



# The Physiologist

## Arthur C. Guyton Physiology Educator of the Year

Robert Carroll

### INSIDE

**Council Meets  
in Bethesda**

p. 367

**2004-2005 Porter  
Physiology  
Fellows**

**Announced**

p. 379

**Society Celebrates  
100+ Years of  
Historical  
Physiological  
Research with Its  
“Classic Articles  
Series”**

p. 381

**Publishers  
Question Access  
Plan**

p. 383

**APS Committee  
Reports**

p. 386

**IUPS Congress  
Program**

p. 416

*“Those of us that dabble in science, we don’t have beards.”*

Arthur C. Guyton,  
January 1981.

I am excited for many reasons to be selected the 2004 Arthur C. Guyton Physiology Educator of the year. First, it reflects the excellent mentorship and guidance I received during my training from **David F. Opdyke** and **Walter N. Duran** while a graduate student at UMDNJ-Newark, and **Thomas E. Lohmeier** and **Arthur C. Guyton** while a postdoc at the University of Mississippi. In addition, my friends and colleagues in the education communities of the APS and the IUPS continue to develop my awareness and appreciation of education. Thank you all.

### Setting Expectations to Enhance Learning

Setting clear expectations enhances learning. This is not merely a hypothesis but, rather, a proven educational maxim. As curricula and curricular goals increase in complexity and number, making sure that the learner has a firm idea of the material she/he is expected to master is essential. The need for clear communication becomes even more critical as we achieve our goal of diversifying the biomedical research community, to assure that students from diverse racial/ethnic groups, nationalities, and even regions of the US clearly understand what constitutes



“success” in their training or studies.

The important connection between expectations and achievement was not always a cornerstone of my approach to learning and teaching. Interestingly, the time and impetus to reflect on my training provided by this award led me to recognize that some of my most important educational lessons occurred in practice, rather than by overt “teaching.” My first

understanding of the relationship between expectations and learning was provided by mentors who set high expectations and communicated them clearly. Allow me to expand on two incidents that shaped my educational approach.

### Learning the Lesson #1

While a second-year graduate student I was asked to develop a catecholamine assay for Dr. Opdyke. Even in pre-*Medline* 1977, conducting the literature search was a straight-forward task and I completed it quickly. Unfortunately, I never found time to do the preliminary lab work that was needed. During my third “update” meeting, Dr. Opdyke noted the lack of progress with the terse statement, “If you can’t complete the project, other arrangements will have to be made.” (David F. Opdyke, April 1977).

The fact that I had other demands on my time was an explanation, but it didn’t change the fact that Dr. Opdyke

*(continued on page 365)*

# The Physiologist

## Contents

### Arthur C. Guyton Physiology

#### Educator of the Year

Robert Carroll 363

#### APS News

Council Meets in Bethesda 367

Granger Thanks APS Staff 369

Editors Hold Successful

Meeting Despite 369

Hurricane Invasion 369

Introducing Virendra

Mahesh 370

Introducing David Gutterman 371

Introducing James Hicks 372

#### Chapter News

Nebraska Physiological Society

Holds Annual Meeting 374

Iowa Physiological Society

Holds Annual Meeting 375

#### Membership

New Regular Members 376

New Affiliate Members 376

New Student Members 377

#### Education

Teachers Attend APS

Science Teaching Forum 378

2004-2005 Porter Physiology

Fellows Announced 379

APS & Physiology Department

at Mississippi Sponsor 380

Undergraduate Symposium 380

#### Publications

Society Celebrates 100+ Years

of Historical Physiological 381

Research with Its "Classic

Articles Series" 381

#### Public Affairs

House Approves NIH Funding;

"De-funds" Two NIMH Grants 382

NIH Requests Comments on

Access Panel 382

Publishers Question Access Plan 383

FASEB Article Chronicles

Lung Surfactant Story 384

APS/AAAS Mass Media Science

and Engineering Fellow 384

Recounts Experience 384

APS Committee Reports 386

IUPS Congress Program 416

APS Awards 426

Positions Available 434

Senior Physiologists' News 440

People & Places 441

Books Received 442

#### Announcements

15th Annual Neurology for the

Primary Practitioner 442

Robert Bosch Foundation Seeks

Fellowship Applicants 443

21st Annual Computed Body

Tomography 2005: The Cutting

Edge 443

Fogarty International Center/

Ellison Medical Foundation 443

Awards 443

#### Scientific Meetings

and Congresses 444

Published bimonthly and  
distributed by  
The American Physiological  
Society

9650 Rockville Pike  
Bethesda, Maryland 20814-3991  
ISSN 0031-9376

**D. Neil Granger**

*President*

**John A. Williams**

*Past President*

**Douglas C. Eaton**

*President-Elect*

**Martin Frank**

*Editor and Executive Director*

*Councillors*

**Carole M. Liedtke, Thomas E.  
Lohmeier, Virginia M. Miller,  
Helen E. Raybould, Jeff M. Sands,  
Charles M. Tipton,  
Irving H. Zucker**

*Ex Officio*

**Susan Barman, Dale Benos,  
Robert G. Carroll,  
Curt D. Sigmund,  
Peter D. Wagner**

#### Publications Committee:

*Chairman:* Dale J. Benos;  
*Members:* Penelope A. Hansen,  
Mark A. Knepper, Hershel Raff, D.  
Eugene Rannels. *Director of  
Publications:* Margaret Reich.  
*Design and Copy Editor:* Joelle R.  
Grossnickle.

**Subscriptions:** Distributed to  
members as part of their member-  
ship. Nonmembers in the USA:  
individuals \$60.00; institutions  
\$90.00. Nonmembers in Canada  
and Mexico: individuals \$65.00;  
institutions \$95.00. Nonmembers  
elsewhere: individuals \$70.00;  
institutions \$100.00. Single copies  
and back issues when available,  
\$20.00 each; single copies and back  
issues of Abstracts issues when  
available, \$30.00. Subscribers to  
*The Physiologist* also receive  
abstracts of the Conferences of the  
American Physiological Society.

The American Physiological Society  
assumes no responsibility for the  
statements and opinions advanced  
by contributors to *The Physiologist*.

Deadline for submission of materi-  
al for publication: Jan. 10, February  
issue; March 10, April issue; May  
10, June issue; July 10, August  
issue; Sept. 10, October issue; Nov.  
10, December issue.

**Please notify the APS Member-  
ship Department as soon as pos-  
sible if you change your address  
or telephone number.**

Headquarters phone: 301-634-7118

Fax: 301-634-7241

Email: [info@the-aps.org](mailto:info@the-aps.org)

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

Printed in the USA

(continued from page 363)

needed the results, and I was responsible for producing them. My explanation did not excuse my lack of performance. With renewed motivation, I completed the necessary work over the next month. This encounter led me to select Dr. Opdyke as my dissertation advisor, and began an association that grew into a friendship. I did not realize it at the time, but I felt comfortable with the clear (and sometimes pointed) communication of expectations that he provided. I knew what I had done correctly...and what I had not accomplished yet.

## Learning the lesson #2

I arrived in Jackson, Mississippi in June of 1981 with all of the pride of a newly minted PhD. I used the Christmas break to grow a beard. In early January, I was in the departmental office when Dr. Guyton came in and, after appreciating my new facial hair, said in a clear voice, "I see you are finally becoming a scientist." I was fairly sure I was not going to like the conversation, but I eloquently responded, "Yes?" Dr. Guyton turned to the few people in the departmental office and announced, "You can tell when a young man becomes a scientist. He grows a beard. Those of us who just dabble in science—we don't have beards." My youthful pride demanded that I not shave my beard. And I didn't – for an entire week. Dr. Guyton had high expectations, clearly communicated his expectation, and then stepped aside. Again, I was not aware of it, but I re-learned something that day. The first step in shaping student performance is to clearly communicate your expectations.

## Applying the Lessons Learned

Two recent projects completed by the APS Education Committee and Education Office illustrate the principles of setting and clearly communicating expectations. The APS is fortunate to have an exceptional and talented group supporting the educational activities of the Society, and I and many others owe a special gratitude to Marsha Matyas and Melinda Lowy for their friendship and diligence.

*Medical Physiology Learning Objectives*

One of the more ambitious projects

was the Medical Physiology Learning Objectives project. The idea resulted from a discussion with **Gabby Navar** (Tulane) in 1997, and took shape over the next three years. This joint project of the APS and the Association of Chairs of Departments of Physiology (ACDP) provides a detailed description of the physiology concepts that should be mastered by students while completing their pre-clinical training. More than 50 physiologists were involved in constructing the objectives, which were then evaluated at 31 different medical schools.

The compiled objectives, available through the APS website (<http://www.the-aps.org/education/MedPhysObj/medcor.htm>), provide a useful guide for both new and experienced faculty. New faculty gain insight into the balance between depth and breadth of coverage when organizing their teaching. Experienced teachers find the objectives to be a valuable reinforcement of their teaching decisions, and a rare opportunity to see what topics are emphasized at other institutions.

The objectives have proven useful for physiologists participating in curriculum "renewal." Medical schools appropriately seek to improve the educational experience and the quality of their graduates. The pre-clinical years are often charged with simultaneously decreasing the amount of classroom time to allow learner-directed activities, and to increase clinical exposure. The development of a nationally accepted description of medical physiology content helps insure that physiology remains a significant component of the pre-clinical curriculum.

Apart from use in individual institutions, this approach has two additional benefits:

1) *Control of "Medical Physiology:"* The objectives allow for review and revision of the physiology curriculum. There are a number of topics, such as gender differences, and changes across the life-span, which are only briefly touched on in most medical physiology courses. Revising the objectives to include these or other topics will speed their appearance as a common component of physiology.

2) *Control of the internal and external evaluation (USMLE Step 1).*

Whether they agree with it or not, experienced teachers accept the reality that testing drives learning. Management books deal with a similar theme—assessment determines behavior. Most teachers can confirm that the most common question asked in a lecture setting is, "Is this on the test?" The objectives need to be provided to new members of the USMLE physiology item writing committee. If item writers use the objectives to guide their content expectations, much of the mystery and confusion surrounding the examination content can be diminished. There should be a clear link between what is taught as medical physiology and what is tested on the USMLE as medical physiology. The objectives can be used to establish this link. Again, clearly identifying and communicating your expectations, and incorporating those expectations into the assessment of learning, will allow more effective direction of student learning.

## Professional Skills for Physiologists and Trainees

The second project focuses on graduate training in physiology. Our expectation of graduate students is sharply different from medical students, but faculty often have difficulty in expressing that difference. In my mind, I have a content expectation for medical students, but I expect graduate students to go past content acquisition to the development of analytical and critical thinking skills, writing and presentation skills, etc. The APS and ACDP have made it easier for graduate students and postdoctoral fellows to comprehend those expectations by providing a template, the "APS/ACDP List of Professional Skills for Physiologists and Trainees."

The APS Council initiated this project in July of 2002 by jointly charging the chairs of the Education Committee (me), Career Opportunities in Physiology Committee (**Frank Belloni**, New York Medical College), and Women in Physiology Committee (**Carole Leidtke**, Case Western Reserve University) to participate in the development of a listing of professional skills critical for physiologists and trainees. A proposal was present-

(continued on page 366)

(continued from page 365)

ed to the ACDP at their annual meeting. The ACDP endorsed it and designated **Bill Dantzler** (University of Arizona), **Vernon Bishop** (University of Texas Health Science Center, San Antonio) and **Bill Spielman** (Michigan State University) to develop and shape the project. As with the Medical Physiology Learning Objectives project, the APS Education Office ended up doing most of the work.

This project built on a variety of similar efforts from other organizations. The working committee compiled and reviewed published documents with similar themes, and evaluated how relevant the components were to physiologists. A draft was circulated through the APS and the ACDP for comments, and the revised document is now available through the APS website (<http://www.the-aps.org/education/skills.htm>). Table 1 indicates the major headings for the final document. Interestingly, core biomedical science knowledge, which was

**Table 1. Major categories of the APS/ACDP List of Professional Skills for Physiologists and Trainees**

Core Biomedical Science Knowledge	Teaching and Mentoring Skills
Professional Ethics	Personnel and Management Skills
Laboratory-Related Skills	Lifelong Learning Skills
Research/Analytical Skills	Career Development Skills
Communication Skills	

the major focus of the Medical Physiology Learning Objectives project, is only one of the nine headings, demonstrating the diverse nature of skills we expect trainees to develop during graduate and postdoctoral studies and in early career development.

I had the opportunity to “field test” the draft objectives on our graduate students. The reactions were interesting, and clearly split along seniority. The first-year students found the list intimidating. The second and third year students found the list useful and the more senior graduate students were frustrated that they did not have

the list available to them earlier. One interpretation of their response is that that list is close to being “on target.” Again, student performance can be enhanced by clearly communicating expectations.

In summary, in my teaching and mentoring, I try to do unto others as I was lucky enough to have done unto me: hold high expectations of students, tell them exactly what is expected of them, and help them achieve the goals. Let them accomplish it. And be sure to celebrate their accomplishments. Oh yes—Hi, Mom.

