from the damage that can be inflicted by nuclear weapons, the history of medicine with a pathophysiological emphasis, and current issues in medicine ranging from ethical matters, and clinical research, to the possible effects of the current emphasis on reductionist approaches on medical education and practice. Osmotic pressure, diffusion processes, and water transport remain topics of importance for me. Manuscripts on some of these topics are in the works. For my family, and, perhaps a few others, I am composing my memoirs and participating in the development of a history of the New Jersey Medical School from its origins as the Seton Hall College of



Medicine to its present somewhat troubled state but producing excellent physicians.

"As to advice to younger colleagues, I can offer very little beyond using caution with respect to accepting administrative responsibilities. Beware of deans. If you are foolish enough to become one (I almost did) prepare to increase the number of your enemies and to lose some of your friends. More importantly, if in your research you hit on something that upsets current dogma, be prepared for resistance and sometimes obstruction, do not lose heart; keep at it. A breakthrough is not always immediately accepted and applicable. Thomas Jefferson pointed out, in a congratulatory letter to Jenner on the development of the small-pox vaccine, that Jenner's discovery had an immediate effect on the practice of medicine, whereas, in 200 years, Harvey's discovery of the circulation had no discernable effect on the practice of medicine. Today, you can expect much more rapid translation from the experimental laboratory to the clinical application.

"I owe a great debt to my teachers, and mentors and to my friends, collaborators, and colleagues. I have had a most rewarding time thanks to the understanding and support of my wife of some 65 years and of our children."

Letter to Hannah Carey

Julian L. Ambrus writes: "Thank you very much for the beautiful gift for being a member of the APS for 50 years. I was out of town when it arrived and unfortunately the enclosed letter was lost. I assumed among others you requested me to write a note for the 'Senior Physiologists' News' in *The Physiologist*. I feel somewhat guilty since I did not respond earlier either when I received a congratulation on my 80th birthday. At that time I was also away on a visiting professorship.

"I retired from the Roswell Park Cancer Institute with the title of Director of Cancer Research in 1992. I was also Professor and Chairman of the Department of Experimental Pathology/Pathophysiology in the Roswell Park Division of the State University of New York at Buffalo and Graduate School. I continue as a senior member which allows me to continue to have graduate students working with me for advanced study.

"During my tenure 102 students graduated with MA or PhD degrees from the Department, and of these 37 were directly advised by me. Twenty-two of the students were in the MD-PhD program and I continued to work with them as medical students, residents or fellows. I continue in the Medical School as Professor of Internal Medicine. My headquarters moved across the street from the Roswell Park Cancer Institute to Buffalo General Hospital, part of the Kaleida Health System, the main teaching hospital for our medical school.

"My wife, also an APS member, Clara M. Ambrus, MD, PhD, FACP, Professor of Pediatrics and Pharmacology, and my son, Julian L. Ambrus, Jr., MD, Associate Professor of Medicine and Director of the Autoimmune Research Group, as well as Head of the Rheumatology Clinic, also work in the same hospital. We are continually mixed up receiving each other's mail. Of our seven children, three are MDs, two with additional science degrees; one is PhD, and the others are MBAs and journalists. I still have a small research group and periodically residents and fellows are assigned to my laboratory for research blocks as part of their curriculum. I'm still at work every day and travel only when I'm invited to give lectures out of town.

"For 20 years I taught a four-semester course in Pathophysiology and recently I received a request to write a textbook on this subject. My colleagues and I are considering this at the present time.

"I much appreciate the work of the APS and I believe that we should also emphasize research and teaching in the area of pathophysiology." ♦

The Wine Wizard Peter Wagner

Dear colleagues:

Whites:

2007 Zolo Torrontes (Mendoza, Argentina) \$9. I had never come across the Torrontes grape until this one. It has a tropical, floral nose with herbal and lychee notes. On the palate it is lush with just off-dry tropical fruit and a hint of Muscat grapiness. It is clean and has good acid, but with the sweet hint, needs to be really quite cold. Interesting and definitely worth the price if you can find it.

2007 Veramonte Sauvignon Blanc (Casablanca valley, Chile) \$8. New Zealand style gooseberry nose, a touch of sulfur that quickly blew off, and rich herbal gooseberry palate and medium to lower acid levels for those who find New Zealand SB's too tart. A nice wine at 2/3 the New Zealand price.

2007 Calina Reserva Chardonnay (Casablanca valley, Chile) \$6. If you like the oaky, buttery style of Chardonnay, this one is a very good deal at the price. Nose has lots of vanilla/oak and medium tropical fruit. The palate has excellent up front tropical/citrus fruit while the finish emphasizes the vanilla oak more.

2005 Bernardus Chardonnay (Monterey, CA) \$13. In contrast to the above, and despite a lot of oak (and tropical fruit) on the nose, the palate has more fruit and less oak, good acidity and while ripe, is not buttery or over-oaked. Tastes fresh despite its age.

2007 Spy Valley Sauvignon Blanc (Marlborough, New Zealand) \$12. Classic NZ style with lots of forward herbal gooseberry and lime on the nose and palate, very clean, quite high lemony acid. That said, I still prefer Whitehaven SB from the same region at \$13 (I have had this in the column before, so am not giving it its own place this time). The two are very similar, but Whitehaven just has more stuffing.

Reds:

2006 Feudo Arancio Pinot Noir (Sicily, yes!!) \$7. When was the last time you had a drinkable Pinot Noir at \$7? This is pleasant, varietal wine that is good value even if it does not knock your socks off. Nose is typical with spice, oak and cherry; palate has quite good spicy cherry fruit and some oak. A bit simple, but easy to quaff. Makes the column because of price.

2007 McManis Pinot Noir (California) \$10. This is a very good wine, compares



Peter Wagner

with PN at twice the price. It has a forward nose of cherry, vanilla, spice, cola.

The palate is a bit light but has decent cherry fruit, soft tannin, and good acidity.

2005 Las Rocas Garnacha (Grenache), Spain \$9. The nose has a touch of black pepper and spice, but not too much fruit. The palate however has excellent floral red/dark berry fruit with medium tannin and decent acid. Not too oaky, this is a good party wine for the lab. Great with grilled stuff.

2006 Clos de los Siete Red Blend (Mendoza, Argentina) \$16. This wine is 45% Malbec, 35% Merlot, 10% Cabernet Sauvignon and 10% Syrah, and packs 15% alcohol. The nose has vanilla, sweet dark cherry and plums. A bit of sulfur swirls off quickly. The palate is rich and soft with dark berry, spice and earth. It has good acid, good length, and comes across as almost sweet, due to ripe fruit plus high alcohol. This wine has depth and complexity and is very easy to drink.

Have fun! ❖

John F. Perkins, Jr. Memorial Award for International Physiologists

From: The American Physiological Society

Award Amount: Up to \$5,000

Contact: Executive Office

Deadlines: April 15 and October 15

The John F. Perkins, Jr. Memorial Award for International Physiologists promotes cultural exchange and scientific collaborations by providing supplementary aid to families of foreign scientists working for a minimum of 3 months in the U.S. In this way, young scientists are able to bring their families and thus make full use of the cultural exchange as well as the scientific benefits associated with an international collaboration.

The program presupposes that the visiting scientist and his/her host already have made arrangements for scientific collaboration and have sufficient funds to cover the needs of the visiting scientist.

Several awards are granted each year. Application for the Perkins Award must be made jointly by the host, who must be an APS member, and the visiting scientist. The recipient receives funds generally not exceeding \$5,000. The size of the award depends on the estimated needs over and above the amount already available to the visiting scientist.

Deadlines: For scientific visits beginning between January 1 and June 30, the application is due on October 15 the year before with notification by December 15. For scientific visits beginning between July 1 and December 31, the application is due on April 15 of the same year with notification by June 15.

Applications will now only be accepted via online submission. Please go to <http://www.the-aps.org/awardapps> to apply.

October 31-November 1

International Congress Laser Medicine, Laser Florence 2008, Florence, Italy. *Information:* Internet: <http://www.laserflorence.org/>.

November 11-15

58th Annual Meeting of the American Society of Human Genetics, Philadelphia, PA. *Information:* The American Society of Human Genetics, 9650 Rockville Pike, Bethesda, MD 20814. Tel.: 1-866-HUM-GENE; Fax: 301-634-7079; Email: society@ashg.org; Internet: <http://www.ashg.org/2008meeting/>.

November 18-23

XXX World FIMS Congress of Sports Medicine, Barcelona, Spain. *Information:* Conference Brochure

November 23-27

4th European Congress of the International Federation for Medical and Biological Engineering, Antwerp, Belgium. *Information:* Conference Secretariat, Semico NV, PCO Services, Korte Meer 16, 9000 Gent, Belgium. Tel.: +32 9-233.86.60; Fax: +32-9-233.85.97; Email: mbec2008@semico.be; Internet: <http://www.mbec2008.be/default.html>.