❖

## Arthur C. Guyton Physiology Educator of the Year Award

The Teaching Section of the American Physiological Society invites you to nominate a fellow physiology educator for the Thirteenth Annual **Arthur C. Guyton Physiology Educator of the Year Award**.

Nominees must be full-time faculty members of accredited colleges or universities and members of the American Physiological Society. The Selection Committee will look for independent evidence of: (1) excellence in classroom teaching over a number of years at undergraduate, graduate, or professional levels; (2) commitment to the improvement of physiology teaching within the candidate’s own institution; and (3) contributions to physiology education at the local community, national or international levels.

In the past, all nominees have shown excellence in teaching at their home institution and many have made significant local contributions through

advising, graduate education, or curriculum design and reform. Consequently, the activities that distinguish a candidate in the rankings include outreach activities at the state, national, or international level; contributions to education through APS activities; peer-reviewed educational journal articles; and widely disseminated publications such as commercially produced textbooks, lab manuals, or software.

Each nominee must be nominated by a member of APS. The nominator should send a preliminary letter outlining the qualifications of the nominee to the Chairman of the Award Selection Committee, postmarked no later than **Friday November 12, 2004**. In addition, the nominator will subsequently be asked to submit a portfolio on behalf of the nominee that includes letters of support from colleagues and students, summaries of student evaluations, teaching honors

and awards, and evidence of education-related activities outside the classroom.

The person selected will receive the award during the APS business meeting at the April 2005 annual meeting of the American Physiological Society (IUPS/Experimental Biology 2005, March 31 – April 6 in San Diego). The Arthur C. Guyton Physiology Educator of the Year will receive a framed, inscribed certificate, an honorarium of \$1,000 and expenses of up to \$600 to attend the meeting. The awardee is requested to write an essay on his/her philosophy of education for publication in *The Physiologist*.

The Chairman of the Guyton Award Selection Committee is Jonathan Kibble, Department of Physiology & Neuroscience, St George’s University, University Center, PO Box 7, St George’s, Grenada, WI. Phone: 473-444-4175 extension 2090; Fax: 473-444-4673; E-mail: [jkibble@sgu.edu](mailto:jkibble@sgu.edu). ❖

## Council Meets in Bethesda

The APS summer Council meeting was held in Bethesda, MD, on July 23-25, 2004. During the meeting Council met with the APS committee chairs. The chairs presented reports of the committees' programs and accomplishments during the past year, and committee plans for the coming year. These committee reports are published in this issue of *The Physiologist*.

Approximately two years ago, the APS Council established a Task Force on Trainees charged with identifying ways in which the Society could do more for graduate students and postdoctoral fellows. One of the recommendations of the Task Force was to establish a Trainee Advisory Committee (TAC) comprised of members from each of the Society's disciplinary sections. Council accepted this recommendation, and a TAC was established. During the past year, the TAC met twice, once by conference call and once at the EB 2004 meeting and presented their first committee report to Council at the summer meeting. The Committee is working on finalizing a Trainee Survey. The survey will be general in nature and include issues relevant to both graduate student and postdoctoral experiences. They are also working on a Trainee Advisory Committee sponsored symposium that will be at the Experimental Biology 2006 Meeting. The symposium will either be an interactive session or a round table discussion on issues such as those that non-US citizens face while working in the US.

The Animal Care and Experimentation (ACE) Committee continues to monitor the issue of management of pain and distress in laboratory animals. There is a clear need for guidance on pain and distress management for researchers and IACUCs. The Committee recommended to Council that the APS initiate a round of discussions between scientists who study pain and distress and lab animal veterinarians who manage pain and distress in clinical settings. The Committee will also put together a planning group of research scientists and lab animal veterinarians to consider relevant data and make recommendations regarding regulations for

the management of pain and distress in laboratory animals. The ACE Committee has formal responsibility to keep the APS *Guiding Principles for the Care and Use of Animals* current. The Committee is evaluating the document and will update it as necessary.

The ACE Committee once again organized and presented a Symposium at EB 2004 entitled *IACUC 101 for Scientists: Dealing with Problem Areas*. This was a four-hour IACUC training program open to all EB attendees. The goal was to provide scientists with focused training to improve their performance on and interaction with IACUCs.

The Communications Committee completed its development of the APS *Timeline of Physiology*, which was distributed at EB 2004. The *Timeline* is now available in an HTML format on the APS website. The Committee organized and presented a Communications Symposium at EB 2004 entitled, "Making Science News." The symposium was intended to familiarize scientists with the media, demonstrate the steps involved in making physiology newsworthy, and provide practical tips for getting scientific research reported by the media.

The Communications Committee has begun an outreach program and will work on developing topic-based resource modules on a variety of physiological issues. The goal of the program is to publicize physiological research to the public, and to inform, teach and gather public support for physiological research. The Communications Committee oversees the APS-AAAS Mass Media Science and Engineering Fellowship. The Committee evaluated 19 applications and recommend funding for one applicant, Nicole Garbarini, who spent 10 weeks at *Scientific America* during the summer.

The Publications Committee continues to strive to make each individual APS journal the best in its field, and to provide the highest possible quality publications. The Journal Impact Factors made a strong showing again in 2003. *Physiological Reviews* remains the highest ranked journal in physiology. The Committee reported

that the second phase of the Legacy Content, going back to 1966, has been posted and is now available as part of the Legacy Content. The redesigning of the journal *News in Physiological Sciences* is now complete. The journal has been renamed to *Physiology*, and the first issue will be the August 2004 issue.

The Career Opportunities in Physiology Committee reported that its session at EB 2004 entitled "Planning a Successful Postdoctoral Experience: A Proactive Approach" was well attended. The workshop focused on how to successfully plan a postdoctoral experience and how to interview for a postdoctoral position, as well as discussing job opportunities available in the drug discovery process and in the government and military. The Committee requested support and a time slot for another symposium to be held at the 2005 IUPS Congress. Council approved the necessary support and room allocation for this session. The 2005 symposium will focus on international collaborations at the postdoctoral and new investigator stages.

The Career Opportunities in Physiology Committee also reported that the APS Summer Undergraduate Research program is still very competitive in the fifth year of the program's existence. The Committee received 28 applications this year and selected 12 for funding. The Committee requested and received funding to support 12 Summer Undergraduate Research Program Fellowships for summer 2005. During the upcoming year, the Committee will be working on completing and disseminating the PowerPoint presentations on careers in physiology and physiology research topics for talks to K-12 and undergraduate students; developing a new career poster for distribution to undergraduate departments; overseeing the annual survey of doctoral recipients in physiology, conducted by the Education Office; overseeing the proposed new project, "Professional Skills for Minority Students in Biomedicine," which involves the development of online professional skills courses

*(continued on page 368)*

(continued from page 367)

based on the APS-ACDP Listing of Professional Skills; and continuing to improve and evaluate the Undergraduate Summer Research Fellowships program.

The Women in Physiology Committee reported that the first **Bodil Schmidt-Nielsen** Distinguished Mentor and Scientist Award was awarded to **W. Clinton Webb** at EB 2004. The Committee also co-sponsored a workshop with ASPET at EB 2004 entitled "Life After the PhD: Finding a Postdoctoral Fellowship." The workshop was designed to inform young physiologists of decision-making and goal setting processes when considering a postdoctoral fellowship as the next step in their professional development. The Committee will co-sponsor a workshop with ASPET at the 2005 IUPS Congress/EB 2005 meeting. The focus of the workshop will be on leadership skills and development. The Committee oversees the mentoring program and assists in matching mentor-mentees. The Committee is concerned

about the lack of communication between the mentee/mentor pairs and suggested that a subcommittee be formed to write recommendations for APS.

The Education Committee reported that the first David S. Bruce Award for Excellence in Undergraduate Research was presented at EB 2004. Four awardees were selected from 12 finalists. The Committee reported that a joint APS/ACDP committee is planning the development of an online resource site for medical physiology course directors. Resources available would include information on faculty evaluation, course evaluation, curriculum issues and instructional options. The Committee is also working on developing additional models and resources for local outreach to K-12 schools, teachers, and students as part of the Frontiers in Physiology project.

An area of concern and discussion for Council continues to be that of open access. In response to the open access movement, the "DC Principles for Free Access to Science" was developed. The

group, lead by APS Executive Director **Martin Frank**, held a press conference at the National Press Club in March 2004 to announce the formation of the DC Principles. Since the formation of DC Principles, APS has received numerous invitations to speak to and meet with other groups, such as the Medical Library Association, to speak about the DC Principles, and the possible costs and impact that the "open-access" publishing models may have on nonprofit scientific and medical publishers.

Reports from the Awards, Committee on Committees, Finance, International Physiology, Joint Program, Liaison with Industry, Long Range Planning, Membership, Perkins Memorial Fellowship, Porter Physiology Development, Public Affairs, Section Advisory Committees, and Senior Physiologists were also presented to Council.

For more information, see the Committee Reports section in this issue of *The Physiologist* beginning on page 386. ♦



APS Council members at the summer council meeting: Virginia Miller, John Williams, Peter Wagner, Carole Liedtke, Curt Sigmund, Irving Zucker, D. Neil Granger, Robert Carroll, Helen Raybould, Douglas Eaton, Sue Barman, Thomas Lohmeier, Jeff Sands, and Charles Tipton.



APS Committee Chairs at the summer council meeting: William Talman, Klaus W. Beyenbach, William Galey, Raouf A. Khalil, Glenn Reinhart, Kevin Kregel, Pamela Gunter-Smith, David Brooks (LRPC member), Hector Rasgado-Flores, Siribhinya Benyajati, Caroline Sussman, and Andrea Gwosdow.

## Granger Thanks APS Staff

APS President **D. Neil Granger** hosted a staff appreciation reception for the Society's employees on Friday, July 23. The event was attended by the APS staff, Council and Committee chairs. APS Executive Director **Martin Frank** and President Granger, on behalf of the Council and chairs, thanked the staff for their efforts over the past year. Granger said that APS continues to be a high quality organization because of the efforts put forth by the staff.

During the appreciation reception, a ceremony is held to recognize those staff members who have served the Society. This year, Granger presented a 25-year certificate to Samer Masri (Circulation Manager); 15-year certificates to Mark Goodwin (Senior Copy Editor and Special Projects), Nancy McClusky (Journal Supervisor); 10-year certificates to Stephanie Demma (Journal Supervisor), Carolyn Villemez (Production Assistant); and 5-year certificates to Robert Barrett (Journal Supervisor), Maria Bokman (Copy Editor), Jessica Darago (Copy



**APS President D. Neil Granger and Executive Director Martin Frank present certificates of appreciation to Jennifer Navas-Marquez, Ellyn Kestnbaum, Maria Bokman, Jessica Darago, Mark Goodwin, Stephanie Demma, Margaret Reich, Robert Barrett, Nancy McClusky, Robert Price, Carolyn Villemez, and Samer Masri. Not pictured: Martin Mould and Iliana Torres.**

Editor), Ellyn Kestnbaum (Copy Editor), Martin Mould (Copy Editor), Jennifer Navas-Marquez (Copy Editor), Robert Price (Director of Finance), Margaret Reich (Director of

Publications), and Iliana Torres (Peer Review Coordinator). On behalf of Council, Granger thanked the employees for their years of service. ❖

## Editors Hold Successful Meeting Despite Hurricane Invasion

**On August 14, after being evacuated by Hurricane Charley from Pawley's Island where they were to hold their meeting, the Editors of *Advances in Physiology Education* met at the Holiday Inn Express three hours inland in Columbia, SC. The cheerful castaways were still able to hold a productive meeting and then headed gratefully home.**



## Introducing Virendra Mahesh

**Virendra B. Mahesh** was elected chair of the Endocrinology and Metabolism Section in April 2004. He had served previously as Councillor and member of the Steering Committee of the Section from 1999 to 2001 and the Section's representative to the Joint Program Committee of the APS from 2001 to 2004. Mahesh has also served on the Reproductive Biology Study Section of NIH from 1977 to 1981 and Human Embryology and Development Study Section from 1982 to 1986 and again from 1990 to 1993 (Chair 1991-1993). In addition, he has served on numerous ad hoc and Special Study Sections of the NIH from 1975 to 2002. Mahesh has served on the editorial boards of *Journal of Clinical Endocrinology and Metabolism*, *Steroids*, *Journal of Steroid Biochemistry and Molecular Biology*, *Journal of Endocrinological Investigation and Endocrinology* and also as Editor-in-Chief of *Biology of Reproduction*. He is currently Consulting Editor, *Biology of Reproduction*, and Associate Director and member of the Public Affairs Executive Committee of FASEB. Mahesh received the Rubin Award from the American Society for the Study of Fertility in 1963, and was the co-winner of the Billings Silver Medal of the American Medical Association in 1965. He was awarded the Carl G. Hartman Award of the Society for the Study of Reproduction in 1996 for his life long contributions in reproductive physiology.