November 27-30

The 11th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI), Paris, France. *Information:* ComtecMed, Congress Organizers, 53 Rothschild Boulevard, PO Box 68, Tel Aviv, 61000, Israel. Tel.: +972-3-5666166; Fax: +972-3-5666177; Email: cogi@comtecmed.com; Internet: <http://www.comtecmed.com/cogi/paris/default.aspx>.

December 2-4

The 5th Annual Gilbane Conference, Boston, MA. *Information:* Lighthouse Seminars, LLC, 763 Massachusetts Avenue, Cambridge, MA 02139. Email: info@lighthouseseminars.com; Internet: <http://gilbaneboston.com/index.html>.

December 4-6

Second Congress of the Asia-Pacific Council on Contraception (APCOC), Macau, China. *Information:* Comtec China, Eagle Business Consultant (HK) Ltd., 175 Xiang Yang Road South, Shanghai 200031, China. Tel.: +86 (21) 5466 0451; Fax: +86 (21) 5466 0450; Email: apcoc@comtecmed.com; Internet: <http://www.comtecmed.com/apcoc/2008/Default.aspx>.

December 4-7

Advances in Inflammatory Bowel Diseases 2008 Crohn's & Colitis Foundation's Clinical & Research Conference, Hollywood, FL. *Information:* Imedex Customer Service, 4325 Alexander Drive, Alpharetta, GA 30022, Tel.: 770-751-7332; Fax: 770-751-7334; Email: meetings@imedex.com; Internet: <http://www.advancesinbd.com>.

December 7-11

American Society for Matrix Biology (ASMB) 2008 National Meeting, San Diego, CA. *Information:* Program Chair: Bill Parks. Tel.: 206-897-1303; Email: parksw@u.washington.edu; Internet: <http://www.asmb.net/>.

2009

January 15-18

The APS Professional Skills Training Course, Lake Buena Vista, FL. *Information:* Amy Feuerstein, The American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814. Tel.: 301-634-7236; Email: afeuerstein@the-aps.org; Internet: <http://www.the-aps.org/education/profskills>.

February 7-12

SPIE Medical Imaging Conference, Orlando, FL. *Information:* SPIE, P.O. Box 10, Ballingham, WA 98227-0010. Internet: <http://www.spie.org/micall>.

February 24-March 1

Dissecting the Vasculature: Function, Molecular Mechanisms, and Malfunction, Vancouver, British Columbia, Canada. *Information:* Stephanie W Watts, PhD, B445 Life Sciences Building, Department of Pharmacology & Toxicology, Michigan State University, East Lansing, MI 48824-1317. Tel.: 517-353-3724; Fax: 517-353-8915; Email: wattss@msu.edu; Internet: <http://www.keystonesymposia.org/9J8>.

February 28-March 4

Biophysical Society's 53rd Annual Meeting, Boston, MA. *Information:* Alexandra Frager. Tel.: 301-634-7325; Fax: 301-634-7133; Email: afrager@biophysics.org; Internet: <http://www.biophysics.org/2009meeting>.

March 13-16

5th world Congress World Institute of Pain - WIP, New York, NY. *Information:* Kenes International, 1-3, Rue de Chantepoulet, PO Box 1726, CH-1211 Geneva 1, Switzerland. Tel.: +41 22 908 0488; Fax: +41 22 732 2850; Email: wip@kenes.com; Internet: <http://www2.kenes.com/wip/Pages/home.aspx>.

March 27

Skeletal Endocrinology, Brescia, Italy. *Information:* Internet: <http://www.skeletal-endocrinology.org/presentazione.asp>.

May 12-15

The North American Research Conference on Complementary & Integrative Medicine, Minneapolis, MN. *Information:* Internet: <http://www.imconsortium-conference.org/>.

May 14-16

3rd International IVI Congress, Madrid, Spain. *Information:* Internet: <http://www.comtecmed.com/ivi/2009/>.

June 26-28

The First International Conference of Hydrogen Sulfide in Biology and Medicine (H2S Biology 2009), Shanghai, China. *Information:* Internet: <http://www.h2sbiology2009.org>.