Mahesh received his PhD degree in organic chemistry from Delhi University, India, in 1955 and his DPhil degree in biological sciences from Oxford University, UK in 1958. After a year of postdoctoral work as James Brown Hudson Memorial Fellow at Yale University, he joined the Medical College of Georgia, Augusta, GA as Assistant Research Professor of Endocrinology in 1959. He became Associate Professor in 1963, Professor in 1966 and Regents Professor in 1970. He was appointed Chairman of the Department of Endocrinology in 1972 and Chairman of the joint department of Physiology and Endocrinology in 1986. Mahesh retired in June 1999 and assumed the position of Regents Professor and



**Virendra Mahesh**

Chairman Emeritus, Department of Physiology and Endocrinology in July 1999.

Mahesh was among the first to show that unlike vitamins, steroid hormones like cortisol did not undergo metabolism to exert biological activity. The development of techniques to measure blood and urinary steroids in his laboratory was used to study the pathophysiology of a variety of human disorders such as the polycystic ovary syndrome and congenital adrenal hyperplasia. He was one of the investigators involved in establishing that clomiphene citrate was useful in inducing ovulation in anovulatory women. In the polycystic ovary syndrome, the ovary was shown to be the source of excessive androgens in a large number of patients. Experimental models were constructed demonstrating that feed back effects of abnormal quantities of androgens and their conversion products at the level of the hypothalamus could result in abnormal secretion of gonadotropins and ovulatory failure. The essential role of progesterone in the induction of ovulatory type gonadotropin surge was established as well as the role of excitatory amino acids and nitric oxide in GnRH release. More recent research efforts focus on the role of estrogens in neuroprotection. Mahesh's research was funded through multiple NIH grants.

One of the major problems facing the Endocrinology and Metabolism Section is the relatively poor attendance of APS members of the Section due to the large number of more specialized meetings in the area. However, the Section's programming provides a unique opportunity to members to focus on a particular aspect of the subject through state-of-the art symposia and featured topics sessions. It also provides a unique opportunity for students and postdoctoral fellows to present papers and compete for numerous prizes. In order to bring these opportunities to the attention of members of the Section, it is proposed that during the next three years we will inform all members by individual letters the deadlines and time frame for nominations for the Solomon Berson Lecture and suggestions for the state-of-the art symposia and featured topic sessions. This will be followed by individual letters in July and again one month prior to the abstract deadline, giving them not only the scientific program organized by the Section, but also other sessions in the Experimental Biology meeting that may be of interest to them and encourage them to submit abstracts from their laboratory. At this time they will also be informed of opportunities for their students and postdoctoral fellows to compete for various awards as well as the list of awards given the previous year. We will also energetically seek candidates for the New Investigator Award.

The Chair plans to interact with the Steering Committee consisting of **Christopher Lynch**, Secretary Treasurer, **James Rose**, Joint Program Committee Representative, **Joshua Anthony**, Liaison with Industry, **Owen McGuinness**, Representative on Committee on Committees, **Patricia Molina** and **Nicholaas Deutz**, Councillors, **Raul Camacho**, Trainee member, and **Mike Mueckler**, Editor, *AJP: Endocrinology and Metabolism* by correspondence and at the Experimental Biology meetings to achieve these goals. ❖



## Introducing David Gutterman

**David Gutterman** was elected Chair of the Cardiovascular Section and assumed duties in April 2004, succeeding **William Chilian**. An active APS member since 1987, Gutterman is also serving a second term as a member of the Public Affairs Committee and previously represented the Cardiovascular Section as a member of the Executive Committee. He formerly chaired the Liaison With Industry Committee, as well as several FASEB symposia.

Gutterman has served as a member or Chair of the American Heart Association (AHA) Executive, Program and Research Committees as well as President of the AHA Iowa Affiliate from 1994-1996. He currently co-chairs the National AHA Programming Committee for Scientific Sessions of the Council on Basic Cardiovascular Sciences.

Appointed to the NIH Biomedical and Behavioral Research Facilities Section in 1996, Gutterman has since served as a member of several Special Emphasis Panels, and recently completed a four-year term on the Cardiovascular and Renal Study Section Review Panel. He is currently serving as Chair of the NIH NHLBI Clinical and Integrative Cardiovascular Sciences Study Section. Gutterman is also active in the American College of Chest Physicians, serving as Chair of the Cardiology and Hypertension Network. He is currently fulfilling a 2-year term as the Vice-Chair of the ACCP Health and Sciences Policy Committee.

Gutterman has served since 1999 as the Associate Editor of the *American Journal of Physiology-Heart and Circulatory Physiology* and as an editorial board member of several cardiovascular journals including *Circulation Research*, *Basic Research in Cardiology*, and *Atherosclerosis, Thrombosis, and Vascular Biology*. He was recently elected as a member of the Association of University Cardiologists and was honored in 2003 with the Boron Lectureship, UCLA School of Medicine, Cardiology Division.



**David Gutterman**

Gutterman earned his BA and MD degrees at the University of North Carolina, Chapel Hill and completed his internal medicine residency and cardiovascular diseases fellowship at the University of Iowa Hospitals and Clinics in Iowa City, where his career developed in the areas neural control of the circulation and human vascular physiology.

Gutterman accepted an appointment as Professor of Medicine and Physiology at the Medical College of Wisconsin (MCW) in 1998. In 2000, he was awarded the endowed chair of Northwestern Mutual Professor of Medicine and received a dual appointment in 2003 as Professor of Pharmacology.

Gutterman was named Associate Director of the Medical College of Wisconsin Cardiovascular Research Center in 1998, Vice-Chair of Medicine for Research in 1999 and Co-Director of the College's Translational Research Initiative in 2003, positions which have fostered his leadership to successfully pilot a strategic transformation to interdisciplinary translational research and to enhance academic, investigative and clinical scholarship among MCW's talented young investigators. He is currently guiding several junior faculty as the supervis-

ing co-PI in separate funded studies on vascular signaling by free radicals, redox mechanisms in the vascular dysfunction of inflammatory bowel disease, the effect of hyperglycemia on potassium channel function, and the impact of extreme athleticism on cardiovascular function in women.

Gutterman is most recognized for his research in the human coronary microcirculation, which has increased understanding of the role of endothelium-derived hyperpolarizing factor (EDHF) in mediating vasodilation to shear stress, the chemical nature of EDHF and the critical role played by potassium channels in vascular smooth muscle in the regulation of vasomotor responses in microcirculation. He is currently PI of a Specialized Center of Research on Ischemic Heart Disease in African Americans, funded by the NIH in 2000. He is a project leader on a program project grant to study vascular signaling by free radicals and recently renewed a 5-year VA Merit Award study in January 2004, investigating the role of epoxyeicosotrienoic acid as EDHF in human coronary arterioles.

Gutterman has identified several areas of interest that will receive the Cardiovascular Section's increased attention during his tenure as chair. These include 1) promoting increased participation and representation of the Cardiovascular Section in APS committees and conferences; 2) maintaining the high quality programming at the Experimental Biology meetings; and 3) fostering career development among trainees and junior faculty members interested in cardiovascular sciences. The Cardiovascular Section has an enthusiastic, dedicated, and highly capable Steering Committee that will be successful in these endeavors. ❖

## Introducing James Hicks

**James W. Hicks** was elected Chair of the Comparative and Evolutionary Physiology Section and assumed duties in April 2004, succeeding **Stan Lindstedt**. Hicks previously served the Comparative and Evolutionary Physiology section as Chair of the Programming Committee and as the Section's representative on the Joint Program Committee for the APS from April 2000-April 2003. In addition to his involvement in the APS, Hicks is currently Editor-in-Chief of *Physiological and Biochemical Zoology*.

Hicks is currently professor in the Department of Ecology and Evolutionary Biology, University of California, Irvine. Hicks received his PhD degree in Biomedical Sciences from the School of Medicine, University of New Mexico, Albuquerque in 1984 and a PhD in Physiology from the School of Medicine, University of New Mexico in 1984. He did postdoctoral work at the Max-Planck Institute for Experimental Medicine in Göttingen, Germany from 1984 until December 1985, working with Norbert Heisler, and followed this experience with a two-year postdoctoral fellowship at the Physiological Research Lab, Scripps Institution of Oceanography, UCSD, with Fred White. Hicks was on the physiology faculty at Creighton University School of Medicine from 1988 until 1992 and then joined the Department of Ecology and Evolutionary Biology, University of California. As a broadly trained, integrative physiologist, Hicks' research efforts are divided among five areas; understanding the mechanism(s), regulation and functional significance of intracardiac shunting in "lower vertebrates," investigating the factors that determine and regulate the cardiopulmonary response to elevated metabolism in "lower vertebrates," investigating the ontogeny of cardiovascular regulation, studying acclimatization to hypoxia and investigating the effects of gravity on the vertebrate cardiovascular system. Hicks' research efforts focus on vertebrates and spans several groups, including amphibians, reptiles and humans. His laboratory provides a unique evolutionary perspective into circulation



**James Hicks**

and respiration and seeks to discover not only differences among organisms, but the unifying principles shared by diverse organisms.

As the newly elected chair of the Comparative and Evolutionary Physiology section, Hicks has identified three areas of section interests that will receive increased attention over the next three years. First and foremost is to continue to be a voice for the comparative approach to physiological investigation, through outstanding programming and interactions with other sections of the APS. In a society often dominated by biomedical sciences, Hicks believes that it is important to articulate the power of comparative and evolutionary physiology and to point out that these approaches are not mutually exclusive with the biomedical sciences. Comparative physiology, at its most basic level, seeks to discover how animals work, and, most importantly, why animals work the way they do. These two seemingly straightforward questions have far-reaching implications and require a variety of investigative approaches. The comparative physiologist is challenged to determine the details of physiological mechanisms while simultaneously gaining insights into ultimate causation, i.e., the evolutionary or adaptive significance of a physiological process or trait. This manifold focus on proximal

mechanism and ultimate causality requires that comparative and evolutionary physiologists bring to their investigations a diversity of analytical approaches and to effectively integrate molecular, cellular, organismal, morphological, biomechanical, biophysical, ecological and evolutionary information.

Another major area of emphasis for the section will be to increase our interactions with the other sections of APS, through support and sponsorship of cross-sectional symposia at Experimental Biology. The diversity of approaches used by comparative and evolutionary physiologists results in most of the section's members having natural affiliations, and membership in many other sections within the APS. Through coordination of our programming efforts, Hicks hopes that these interactions will grow and result in mutually interesting and exciting programming.

Finally the section continues to emphasize the participation of students and young investigators. One mechanism that began under the leadership of the past chair, **Stan Lindstedt**, is to provide opportunities, specifically for young investigators to develop Featured Topics at Experimental Biology. This has been a success and will continue into the future. Members of the Steering Committee include **Colleen Talbot** acting as Secretary, who will be responsible for developing our Fall Newsletter. **Siribhinya Benyajati** is the sections Treasurer, and continues to do an outstanding job in raising funds for the section. Her tireless efforts have resulted in improving the section's finances and increasing our ability to support outstanding young investigators. **Michele G. Wheatly** continues as our representative to the Committee on Committees and has been invaluable in integrating the role of our section members within the society. **Joe M. Szwczak** is the sections newly appointed representative for the Liaison With Industry Committee and our Postdoctoral Trainee Member is **Rudy Ortiz**. The section is fortunate to have **David Goldstein** assume the position of Chair of the section's Programming

Committee and section representative to the Joint Programming Committee. David plays an important role in organizing the section's participation in the annual Experimental Biology meetings, has played an important role in the planning of the upcoming IUPS, and most importantly has taken on the job of chairing the committee that is organizing the next Intersociety Meeting in Comparative Physiology, to be held in 2006. Finally, our section continues to have a close and supportive relationship with the *American Journal of Physiology; Regulatory, Integrative and Comparative*. The journal's Associate Editor, **John Pritchard** attends our sectional meeting at Experimental Biology and encourages feedback and submissions from our section members. ❖

## Bowditch Award Lecture

The Bowditch Lectureship is awarded to a regular member, under 42 years of age, for original and outstanding accomplishments in the field of physiology. Selected by the APS President, the recipient presents a lecture at the Experimental Biology meeting, which is considered for publication in the Society journal of their choosing. The recipient receives an honorarium of \$2,500, reimbursement of expenses incurred while participating in the Experimental Biology meeting, and a plaque. The membership is invited to submit nominations for the Bowditch Lecturer. A nomination shall be accompanied by a candidate's curriculum vitae and one letter detailing the individual's status, contributions, and potential.

More information on the award and nomination procedures are available at <http://www.the-aps.org>. Nominations should be sent to: The APS Bowditch Lecture Award, c/o Linda Jean Dresser, 9650 Rockville Pike, Bethesda, MD 20814-3991; or submitted online at [http://www.the-aps.org/cgi-bin/Election/Lecture\\_form.htm](http://www.the-aps.org/cgi-bin/Election/Lecture_form.htm).



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

**Frontiers in Physiology**  
Professional Development Fellowship for Teachers  
Application Deadline is January 10, 2005

Teachers are seeking research hosts for Summer 2005.

**Applications are available online:**

<http://www.the-aps.org/education/frontiers/app.html>



American Physiological Society  
9650 Rockville Pike, Bethesda, MD 20854-3991  
T: 301-634-7132 F: 301-634-7098 E: [kkelly@the-aps.org](mailto:kkelly@the-aps.org)

## Nebraska Physiological Society Holds Annual Meeting

The seventh annual meeting of the Nebraska Physiological Society (NPS) was held on Friday, May 14, in the Durham Research Center at the University of Nebraska Medical Center, Omaha, NE. Attendance at the meeting totaled 85 registered individuals, and 48 research posters were presented, the most so far at this meeting. The meeting began at 9:00 am with a welcome and introductory remarks from **Dale Bergren**, NPS President and Professor, Department of Biomedical Sciences, Creighton University, Omaha, NE.

The keynote address was then presented by **Stephen L. Lipsius**, Professor, Department of Physiology, Loyola University Medical Center, Chicago, IL. Lipsius presented his studies on cholinergic regulation of L-type calcium currents in atrial myocytes via nitric oxide signaling pathways.

The student presentations followed the APS lecturer. Four students (two graduate and two postdoctoral) finalists were selected to present their research projects. Each presenter was allowed a 10 minute session followed by a short question/answer period. The finalists were selected based on the quality of the abstracts submitted. A \$250 award was presented to postdoctoral student **Xun Li** of the Department of Cellular and Integrative Physiology, UNMC, for his project "Thioredoxin-mediated reversal of cardiac K<sup>+</sup> channel remodeling in experimental diabetes," and to graduate student **Rebecca Bott** of the Department of Animal Science University of Nebraska, Lincoln, NE, for her project "Induction of

Endothelial Cell Migration: A Proposed Mechanism for Vascular Endothelial Growth Factor's (VEGF) Action on Neovascularization and Seminiferous Cord Formation During Testis Morphogenesis." Other finalists were postdoctoral student **Shumin Li** and graduate student **Jennifer Pluznik**, both from the Department of Cellular and Integrative Physiology, UNMC.

The student presentations were followed by an educational presentation by **Ronald Tuma**, Professor and Chairman of the Department of Physiology, Temple University, Philadelphia, PA. Tuma spoke on the use of computer aided instruction to create a "living" textbook of physiology.

The morning session concluded with an update on the state of the American Physiology Society presented by **Irving H. Zucker**, APS Councillor and Past-President of NPS and Professor and Chair of the Department of Cellular and Integrative Physiology, UNMC. Zucker highlighted current programs and activities of the parent society.

The NPS business meeting followed lunch. **Tom Pissari**, Assistant Professor, Department of Biomedical Sciences, Creighton University, Omaha, NE, updated the members on the status of the Nebraska Local Outreach Team (LOT), which is a branch of the APS Frontiers in Physiology program. **Harold Schultz**, NPS Secretary-Treasurer and Professor, Department of Cellular and Integrative Physiology, UNMC, presented the current financial status of the NPS. He noted that the current financial status of the NPS is sound and thanked this year's sponsors for their support. Sponsors included the American Physiological Society, the Department of Physiology and Biophysics, UNMC; the Dean's Office of the College of Medicine, UNMC; the Dean's Office of the School of Medicine, Creighton; North Central Instruments; ADInstruments; and Fischer Scientific.

NPS President Bergren presented plaques to honor prior NPS presidents, David Petzel, Professor, Department of Biomedical Sciences,

Creighton University, and **Shyamal Roy**, Professor, Department of Cellular and Integrative Physiology, UNMC. Bergren then thanked the staff for their help and support during his presidency and introduced NPS President-Elect **Andrea Cupp**, Assistant Professor, Department of Animal Science University of Nebraska-Lincoln, Lincoln, NE. New officers for the coming year include **William Mayhan**, Professor, Department of Cellular and Integrative Physiology, UNMC, President-Elect, and **Kaushik Patel**, Professor Department of Cellular and Integrative Physiology, UNMC, Councillor.

Following the business meeting participants visited the sponsors' displays and viewed the research posters. Departments and institutions represented in the poster session included the Departments of Cellular and Integrative Physiology, Obstetrics and Gynecology, Olson Center for Women's Health, Pediatrics, and Internal Medicine, UNMC; VA Medical Center, Omaha, NE; Departments of Animal Science, Chemistry, and Biochemistry, UNL; Departments of Biomedical Sciences, Pharmacology, and Internal Medicine, Creighton University, Omaha, NE; USDA Meat Animal Research Center, Clay Center, NE; West Central Research and Extension Center, North Platte, NE Cell Physiology Laboratory, Kansas State University, Manhattan, KS; Iowa State University, Ames IA; SUNY Downstate Medical Center, Brooklyn, NY; Laboratorio de Biotecnologia e Reproducao Animal, Universidade Federal de Santa Maria, Santa Maria, Brazil; Mount Desert Island Biological Laboratory, Salisbury Cove, ME.

The meeting concluded at 4:00 pm with a tour of the new research facilities in the Durham Research Center.

❖

*Harold Schultz,  
Secretary/Treasurer*



**Poster Sessions at the Nebraska Physiological Society Meeting.**

## Iowa Physiological Society Holds Annual Meeting

The ninth annual meeting of the Iowa Physiological Society (IPS) was held on Monday, May 17, 2004 in the Medical Education and Research Facility at the University of Iowa Carver College of Medicine in Iowa City. Approximately 50 attendees participated in the meeting, including scientists and teachers from several Iowa institutions and invited guests from the University of Missouri-Columbia and the University of New Mexico. The meeting program included PowerPoint presentations by student and postdoctoral trainees and invited faculty, 23 poster presentations, a hands-on-session on computer-based approaches to teaching physiology, and the presentation of Trainee Travel Awards.

Early arrivals to the conference met the evening before the conference at the *Atlas World Grill* in downtown Iowa City for a "Conference Kickoff." After registration and opening remarks, the meeting was officially underway at 9 am the following day, beginning with a featured presentation by **Peter M. Snyder**, Associate Professor of Internal Medicine at the University of Iowa, who spoke on "Ubiquitin-Protein Ligase Regulation of the Epithelial Sodium Channel." Snyder's presentation was followed by PowerPoint presentations by the Trainee Award Finalists: **Shun-Guang Wei** (mentor **Robert B. Felder**), **Chunhua Jiao** (mentor **Gina C. Schatteman**), and **Marc F. Doobay** (mentor **Robin L. Davison**) from the University of Iowa, and **Baojian Xue** from the

University of Missouri-Columbia (mentor **Meredith Hay**). All four presentations were excellent which made the selection of the winners of the awards difficult. After much discussion among the judges, **Marc Doobay** and **Shun-Guang Wei** were named winners of the Trainee Travel Awards.

**Virend K. Somers**, Professor of Medicine at the Mayo Clinic and Mayo College of Medicine, Rochester, MN delivered the Plenary Lecture, which was supported by the American Physiological Society. Somer's provocative presentation "Sleep, Death and the Heart" was well-received and generated much discussion.

The IPS Business Meeting was presided over by IPS President **Mark W. Chapleau** and President-elect **Harald M. Stauss**. Secretary-Treasurer **Ulla C. Kopp** summarized the state of the membership and finances of the Society, concluding that the financial state is good. Many items were discussed including: 1) the nomination of candidates for IPS President-elect, 2) possible locations and dates for the next IPS meeting including the possibility of a return of a joint meeting with the Nebraska Physiological Society, 3) ways to increase the IPS membership and facilitate communication between members of the society, 4) and the future of the relationship between the IPS and the Iowa Academy of Sciences (IAS). In addition to Chapleau, Stauss, and Kopp, key participants in the business meeting included past IPS presidents **Ron Torry** (Drake University), **Piper Wall** (Iowa Methodist Medical

Center, Des Moines), and **Thomas Schmidt** (University of Iowa), and **Scott H. Carlson** (Luther College). The discussion led to the later nomination of **Scott Carlson**, Assistant Professor at Luther College in Decorah, Iowa for the position of IPS President-elect. I am pleased to report that Scott accepted the position and is now serving as President-elect.

The afternoon sessions included two poster sessions, a featured presentation by **Harald M. Stauss**, Assistant Professor of Exercise Science at the University of Iowa, on "Mechanisms of Blood Pressure Variability," and three additional PowerPoint presentations related to selected posters. In addition, **Joel A. Gordon** (Vice-chair for Education, Department of Internal Medicine) and **Mark Chapleau** (Departments of Internal Medicine and Physiology & Biophysics) of the University of Iowa gave a much-appreciated hands-on demonstration on the use of computers in teaching physiology, which included simulations illustrating key principles of renal and cardiovascular physiology.

The main objective of the IPS conference—to provide an opportunity for physiologists throughout the state of Iowa to interact, develop collaborations, and share ideas on the science and teaching of Physiology—was clearly achieved. The conference also provided an ideal venue for trainees to gain experience in presenting their research findings and meeting peers.

❖  
*Mark W. Chapleau*  
President, Iowa Physiological Society



**Pete Snyder** of the University of Iowa delivering his feature presentation "Ubiquitin-Protein Ligase Regulation of the Epithelial Sodium Channel."



**Mark Chapleau** (left) presenting Trainee Travel Awards to (left to right) **Shun-Guang Wei** and **Marc Doobay** of the University of Iowa, **Baojian Xue** of the University of Missouri-Columbia, and **Chunhua Jiao** of the University of Iowa.

## New Regular Members

\*transferred from Student Membership

**Sally Wahba Aboelela\***

Columbia Univ., NY

**Jeremy Thomas Allen**

Univ. of Salford, United Kingdom

**Beatrice Maier Anner**

Loma Linda, CA

**Raanan Arens**

Children's Hosp., Philadelphia, PA

**Franz Josef Baudenbacher**

Vanderbilt Univ., TN

**Darrell David Belke**

Univ. of California, San Diego, CA

**Laura Bennet**

Univ. of Auckland, New Zealand

**Candice M. Brown\***

Univ. of California, Davis

**Luke Charles Carey**

Wake Forest Univ., NC

**Dan Chalothorn**

Univ. of North Carolina, Chapel Hill

**Alberto Concu**

Univ. Di Cagliari, Italy

**Daniela Cucu**

Katholieke Univ., Leuven, Belgium

**Aniruddha Das**

Columbia Univ., NY

**Cassandra V. Delgado-Reyes\***

Emory Univ., GA

**Jean Francois Demonet**

INSERM, France

**Gerald Arthur Diemel**

Univ. of Arkansas

**Yuan-Lin Dong**

Univ. of Texas Med. Branch

**John F. Engelhardt**

Univ. of Iowa

**Alan Kenneth Erickson**

South Dakota State Univ.

**Lori Estes\***

Georgetown Univ., DC

**Patrick Thomas Fueger\***

Duke Univ. Med. Ctr., NC

**Han Golani**

Tel Aviv Univ., Israel

**Bradley Edward Greger\***

Caltech, Pasadena, CA

**Jennifer M. Groh**

Dartmouth Coll., Hanover, NH

**Renzhi Han\***

Howard Hughes Med Inst., IA

**Colleen Cosgrove Hegg**

Univ. of Utah

**Walther Honscha**

Univ. of Leipzig, Germany

**Tahir Hussain**

Univ. of Houston Coll. Pharm., TX

**Deepika Jain**

Univ. of Pennsylvania

**Bina Joe**

Medical College of Ohio

**Mark Johnson**

Northwestern Univ., IL

**Matthew Robert Jones**

Harvard Univ., MA

**Juliann G. Kiang**

Walter Reed Army Inst. Res., MD

**Jason P. Kirkness**

Univ. of Sydney, Australia, Westmead Hosp.

**Yukio Komatsu**

Res. Inst. Environ. Med, Japan

**Kiyoyasu Kurahashi**

Yokohama City Univ., Japan

**Qin Li**

Univ. of Texas, Southwestern Med. Ctr.

**Weike Mao**

Univ. of Rochester Med. Ctr., NY

**Ruth E. Martin**

Univ. of Western Ontario, Canada

**Daniel A. Martinez**

Univ. of Houston, TX

**Jeffrey I.R. Messer**

Chandler-Gilbert Comm. Coll.,

Phoenix, AZ

**Nestor Molfino**

Otsuka Maryland Res. Inst., MD

**Noriteru Morita**

Hokkaido Asai Gakuen Univ., Japan

**Marina Mourtzakis\***

Univ. of Alberta, Canada

**Alan B. Moy**

Univ. of Iowa, Iowa City

**Steven B. Oppenheimer**

California State Univ., Northridge

**Henry P. Parkman**

Temple Univ. Hosp., PA

**James T. Porter**

Ponce School of Med., Puerto Rico

**Martin Post**

Hospital for Sick Children, ON, Canada

**Padmam Puneet**

National Univ. of Singapore

**Arshad Rahman**

Univ. of Rochester Sch. of Med., NY

**Asia Rehman**

Univ. of Sains, Malaysia

**Hong Ren**

Marquette Univ., Milwaukee, WI

**Jim L. Rupert**

Univ. of British Columbia, Canada

**Rasnpreet Sabharwal\***

Univ. of Iowa

**Susan E. Safford**

Lincoln Univ., PA

**Minati Satpathy**

Indiana Univ., Bloomington

**David E. Schmitt**

Marquette Univ., WI

**Brad A. Seibel**

Univ. of Rhode Island

**Hassan Sellak**

Univ. of South Alabama, Mobile

**Dirk J. Snyders**

Univ. of Antwerp, Belgium

**Christine M. Sorenson**

Univ. of Wisconsin

**Terrence R. Stanford**

Wake Forest Univ., NC

**Alexander Staruschenko**

Univ. of Texas, San Antonio

**Ashley M. Stokes\***

Louisiana State Univ.