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<i>AJP-Cell Physiology</i>	Jan 1977 - Sept 1997
<i>AJP-Endocrinology & Metabolism</i>	Jan 1977 - Sept 1997
<i>AJP-Gastrointestinal & Liver Physiology</i>	Jan 1980 - Sept 1997
<i>AJP-Heart & Circulatory Physiology</i>	Jan 1977 - Sept 1997
<i>AJP-Lung Cellular & Molecular Physiology</i>	Aug 1989 - Sept 1997
<i>AJP-Regulatory, Integrative & Comparative Physiology</i>	Jan 1977 - Sept 1997
<i>AJP-Renal Physiology</i>	Jan 1977 - Sept 1997
<i>Advances in Physiology Education</i>	June 1989 - Nov 1997
<i>Physiological Reviews</i>	Jan 1921 - Dec 1997
<i>News in Physiological Sciences</i>	Jan 1986 - Jan 1998
<i>Physiological Genomics</i>	Not applicable because first published in 1999

Contact us for more info:
The American Physiological Society
 9650 Rockville Pike, Bethesda, MD 20814-3991 (USA)
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of the American Physiological Society

Experimental Biology 2009

April 18-22, 2009
New Orleans, Louisiana

2009 APS Conference: Sex Steroids and Gender in Cardiovascular-Renal Physiology and Pathophysiology

July 15-18, 2009
Broomfield, Colorado

2009 APS Conference: ET-11: APS International Conference on Endothelin

September 9-12, 2009
Montréal, Canada



The American Physiological Society, Meetings Department
Phone: 301.634.7967, Fax: 301.634.7264, E-mail: meetings@the-aps.org



MEMBERSHIP APPLICATION FORM

The American Physiological Society

1. Check membership category you are applying for: Regular Affiliate Student
2. Name of Applicant: _____
Last Name or Family Name / First Name / Middle Name
3. Date of Birth _____ Optional: Male Female
Month / Day / Year
4. Institution Name _____ Department _____
(Please do not abbreviate Institution Name)
5. Institution Street Address _____
6. City/State/Zip/Country _____
7. Home Address (**Students only**) _____
8. Work Phone _____ Home Phone _____
9. Fax _____ E-mail _____

10. EDUCATIONAL STATUS: ► **IMPORTANT for STUDENTS: **If you are enrolled as a student for an advanced degree (Ph.D., M.D., D.V.M.) please include the month and year you expect to receive your degree.**

Dates **	Degree	Institution	Major Field	Advisor
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11. WHAT IS YOUR SECTION AFFILIATION? Please identify your primary sectional affiliation (1) and check up to two additional sections with which you would like to affiliate. **There can be only one "Primary" affiliation.**

- | | | |
|----------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Cardiovascular | <input type="checkbox"/> Endocrinology & Metabolism | <input type="checkbox"/> Renal Physiology |
| <input type="checkbox"/> Cell & Molecular Physiology | <input type="checkbox"/> Environmental & Exercise Physiology | <input type="checkbox"/> Respiration Physiology |
| <input type="checkbox"/> Central Nervous System | <input type="checkbox"/> Gastrointestinal & Liver Physiology | <input type="checkbox"/> Teaching of Physiology |
| <input type="checkbox"/> Comparative & Evolutionary Physiology | <input type="checkbox"/> Neural Control & Autonomic Regulation | <input type="checkbox"/> Water & Electrolyte Homeostasis |

12. DO YOU WORK IN INDUSTRY? YES NO

13. SPONSORS (Sponsors must be Regular APS Members. If you are unable to find sponsors, check the box below, and we will locate them for you.)

CHECK THIS BOX IF APPLICABLE: Please locate sponsors on my behalf.

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**signature indicates that sponsor attests applicant is qualified for membership.*

► **Please turn over for more questions...and mailing instructions.**

Membership Application (Continued...) Applicant Last Name (please print) _____

14. OCCUPATIONAL HISTORY [Check if student]

Current Position:

Dates	Title	Institution	Department	Supervisor
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Prior Positions:

Dates	Title	Institution	Department	Supervisor
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15. LIST YOUR MOST SIGNIFICANT PUBLICATIONS, WITH EMPHASIS ON THE PAST 5 YEARS (Publications should consist of manuscripts in peer-reviewed journals. List them in the same style as sample below.)

Sample: MacLeod RJ and Hamilton JR. Volume Regulation initiated by Na⁺-nutrient cotransport in isolated mammalian villus enterocytes. Am J Physiol Gastrointest Liver Physiol 280: G26-G33, 1991.

16. DOCTORAL DISSERTATION TITLE (if applicable):

17. POSTDOCTORAL RESEARCH TOPIC (if applicable):

18. WHICH FACTOR INFLUENCED YOU TO FILL OUT OUR MEMBERSHIP APPLICATION?

Mailer Meeting (Which meeting? _____) Colleague Other _____

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R/ 2008