**Jennifer L. Stow**

Univ. of Queensland, Australia

**Toshiaki Tamaki**

Univ. of Tokushima Sch. of Med., Japan

**Mark S. Taylor\***

Univ. of South Alabama

**John Steven Torday**

Harbor Univ., Los Angeles, CA

**David S. Weber\***

Univ. of South Alabama

**Weizheng Wei**

Univ. of California, Los Angeles

**Qiang Xia**

Zhejiang Univ., China

**Semir Zeki**

Univ. College London, UK

**Janos Zempleni**

Univ. of Nebraska, Lincoln

## New Affiliate Members

**Adam Hayashi**

Central Florida Comm.  
College

**Dwayne A. Lavoie**

Bristol Myers Squibb Co.,  
Syracuse, NY

**Ajibade Seun Adedeji**  
Ambrose Alli Univ., Nigeria

**Ayodeji Augustus Adelopo**  
Univ. of Lagos, Nigeria

**Afolabi Adeyemi Ajadi**  
Univ. of Lagos, Nigeria

**Paul Ayodeji Amund**  
Univ. of Lagos, Nigeria

**Babalola R. Bawa-Allah**  
Univ. of Lagos, Nigeria

**Felice Beitzel**  
Univ. of Melbourne

**Trevor R. Cardinal**  
Univ. of Arizona

**Kira C. Castellon**  
Univ. of Maryland, Eastern Shore

**Bao-Ping Chen**  
Zhejiang Univ., China

**Aijyl V. Cagas**  
Mindanao St. Univ., Philippines

**Jill Nicole Cook**  
Univ. of Texas, Austin

**Sarah E. Deemer**  
Univ. of Texas, El Paso

**Dario Dieguez, Jr.**  
Univ. of Texas, San Antonio

**Olamide T. Fashua**  
Univ. of Lagos, Nigeria

**Courtney J. File**  
East Carolina Univ., NC

**Ryan M. Francis**  
Michigan State Univ.

**Qin Gao**  
Zhejiang Univ., China

**Stephen L. Gooding**  
Purdue Univ., IL

**Joslyn K. Hansen**  
Univ. of Florida

**Tony E. Haynes**  
Texas A&M Univ.

**Jeremy D. Holman**  
Louisiana State Univ.

**Lucy SooYon Jun**  
CA State Univ., San Bernardino

**Patricia A. King**  
Univ. of Queensland, Australia

**Sailesh Konda**  
George Washington Univ., DC

**Kehinde A. Kuti**  
Univ. of Lagos, Nigeria

**Peter R. Latchman**  
Columbia Univ., NY

**Hua-Wei Liang**  
Zhejiang Univ., China

**Micheal C. M. Lim**  
Edith Cowan Univ., Australia

**Guohua Lin**  
Zhejiang Univ., China

## New Student Members

**Feilim MacGabhann**  
Johns Hopkins Univ., MD

**Edward K. Merritt**  
Univ. of Texas, Austin

**O'Dhaniel Mullette-Gillman**  
Dartmouth College, NH

**Charity Jo Nofziger**  
Indiana Univ.

**Alexandre H. Okano**  
FEF/UNICAMP, Brazil

**Gabriela R. Oliverira**  
Univ. De Sau Paulo, Brazil

**Richard J. Lovell**  
Univ. of Hull, UK

**Patrick C. Okafor**  
Univ. of Lagos, College of Med., Nigeria

**Matthew D. Pahnke**  
Univ. of Texas, Austin

**Gary Pierce**  
Univ. of Florida

**Steven Purtugal**  
Univ. of Birmingham, AL

**Pavithran Purushothaman**  
Jawaharlal Inst., India

**Brian F. Renna**  
Temple Univ., PA

**Paul A. Rogers**  
Louisiana State Univ.

**Raja S. Settivari**  
Univ. of Missouri

**Bing Shen**  
Tulane Univ., LA

**Shaun V. Spielman**  
Dickinson College, PA

**Ben C. Sporer**  
Univ. of British Columbia, Canada

**Toru Suzuki**  
Okayama Univ.

**Christine Turenus Williams**  
Univ. of CA, Riverdale

**Hui-Ping Wang**  
Zhejiang Univ., China

**Qiong Wang**  
Virginia Tech.

**Marc S. Wells**  
Liverpool Hope Univ., UK

**Yi-Ying Wen**  
Natl. Taiwan Normal Univ.

**Keisha C. Williams**  
Louisiana State Univ.

**Liping Wu**  
Zhejiang Univ., China

**Zhekang Ying**  
Medical College of Georgia

**Zainal A. Zainuddin**  
Edith Cowan Univ., Australia

**Shi-zhong Zhang**  
Zhejiang Univ., China

## Physiology in Perspective Walter B. Cannon Memorial Lecture

The Cannon Memorial Lecture, sponsored by the Grass Foundation, honors Walter B. Cannon, President of the Society from 1913-1916, and is presented annually at the spring meeting to an outstanding physiological scientist, domestic or foreign, as selected by the President-Elect with the consent of council. The recipient presents a lecture on "Physiology in Perspective," addressing Cannon's concepts of "The Wisdom of the Body." The lecture is considered for publication in the Society journal of their choosing. The recipient receives an honorarium of \$4,000, a plaque, and reimbursement of expenses incurred in association with delivery of the lecture. The membership is invited to submit nominations for this lecture. A nomination shall be accompanied by a candidate's curriculum vitae and one letter detailing the individual's status and contributions.

More information on the award and nomination procedures are available at <http://www.the-aps.org>. Nominations should be sent to: The APS Cannon Lecture Award, c/o Linda Jean Dresser, 9650 Rockville Pike, Bethesda, MD 20814-3991; or submitted online at [http://www.the-aps.org/cgi-bin/Election/Lecture\\_form.htm](http://www.the-aps.org/cgi-bin/Election/Lecture_form.htm).

## Twenty-five Teachers Attend APS Science Teaching Forum

For the week of July 26-August 1, 25 Research Teachers (RTs) from this year's Frontiers in Physiology and Explorations in Biomedicine Fellowship programs gathered at the Airlie Center in Warrenton, VA. During this intensive workshop week, the teachers explored inquiry- and equity-based teaching strategies, how to integrate technology into their classroom and the use of animals in teaching and research. 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 by the National Science Education Standards. The RTs also started developing their own hands-on, inquiry-based science activities. The teachers left the Airlie Center exhausted but thrilled with all that they had learned and the vibrant collegial network that had formed over the week.

The 2004 RTs spent the majority of the summer conducting research in APS-member host laboratories, learning first-hand how the research process works. Over the last 14 years, the APS has partnered with many of the nation's leading biomedical academic, private, and government research facilities to provide research opportunities for over 300 teachers.

The Frontiers in Physiology and



**Traveling from points as diverse as Texas, New Hampshire and Washington, the 25 2004 Research Teachers gathered in Virginia for an intensive week long workshop.**

Explorations in Biomedicine Professional Development Fellowship programs seek to build on-going connections between science instructors and the biomedical research community. The summertime workshop and research experience are components of the competitive yearlong Fellowships.

In April the RTs will attend the International Union of Physiological Scientists meeting in San Diego, CA, to further their science experiences and learn about the latest life-science research findings. Many RTs will present their own research findings and/or activities at poster sessions.

The Frontiers Fellowship awardees

teach at middle and high schools across the United States. Frontiers in Physiology is a program of APS, and is sponsored by APS, the National Center for Research Resources (NCRR) Science Education Partnership Awards (SEPA), and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health.

The Explorations in Biomedicine Fellowship is sponsored by APS and the National Institute of General Medical Sciences (NIGMS)/Minority Access to Research Careers (MARC) Program. Explorations RTs teach primarily Native American students at middle and high schools, and tribal colleges on Indian reservations.

### **Mentors and Curriculum Development: Deepening the Learning**

Another vital component of the weeklong Professional Development Workshop is the guidance provided by the Mentor/Instructor team composed of former RTs and Physiologists-in-Residence. During the summer workshop, the Mentor/Instructors facilitated sessions using APS curriculum units and worked with the RTs one-on-one as they developed their own lab/lessons. The Mentor/Instructors work with the 2004 RTs throughout the Fellowship year via email and



**Workshops included hands-on physiology lab activities from the APS online unit "The Sense of Touch." John Hall tests Betsy Scarborough's tactile receptor fields with a two-point discrimination tester.**



online activities.

Returning for their second time as Mentor/Instructors were: **Isabelle Camille**, Coral Gables High School in Miami, FL; **Kris Clements**, Caddo Parish Magnet High School in Shreveport, LA; and **Kolene Krysl**, Oakdale Elementary School in Omaha, NE. Joining the team were **Terri DeCresie**, A.G. Cox Middle School in Winterville, NC; **Diana DeSpain**, Putnam City High School in Oklahoma City, OK; and **Randy Dix**, Olathe North High School in Olathe, KS.

### APS Member and Minority Travel Fellow Serve as Physiologists-in-Residence

During the 2004 Science Teaching Forum, two dynamic physiologists served as Physiologists-in-Residence: **Barb Goodman**, Professor of Physiology and Director of Special Programs and Science Education at the University of South Dakota's School of Medicine in Vermillion, SD, and **Karma Rabon-Stith**, a Postdoctoral Fellow at the University of Maryland-College Park Department of Kinesiology & University of Maryland-Baltimore Department of Medicine. Goodman also serves as an Associate Editor of *Advances in Physiology Education*. Rabon-Stith recently received an APS NIDDK Minority Travel Award to attend the

2004 "APS Translational Research Conference on Integrative Biology of Exercise."

As the 2004 Physiologists-in-Residence, Goodman and Rabon-Stith actively and effectively fielded the RTs' numerous questions related to science content, the use of animals in research, and classroom equity issues. Goodman and Stith-Rabon also provided assistance to teachers as they began developing science labs and activities to use in their classrooms.

Applications for the 2005 Professional Development Fellowships are available on the APS website at [http://www.the-aps.org/education/edu\\_k12.htm](http://www.the-aps.org/education/edu_k12.htm). For additional information about the summer research programs, email the APS Education Office at [education@the-aps.org](mailto:education@the-aps.org), or call 301-634-7132. ❖



The 2004 Physiologists-in-Residence and Mentor/Instructors. From left to right: Barb Goodman, Karma Rabon-Stith, Kolene Krysl, Terri DeCresie, Isabelle Camille, Diana DeSpain and Randy Dix.

## 2004-2005 Porter Physiology Fellows Announced

The APS and Porter Physiology Development Committee congratulate the 2004-2005 APS Porter Physiology Fellows:

**Christina Bennett**, Univ. of Michigan

**Adrienne Bratcher**, Univ. of Louisville School of Medicine

**Jessica Clark**, Univ. of Arizona

**Alfredo Garcia III**, Wright State Univ.

**Damon Jacobs**, Univ. of North Carolina, Chapel Hill

**Walson Metzger**, Univ. of Dentistry and Medicine, NJ

**Gary Morris**, Eastern Virginia Medical School

**Stefanie Raymond-Whish**, Northern Arizona Univ.

The Porter Physiology Fellowships for minorities are one-year fellowships that provide a stipend of \$18,000. The fellowships are open to underrepresented ethnic minority

applicants (African Americans, Hispanics, Native Americans, Native Alaskans, or Pacific Islanders) who are citizens or permanent residents of the United States or its territories. Applicants must have been accepted into or currently be enrolled in a graduate program pursuing an advanced degree in the physiological sciences. For more information, see the APS website at [http://www.the-aps.org/education/minority\\_prog/porterfell.htm](http://www.the-aps.org/education/minority_prog/porterfell.htm) or contact Melinda Lowy in the APS Education Office at [education@the-aps.org](mailto:education@the-aps.org) or 301-634-7132. The deadline for 2005-2006 applications will be **January 15, 2005** and **June 15, 2005**. ❖

## APS and Physiology Department at Mississippi Sponsor Undergraduate Symposium

The APS, along with the Department of Physiology at the University of Mississippi Medical School, sponsored an undergraduate research symposium and luncheon on July 29, 2004.

**Joey P. Granger** conceived of and hosted the event as a result of having a 2004 Undergraduate Summer Research Fellow, Lyndsay K. Roberts from Mississippi State University in Starkville, working in his laboratory.

As a research host, Granger received a grant from APS for his use. Rather than apply the funds toward lab supplies or other things, he decided to utilize the funds to have a department-wide undergraduate research symposium.

The event allowed all the undergraduate students working in physiology laboratories to present their research results from the summer to the department faculty and the other

students, giving them valuable experience at explaining their research. The luncheon also gave everyone the opportunity to converse and discuss their research in a less formal atmosphere. All those who participated in the event felt it was time well spent.

APS thanks Dr. Granger for his efforts on behalf of the undergraduate students. ❖



**Back Row, Left to Right: Dr. John Hall, Matt Dukes, Chaz Seyfarth, William Johnson, Geoffrey Ferril, Latoya Bullock, Paul Brown, Ben Hodnett, Leigh Bailey, Dr. Joey Granger. Front Row, Left to Right: Ameila Bailey, Toni Peters, Lyndsay Roberts, Leslie Granger, Jennifer Dearman, Alissa Willis, Elizabeth Fowler.**

### The American Physiological Society Medical Physiology Curriculum Objectives

<http://www.the-aps.org/education/MedPhysObj/medcor.htm>  
Download in HTML or PDF format

***NOW AVAILABLE IN PRINT FORM; UP TO 15 COPIES FREE PER DEPARTMENT.***

The **Medical Physiology Curriculum Objectives** is a joint project of The American Physiological Society and the Association of Chairs of Departments of Physiology.

APS Education Office  
9650 Rockville Pike, Bethesda, MD 20814-3991  
Phone: 301-634-7132; Fax: 301-634-7098; Email:  
education@the-aps.org; <http://www.the-aps.org/education.htm>

## Society Celebrates 100+ Years of Historical Physiological Research with Its “Classic Articles Series”

APS recently embarked on a mission to share more than 100 years of physiological research through its Legacy Project. The arduous project that included scanning hundreds of original journal volumes—the equivalent of more than 200 linear feet of shelf space—dating back to 1898 has “truly been a labor of love.”

To celebrate the recent completion of the Legacy Project, APS identified 46 articles published in the APS journals that have proven vital to the discipline of physiology and the evolution of modern-day medicine.

The selection process for these articles proved to be nearly as arduous and time consuming as the Legacy Project itself, but was well worth the effort. “We assembled a Task Force of eminent physiologists with a historical interest,” said APS Publications Committee member **Hershel Raff**, who spearheaded the selection of the classic articles.

“We polled certain APS members and committees for nominations of papers. Other databases, historical books, and review articles were also researched. Once a list of over 200 citations was gathered, the Task Force narrowed the group down to about 80. We then separated the citations into areas of interest (heart, lung, kidney, hormones, etc.) and had them reviewed again by experts in each area. These experts further narrowed the choices down and even substituted others. Finally, the experts wrote essays about each citation or group of citations - these essays now appear online,” Raff added. Original authors of the classic papers, where possible, were also invited to provide additional commentary about the work and times.

“The articles epitomize the ever-evolving thirst for knowledge and the pioneering spirit of invention that are the signature of physiology’s best and brightest,” said APS Publications

Committee Chair **Dale Benos**. “Science owes many advances in technology, equipment, and insight into perplexing physiological processes to this early research.”

These 46 seminal articles represent advances of undisputed importance. For example, there is the 1945 paper authored by Seymour Kety and Carl Schmidt that introduced a revolutionary new way to measure cerebral blood flow. The manuscript, still a landmark in its field, sparked the development of new cerebral blood flow methodologies and revolutionized research on the human brain. (Article: “The determination of cerebral blood flow in man by the use of nitrous oxide in low concentrations.”)

Or the Arthur Guyton, Arthur Lindsey and Berwind Kaufmann 1955 article, which through its pioneering use of systems analysis, placed an emphasis on venous return as a determinant of cardiac output and became an important tool for research and teaching. (Article: “Effect of mean circulatory filling pressure and other peripheral circulatory factors on cardiac output.”)

Also included was the development of the first three-function blood-gas analyzer—an essential tool in surgery, anesthesia, intensive care, and emergency medicine—detailed in the 1958 article by John Severinghaus and A. Freeman Bradley. This invention, which measures arterial blood for oxygen, carbon dioxide and pH, has proved to be one of the most important laboratory tests for physicians. (Article: “Electrodes for blood Po<sub>2</sub> and Pco<sub>2</sub> determination.”)

The authors of the classic articles are not only prestigious within the field of physiology, but are respected in the scientific community as a whole.

“It was remarkable that several Nobel Prize winners were among the authors highlighted, like Andre Frederic Cournand and Bernardo

Alberto Houssay,” Raff said. “Also remarkable was the importance of these studies in translational science - the application of basic discoveries to clinical medicine. For instance, the use of creatinine clearance in the assessment of renal failure; the evaluation of ventilation-perfusion relationships in patients with lung disease; and the diagnosis of pituitary tumors producing prolactin, are all examples. This application of physiology to clinical medicine is consistent with the long history of the APS as an interface between very basic researchers and clinicians,” he continued.

Though this first group of papers has been selected, the “Classic Articles” series is not yet complete. Several outstanding articles and essays, including papers from the *Journal of Neurophysiology*, will be added to the website shortly. And certainly, readers may identify other articles that seem appropriate for the collection. Additional articles can be submitted to the Task Force for review.

“The beauty of this project is that it’s online and can be expanded,” says APS Director of Publications Margaret Reich.

The aim of sharing these classic articles and essays is to stimulate and inspire physiologists of all ages to appreciate the beauty and the greatness of science published in APS research journals in the last century. Additionally, APS recognizes the need to make all of its archived literature accessible, to both serve as a testament to the dedicated scientists involved in physiological research and to provide a deeper understanding of the cultural heritage of modern day science.

The “Classic” articles, introductory essays, and complete first editions of each journal are freely available on the APS Journals web site (<http://www.the-aps.org/publications/classics/>). ❖

## House Approves NIH Funding, "De-funds" Two NIMH Grants

On September 9, 2004, the House of Representatives approved a funding bill that would provide the NIH with a \$28.5 billion budget in fiscal year 2005. Under the House bill the NIH budget would grow by \$727 million or 2.6% above the current level.

Meanwhile, the Senate Appropriations Subcommittee on Labor-HHS-Education was expected to recommend an NIH budget of \$28.9 billion. This sum represents a \$1.1 billion or 3.6% increase above the current level. These figures were circulated unofficially after Subcommittee Chair Arlen Specter (R-PA) polled his colleagues about what funding level to provide. A subcommittee markup was scheduled to take place September 15.

However, it seems unlikely that Congress would be able to finalize the Labor-HHS bill before the end of the fiscal year. It was therefore expected that a Continuing Resolution would be needed again this year to keep the government operating after October 1.

Biomedical research advocates had several concerns about the House version of the NIH bill. The sub-inflationary funding increase was disappointing, but it had been expected since the President had recommended only a 2.6% increase for the NIH. However, the House bill also included several troubling legislative provisions.

During the debate over the bill, the House accepted an amendment offered by freshman Rep. Randy Neugebauer (R-Texas) that would cut off National Institute of Mental Health (NIMH) funding for two grants. One grant was to study of the impact of dorm room decorations on the mental health of college students. The other project was directed at understanding how college students define a meaningful day. In comments reminiscent of the "Golden Fleece" awards issued by Sen. William Proxmire (D-WI) during the 1970s and 1980s, Neugebauer called upon the NIMH to focus its efforts on "serious mental health issues." Labor-HHS-Education Subcommittee Chair Ralph Regula (R-TX) defended NIH peer review and urged the House not to

involve itself in monitoring funding decisions. Regula called NIH peer reviewers "very capable people," but said that with a portfolio of some 40,000 grants, "you can find a couple that you might have some question about the efficacy." Regula declined to oppose the Neugebauer amendment because the projects in question were already completed, and the amendment was approved by a voice vote. It was subsequently revealed, however, while one of the grants was completed, other project was ongoing, although the funds had already been obligated. Research advocates were expected to ask with the Senate Appropriations Committee to counter this amendment and to affirm the importance of an independent peer review process.

The House also approved an amendment by Rep. Scott Garrett (R-NJ) that would prohibit the use of funds to send more than 50 federal employees to the any one overseas conference. The amendment was apparently a response to controversy in recent years about the size of government presence at certain international meetings. The provision, which would not apply to scientific meetings held in the U.S., is also likely to be raised when the Senate takes up its version of the legislation.

During the course of the debate, Chairman Regula also held a colloquy with Rep. Ernest Istook (R-OK) to clarify the intention behind report language instructing the NIH to make articles publicly accessible through PubMed Central. (See **"NIH Requests Comments on Access Plan."**) This provision was included in the House Appropriations Committee report that accompanied the NIH funding bill. The report language, which was made public in mid-July, told the NIH to start requiring extramural researchers to deposit the manuscripts of articles accepted for publication journals into PubMed Central. The articles would be made freely accessible to the public after 6 months, unless NIH funds were used to pay publication related costs such as page or color charges, in which case the manuscripts would be made freely accessible upon deposit. The report asked the NIH to report back on such a plan by December 1, 2004.

Many scientific publishers objected to this mandate, which was appeared without prior discussion. (See **"Publishers Question Access Plan."**) Istook agreed to hold a colloquy with Regula to clarify the intent of the language. In his floor statement, Istook said that he has "been very concerned for a number of years that the public is not always able to access the results of [NIH-funded] research. He noted the publication of the NIH policy and said that it "carefully balances the interests" of the publishers, researchers, and patients. Regula agreed with this assessment and said the issue was "a very simple proposition: NIH, or the taxpayer, pays for the research, even pays for the journals, and should be able to share the results with the taxpaying public." He went on to "encourage the NIH to move expeditiously to finalize its proposal after considering the comments it receives on its policy."

## NIH Requests Comments on Access Plan

On September 3, 2004 the NIH published a Notice in the NIH Guide to Grants and Contracts setting forth its plans to provide "Enhanced Public Access to NIH Research Information" by disseminating accepted manuscripts through PubMed Central. The notice is available on line at <http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-04-064.html>.

The notice states that NIH has "a long-standing commitment to share and support public access to the results and accomplishments of the activities that it funds" and that "Establishing a comprehensive, searchable electronic resource of NIH-funded research results and providing free access to all is perhaps the most fundamental way to collect and disseminate this information." The notice further states that NIH must "balance this need with the ability of journals and publishers to preserve their critical role in the peer review, editing and scientific quality control process."

In the notice, NIH proposes to request that grantees "provide the NIH with electronic copies of all final

version manuscripts upon acceptance for publication if the research was supported in whole or in part by NIH funding." This would apply to research grants, cooperative agreements, contracts and National Research Service Award (NRSA) training fellowships. Depositing a manuscript will be offered as "an alternative means by which [NIH-supported investigators] will meet and fulfill the requirement of the provision of one copy of each publication in the annual or final progress reports."

"NIH considers final manuscripts to be an important record of the research funded by the government and will archive these manuscripts and any appropriate supplementary information in PubMed Central (PMC)," according to the notice. However, in a significant departure from current practice, the NIH will provide the public with free access to manuscripts 6 months after publication, or sooner if the publisher agrees. In addition, publishers would have the option to replace the author's manuscript with a web link to the publisher's final version of the article.

The NIH Notice differs from the instructions inserted in the Labor-HHS-Education Appropriations report by Rep. Ernest Istook (R-OK). The NIH notices states that the agency will "request" that grantees deposit their articles in PubMed Central, whereas the House report instructed the NIH to require this. The NIH plan would also make all articles publicly accessible after six months, whereas the House language would have required immediate public access if NIH funds were used to pay publications fees such as page or color charges. Because of the latter provision, the original House language would have had enormous negative consequences for not-for-profit publishers, who tend to rely upon publication fees as a way to spread costs and keep subscriptions prices in check.

After the House report language was made public in mid-July, NIH hastily organized three separate sessions for the publishing, investigator, and patient communities. Representatives of each group were invited to meet with NIH Director Elias Zerhouni to discuss public access

issues. Although the House language was couched as an instruction to the NIH to develop a plan, during the July 28 meeting with publishers, Zerhouni indicated that the NIH already had a proposal and would be publishing it within weeks.

One concern about the NIH plan was that it had been developed without public input. The APS is a founding member of a coalition of not-for-profit publishers who have been working to promote the wide-spread free dissemination of scientific research. The DC Principles for Free Access to Science were announced in March 2004 as an reaffirmation of the commitment of scholarly, not-for-profit publishers to innovative publishing practices and the dissemination of the research published in their journals. DC Principles publishers make the full text of their journals publicly available as soon as it is possible for them to do so. They also make selected articles of special interest free online as soon as they are published. In addition, these publishers reinvest the revenues from their journals to support science, including scholarships, scientific meetings, grants, educational outreach, advocacy for research funding, free dissemination of information for the public, and improvements in scientific publishing. The full text of the DC Principles is available online at <http://www.deprinciples.org>.

The DC Principles Coalition has been described as the middle ground between commercial publishers and advocates of Open Access publishing. Nevertheless, these publishers were not consulted during the design and development of the NIH plan.

The APS will study the NIH proposal and provide comments to the agency between now and November 2. Among the questions to be considered is whether it is appropriate for the NIH to regulate scientific publishing, and what will be the impact both on the NIH and on the scientific literature if it does so.

## Publishers Question Access Plan

A group of more than 50 not-for-profit publishers including most of the signatories of the DC Principles sent a letter asking Senators Specter and Harkin to halt the NIH's efforts to develop a government-run manuscript distribution center.

The September 8 letter raised questions about both the public access language in a House Appropriations Committee report and the NIH proposal that was published September 3. APS Executive Director and DC Principles Coalition Coordinator Martin Frank signed the letter.

"Although it is certainly justified for the NIH to collect manuscripts for internal use to manage its research portfolio, it is unacceptable for the NIH to mandate a timetable by which the public will be given free access to articles destined for publication in scientific journals," Frank wrote. He noted further that "As scientific publishers, our disagreement is not about whether scientific research should be made broadly and readily accessible. Rather, it is about how best to do so."

The letter raised concerns about a lack of due process in formulating the proposal as well as the failure of the NIH to adequately evaluate its likely consequences. It asked how the proposed national repository would affect scientific publishing whether it would ultimately prove to be in the best interests of science.

One concern is the repository's financial impact on publishers since demand for subscriptions will weaken if manuscripts are made available without charge. The not-for-profit publishers who subscribe to the DC Principles affirm that publishers should make the full text of journals available freely as soon as possible. However, since demand for journals varies among scientific fields, and journals are published at different intervals, the DC Principles allows for the fact that publishers themselves must determine a timetable for granting access that enables them to meet their business and publishing requirements. Consequently, there is serious concern that a government-mandated

timetable to make articles freely available will harm some publications by undermining the value of their subscriptions. This will harm science because not-for-profit publishers use their journal revenues to fund innovations in electronic publishing and to support research, scientific meetings, and educational programs.

"Journal revenues underwrite activities that are a public good that supports science," Frank wrote. "A government-run mandatory distribution system threatens these activities."

The letter questioned whether the creation of a centralized government repository is "necessary to ensure access to science or desirable as a matter of public policy." Frank noted that some publishers who signed the letter already voluntarily deposit their content with PubMed Central, while others place their content on-line through the HighWire Library of the Sciences and Medicine (<http://highwire.stanford.edu>). "This website, which was privately developed by [Stanford's] HighWire Press, has search capabilities exceeding those of PubMed Central," Frank wrote.

Frank also questioned the NIH's assumptions regarding the likely costs of the proposed repository. PubMed Central currently has a \$2.5 million budget, and while NIH estimates that it would cost no more than another \$2.5 million to handle the deposit of approximately 50,000 NIH-funded research articles each year, some publishers believe that it might cost as much as \$50 million.

Providing patients with access to the latest research about their diseases is one of the primary rationales given for this proposal. However, Frank noted that many patients prefer consumer-oriented information rather than journal articles. For those who are interested in reading the scientific literature, the NIH plan will only give them access to the studies it funds.

"Solving the problem of patient access to research will require cooperative efforts between patients and publishers," Frank wrote. Most DC Principles journals "already provide copies of articles without charge to individuals dealing with personal or familial health problems," he said.

"Publishers are also exploring with voluntary health agencies additional ways to expedite access to this information."

With respect to other consumers of research, Frank pointed out that "up until this point, the norm was that journal subscriptions were a cost of doing research." Although the advent of the Internet makes it easier to disseminate information, it does not eliminate the costs associated publishing. Frank questioned whether it was appropriate for the NIH to "take it upon itself to donate scientific content not only to U.S. researchers and companies but also to the world at large, particularly when doing so will harm the economic interests of U.S. scientific publishers."

Frank concluded by urging the Senate to seek answers to these questions through an independent General Accounting Office study before allowing the NIH to proceed with its plan. The letter is available on the DC Principles website at <http://www.dcpinciples.org/senateletter.pdf>.

## FASEB Article Chronicles Lung Surfactant Story

FASEB has published the 16th article in the Breakthroughs in Bioscience series. "Bubble, Babies and Biology: The Story of Surfactant" was written by science writer Sylvia Wrobel under the guidance of scientific advisor **John Clements**. The article, intended for the general public, describes a problem that was first identified in patients, and then elucidated in the lab through the cooperation of physicians and scientists, which led to the introduction of successful treatments in clinical settings.

Less than 50 years ago, tens of thousands of premature infants were born each year and died, struggling for breath from some mysterious affliction that left physicians baffled and helpless to intercede. "Bubbles, Babies and Biology" traces the confluence of obscure, unrelated discoveries in physics, lung physiology and pathology that led to the discovery of surfactant and its use in saving lives of pre-

mature infants. This fascinating tale of research discovery follows the work of many different scientists who unraveled this puzzle and were able to translate basic knowledge into practical medicine and create new frontiers in neonatal medicine.

The article is available online at: <http://www.faseb.org/opar/break/>.

## APS/AAAS Mass Media Science and Engineering Fellow Recounts Experience

**Nicole Garbarini** was chosen by the Communications Committee to be this year's APS-sponsored AAAS Mass Media Science and Engineering fellow. Now in its 30th year, this highly-competitive program has supported more than 450 Fellows. Nicole is an APS student member who is currently a neuroscience PhD candidate at Vanderbilt University, working in the laboratory of Eric Delpire. She has returned to her graduate studies, but plans to continue expanding public understanding of science through freelance scientific journalism. Her article below details her summer of learning at *Scientific American*.



There is no doubt that scientific research has an important influence on society. From understanding disease to creating consumer technologies to making political legislation, science affects everyday living. Yet, scientific research is a mysterious process to a large majority of the general public. What goes on in a laboratory? How are hypotheses and data judged to be correct?

Similarly, the media is a highly influential presence in today's world, connecting and educating people

Similarly, the media is a highly influential presence in today's world, connecting and educating people

about current events and how they impact the future. And like research science, news making remains a mysterious process to many. How are stories investigated? What constitutes an important news item?

The AAAS Mass Media Science and Engineering Fellowship program aims to directly close the gap between the way scientists and journalists understand each other. Now in its 30th year, this program places young scientists at mass media outlets for 10 weeks to educate them about the journalistic process and bring current researchers into newsrooms across the country. This summer, I had the wonderful opportunity to participate in this program and work at *Scientific American* magazine. I have always had an interest in journalism and have prior editorial experience from high school and college newspapers. However, I have not had much formal communications training.

The summer began with three days of orientation at the AAAS offices in Washington, DC. I had the chance to meet the other 16 fellows selected for this year's program who came from all walks of science, from plant biology to chemistry to geophysics. Orientation sessions taught us about interviewing, note-taking, reporting, and the editorial process. Experts in the field of science writing, including accomplished freelancers and science news editors, led us in interactive workshops. We toured the news offices of NPR and had a roundtable discussion with some of their science reporters. Additionally, we met several Mass Media program alumni who are currently involved in communications. All of these activities were a great way to hear about what science journalism is like today and meet people who moved from science backgrounds into a writing career.

I then moved to Manhattan to begin my work at *Scientific American*. Mariette DiChristina, the magazine's Executive Editor, was my main contact. She introduced me to the magazine, helped me get acquainted with the editorial process, and gave me my first work assignments. An excellent mentor, she made sure that I was given ample opportunities to participate in various editorial staff duties,

such as participating in news, production, and editorial meetings. She also set up meetings with Publicity, Marketing and other departments on the business side, which gave me a more complete picture of all the components needed to successfully publish the magazine.

My first duty, which made me acutely aware of the learning curve I faced, was to edit a "Letters to the Editor" section. I initially thought this would be a fairly easy task. However, as I started work on this section—trying to find appropriately representative letters, editing them without changing their overall tone, contacting authors of the original articles to get their response—I realized that a lot of work goes into a seemingly simple task like putting together the feedback section of the magazine.

The majority of my work assignments involved editing, researching facts and primary literature, and reporting and writing. One of my most exciting assignments was writing my first news brief. I was to write approximately 500 words about a microchip that can release extremely precise and minute amounts of fluids. The chip is being developed to serve as a prosthetic retinal implant, essentially mimicking the neurons which degenerate in some types of age-related blindness. I really enjoyed reading the primary research, thinking of questions to ask the researchers, and figuring out who else I could talk to in order to develop this story. Composing the article was challenging, but after writing and editing, then working with my editor, I felt like I was able to develop the story into a solid piece which explained the importance of this new technology.

While much of my work was done from my desk, I had opportunities to find story ideas outside of the office as well. I attended two press conferences, which not only generated story ideas, but also allowed me to meet other members of the press and observe a scientific press conference. I also spent a day on an assignment at Cold Spring Harbor Laboratory, where I conducted half hour interviews with seven of their primary investigators. This was a great opportunity to discuss some of their research.

I learned a lot about the magazine

just by chatting with members of the *Scientific American* staff about their work and how they ended up working for a science publication. I was continually impressed with how much they knew about a wide range of scientific disciplines. Neuroscience and biomedical research may always be the most familiar to me, but working with the *Scientific American* editorial staff has inspired me to learn more about other scientific disciplines.

The program ended with wrap-up sessions at the AAAS offices. Each fellow shared their summer work at a poster session and attended workshops about other opportunities in science communications.

These ten weeks increased my interest in communications and reminded me how fortunate scientists are to experience the excitement of discovery first-hand. Unlike most people, we have everyday access to cutting edge information about science and technology. While benchwork or grant-writing may at times seem commonplace, we are involved in an exciting and fast-paced field. Talking to journalists about my own work really makes me feel privileged to be involved in biomedical research.

Though I have now returned to my graduate program, this fellowship has encouraged me to continue pursuing outreach to the general public via journalism. I strongly recommend this program to graduate students who are interested in learning more about the journalistic process. Additionally, I am especially grateful to the American Physiological Society for continuing to support this program. I believe their support is a significant contribution to the public understanding of scientific research.

❖

## Moving?

If you have moved or changed your phone, fax or Email address, please notify the APS Membership Office at 301-634-7171; Fax to 301-634-7241; or change your information at the Members Only portion of the APS Website at <http://www.the-aps.org>. ❖

## Animal Care and Experimentation Committee



The ACE Committee organized another successful Institutional Animal Care and Use Committee (IACUC) training program at EB 2004 in Washington, DC. "IACUC 101 For Scientists: Dealing with Problem Areas," was chaired by **John Stallone**, past chair of the ACE Committee. This four-hour workshop was held on Saturday, April 17 and attracted over 70 scientists from the APS and other societies. The NIH Office of

Laboratory Animal Welfare (OLAW) provided major support for this program with additional contributions provided by the American Society for Pharmacology and Experimental Therapeutics (ASPET), the American Association of Immunologists (AAI), the American Society for Investigative Pathology (ASIP), the American Association of Anatomists (AAA), and the Federation of American Societies for Experimental Biology (FASEB). The goal of this workshop was to provide scientists with focused training to improve their performance on and interaction with IACUCs. In addition to the regular workshop topic presentations, representatives from the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC), USDA, and NIH/Office of Laboratory Animal Welfare (OLAW) were available to answer questions and discuss their own organizations' areas of concern.

Considerable progress has been made on the development of a resource book for the conduct of research involving animal exercise studies to provide guidance on how to design effective experimental protocols that assure the welfare of research animals. This project grew out of a request from the Environmental and Exercise Physiology Section leadership for the APS to provide guidance on the conduct of exercise research protocols involving animals. A group of exercise physiologists and other experts held a planning meeting in December 2002. An expanded group subsequently held two workshops in June 2003 and March 2004 to review what topics to address and to discuss various concerns. A smaller group met in June 2004 to determine how best to compile the contributions of the different authors. By pointing out key considerations in the design of exercise protocols, it is hoped that the resource book will be useful to new researchers, IACUCs, journal editors and reviewers, regulators, and others. The document is expected to be ready for publication early in 2005.

The ACE Committee also continues to be involved in educational outreach. In 1998, the APS created an eight-page color brochure entitled "Questions People Ask About Animals in Research. . . With Answers from the American Physiological Society." The intended audiences include

high school students and the general public. The brochure, which is also available on the APS website at <http://www.the-aps.org/pa/animals/index.htm>, contains a series of essays on frequently asked questions about the use of animals in research. The brochure has been very popular and, as of June 2004, almost 50,000 copies had been disseminated either directly by the APS or by universities, companies, individuals, or educational organizations. The latter category includes the dozen or so organizations that comprise States United for Biomedical Research. The APS has been actively trying to partner with these state-based biomedical research advocacy organizations by providing complimentary copies of the "Questions" brochure, as well as other materials produced by the APS Education Office. The APS has set up web links to these groups and invited them to link to the APS Public Affairs and Education Offices. In addition, the APS seeks to collaborate directly with these groups in other ways and provides them with modest financial contributions. For additional information about these groups and their programs visit the APS website at [http://www.the-aps.org/pa/action/news/state\\_societies.htm](http://www.the-aps.org/pa/action/news/state_societies.htm).

One important issue under discussion by the Committee this past year was the use of animals in medical and veterinary education. A task force comprised of members of the ACE and Education Committees began examining this issue, and APS Public Affairs Officer Alice Ra'anani reviewed a number of studies intended to evaluate the effectiveness of animal experimentation as an educational tool. However, there were gaps and other problems with the data, in addition to which it would be very difficult to probe the subtleties of this question by comparing students' test results. Therefore, the APS Council has decided to frame the question more broadly and directed the Education Committee to review educational research on the advantages and disadvantages of various pedagogical strategies.

In terms of future projects, the management of pain and distress in laboratory animals is an ongoing area of concern. Within the scientific community, determining appropriate relief of pain and distress consistent with the scientific aims of the study is sometimes a subject of dispute between researchers and IACUCs. This issue is also important because the adequacy of measures to control pain and distress plays an important role in influencing public support for animal research. There is a clear need for additional guidance on pain and distress management so an ACE subcommittee has agreed to explore these matters in more detail.

As the new Chair of the ACE Committee, I would like to urge all APS members to make a practice of discussing the value of animal research with your family and friends as well as to your elected officials at every level. It is important that individual scientists join with professional societies such as APS in making their voices heard if we are to preserve our privilege to use animals in research and teaching. ❖

*Kevin C. Kregel, Chair*



Council accepted the report of the Animal Care and Experimentation Committee.

Council approved the necessary funding to convene a planning meeting on pain and distress management issues in laboratory animals.

Council approved the request to designate the APS representative to FASEB's Science Policy Committee as an *ex officio* member of the ACE Committee.

## Awards Committee



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

This year the number of applications for the postdoctoral fellowship awards declined a little. However, we received several outstanding applications and because only two fellowships are awarded, it was still difficult to determine the most meritorious. We followed again the gender distribution of applicants and recipients. Female recipients still lag behind based on the ratio of female:male applicants for all awards.

*Review Criteria.* We now have review and scoring criteria for all of the awards. This is especially helpful for new Committee members, and our review process.

### 2004 Award Recipients

#### *Postdoctoral Fellowship Award in Physiological Genomics*

We received 21 applications and awarded two Postdoctoral Fellowships in Physiological Genomics. The awardees are **Matthew R. Jones**, Harvard School of Public Health, Physiology Program, Boston, MA, and **Takuya Sakaguchi**, Department of Biochemistry and Biophysics, University of California, San Francisco, CA. The fellowships were awarded at a level of a \$32,000 stipend and \$3,500 trainee allowance grant for the first year and a \$34,000 stipend and \$3,500 trainee allowance grant for the second year.

#### *Research Career Enhancement (RCEA) and Teaching Career Enhancement (TCEA) Awards*

The RCEA and TCEA are designed to enhance the career potential of regular APS members. The RCEA supports short-term visits to other laboratories in order to acquire new skills or attendance at a course directly related to a particular research methodology. The TCEA provides funds for the development of innovative and widely applicable

programs for teaching physiology.

For the October 2003 deadline, we received 14 RCEA and seven TCEA applications. We funded four awards: **Charles W. Cortes**, University of Louisiana, Lafayette, IN; **Janna L. Morrison**, University of Adelaide, Australia; **Snezana Petrovic**, University of Cincinnati, OH; and **Geoffrey Schofield**, Tulane University, New Orleans, LA. We funded four TCEA awards: **A. Lynelle Golden**, Kennesaw State University, GA and Bastyr University, Kenmore, WA; **Jonathan D. Kibble**, St. Georges University, Grenada, West Indies; **James M. Norton**, University of New England College of Osteopathic Medicine, Biddleford, ME; and **Paul R. Standley**, Midwestern University, Glendale, AZ.

#### *Young Investigator Awards*

The APS has three Young Investigator Awards: the Arthur C. Guyton Award for Excellence in Integrative Physiology, the Shih-Chun Wang Young Investigator Award, and the Lazaro J. Mandel Young Investigator Award.

The Arthur C. Guyton Award was established in 1993 and is awarded to an investigator who has demonstrated outstanding promise in research that utilizes quantitative and integrative approaches and feedback control system theory for the study of physiological function. The recipient cannot hold an academic rank higher than Assistant Professor. This year we received two applications and recommended that the awardee be **Armin Just**, Department of Cell and Molecular Physiology, Chapel Hill, NC.

The Lazaro J. Mandel Award was established in 2000 in memory of **Lazaro Mandel**, Professor of Physiology at Duke University. The award is given to an individual demonstrating outstanding promise in epithelial or renal physiology who holds an academic position no higher than Assistant Professor. We received four applications this year and recommended the awardee be **Bruce D. Schultz**, Department of Anatomy and Physiology, Kansas State University, Manhattan, KS.

This year the Shih-Chun Wang Award was not available.

The Committee has worked hard this year reviewing applications and selecting the best recipients and evaluating our review process and scoring criteria. I would like to personally thank each Committee member for the time and effort they have put forth to ensure that we met our goals. ❖

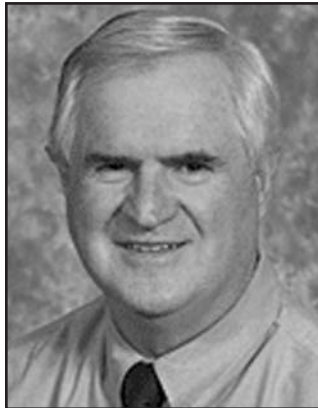
*Pat Preisig, Chair*

Council accepted the report of the Awards Committee.

Council unanimously accepted the requested wording clarifying the status and proposed studies involving transgenic or knock-out mice in the Postdoctoral Fellowship Award application.

Council approved a motion to accept the wording requesting additional information in the Research Career Enhancement Award application regarding incorporating the experience into the applicant's home institution research program.

## Career Opportunities in Physiology Committee



### Careers Symposium, Experimental Biology 2005

This annual EB Careers session is intended to address the specific objective in the 2000 APS Strategic Plan, “to promote interest in and understanding of careers in the physiological sciences” and the related action item, “to provide information on career options and training in professional skills for both research and teaching via meetings and electronic communications. In recent years,

the Careers session focused on the diversity of career opportunities in physiology, particularly those in non-traditional areas.

For the 2003 session, we chose to compliment the Women in Physiology and Pharmacology Mentoring Workshop on “Life After the PhD: Finding a Postdoctoral Fellowship” by focusing the Careers Symposium on “Planning A Successful Postdoctoral Experience: A Proactive Approach.” In the symposium, we highlighted how to successfully plan a postdoctoral experience and how to interview for a postdoctoral position and following up the interview, as well as discussing job opportunities available in the drug discovery

process and in the government and military. The workshop focus and information highlighted the skills development endorsed by the APS and ACDP in the List of Professional Skills for Physiologists and Trainees. The Committee has established 1) strong session attendance by students at the undergraduate, graduate, and postdoctoral levels; and 2) positive feedback from attendees as appropriate indicators of success for this activity. The sessions are constantly well attended, attracting 150-200 participants annually. Audience exit surveys indicate attendance primarily by graduate students, but also significant numbers of post-doctoral fellows and undergraduate students. Participant feedback indicates that the sessions have been generally well received.

The plan for the 2005 session was developed last year and submitted to the IUPS Programming Committee. The theme will be on international collaborations at the post-doctoral and new investigator stages, focusing on both US scientists going overseas and non-US scientists coming to the US.

### APS Summer Undergraduate Research Fellowship Program

This program was designed to help achieve one element of the 2000 APS Strategic Plan, Awards and Grants—“to attract the next generation of physiologists and foster their early career development.”

This program has gotten off to a very successful start. Because of the overwhelming number of applications, funding was increased from the original four fellowships to 12 in the program’s first year (summer of 2000). Applications

**Table 1. Undergraduate Research Programs – Stipend Information (sorted by stipend level only).**

Institution*	Stipend	Housing Allowance	Research Supplies etc.	Travel
NASA	5,000	-	-	yes
DOE	4,000	yes	-	yes
U Massachusetts	4,000	-	-	-
Endocrine Soc	4,000	-	-	?
NIH	3,400-3,800	-	-	-
UTMB	3,200	-	-	-
UNC, Chapel Hill	3,200	yes+1,400 food	-	400
CUR	3,000-3,500	-	500	500
NIST	3,000/9 wks	yes	-	yes
Wayne State Univ.	3,000	yes	-	-
CSU	3,000	yes	-	500
Albany Med. College	3,000	-	-	-
Cold Spring Harbor	3,000	Food/board paid	-	-
U Rochester Med Ctr	3,000	yes	-	-
East Tennessee State U	2,750	900	500	500
U Minnesota	2,630	-	-	1,370
ASM	2,500	850	500	650
				(Instit.)+ travel (mtg)
Huntsman Cancer Inst.	2,500	-	-	-
UTHSCSA	2,500	-	-	-
UMDNJ	2,500	yes	-	-
Indiana U, Bloomington	2,500	-	300	Travel (mtg)
Loyola U	2,400	-	-	-
APS	2,000	-	500	800 (mtg)

\*Institutions selected based on Google search (first 8 pages of results)

were lower in number this year, although still very competitive in this fifth year of the program's existence. Twenty-eight were received, a decrease of 49% from last year. Although the quality of almost all the applications was sufficient to merit funding, the Committee chose the 12 "best" for awards. Thus, 43% of the applications were funded, which did not allow for high selectivity on our part. Over the four-year history of the program, we have received 221 applications for the 60 awards granted, yielding an overall "selectivity" ratio of about 1:4.

When the Committee looked for reasons for the decrease in the number of applications received for the award, it saw no difference in the ways the award was promoted. However, when the APS program was compared with those of other societies, government agencies, and universities, important differences were apparent. As can be seen in the table below, APS ranks at the bottom of the list in terms of amount of stipend given. When the other benefits (host laboratory and travel funds) are factored in, then APS moves toward the middle of the list, although the data on additional benefits were not available for some of the components of the other programs; therefore, the APS program total benefits may rank lower than shown in Table 1.

The APS Undergraduate Summer Research Program seeks to attract the best undergraduate students to physiology; this will not happen if the program benefits are not competitive with other programs.

We will follow the same process and use essentially the same criteria for next year. We have decided to ask Committee members to rank their applications in addition to giving scores. A ranking would help the Committee know how each member saw a specific application with respect to the others he/she reviewed.

The goal of the APS Undergraduate Summer Research Fellowship program is to excite and encourage undergraduate students worldwide to pursue a career as a basic research scientist. We have adopted the following measurable objectives for this program:

Students participating in the APS Undergraduate Summer Research Fellowship Program will:

Learn to develop a hypothesis-driven research project, collect and analyze data, and write up the experimental results;

Present at least one poster or oral presentation on their experimental results at a scientific meeting;

Attend a national multi-society scientific meeting and interact with fellow undergraduate awardees;

Express a strengthened commitment to a research career as a result of the summer program; and

Enroll in a graduate or combined graduate/professional program to pursue a career in basic biomedical research.

This year, all 12 fellows attended EB 2004, bringing the four-year total to 46 of 48 total awardees (96%) who attended EB, an APS national conference, or a comparable national meeting. At EB 2004, all 12 of the fellows presented abstracts; in addition, one of the fellows had an oral presentation and another fellow had a second abstract. Thus, the initial 48 awards (first four years) have fostered research experiences sufficiently successful to produce 41 abstracts (85%) at national meetings.

We have finished an online follow-up survey of the first two "classes" of UGSRF fellows to ascertain what impact the UGSRF experience had on their career choice to-date. The large majority of fellows (85%) continued working in research as undergraduates, either in their fellowship research mentor's lab (60%) or another lab (25%). Of those who continued research work, 75% received a stipend or pay for their work.

Nearly 40% of the students responding had published a paper or report on their APS-funded research.

More than three-quarters (76%) of the responding students had graduated from their undergraduate institutions. Of these, 83% had applied to graduate school (PhD or Master's programs) and 67% had been accepted. A total of 67% had applied to a science-related professional school (e.g., MD, DVM, DDS) and of those half were accepted into a program. In total, 100% of those participating in our program who had already graduated from college have been accepted to graduate or professional school. At the time of the survey, most of the graduates (75%) were already enrolled in a graduate or professional degree program. Nearly half were enrolled in graduate programs leading to the doctoral or Masters degrees and an additional quarter were in dual-degree programs. The large majority of students in graduate school or in dual-degree programs were studying in physiology (50%) or neuroscience (38%).

## Careers Poster

A new careers poster was designed in 2002 for annual distribution to all US and Canadian undergraduate colleges and life sciences departments. The new design coordinates with the new APS Career Web and includes animals. The poster prominently displays the URL for the APS Web site, which is how most undergraduates seek information. Posters must be re-distributed every year, because their undergraduate departments clean off their bulletin boards each autumn. As a cost-saving measure, posters were printed in numbers sufficient to mail for two consecutive years (2003-2004).

While our overall goal in the annual distribution of the career poster is to attract more students to physiology careers, it would be difficult to measure its direct impact on that outcome. An interim objective is to use the poster to get students to come to the new APS Careers Web to explore physiology career options further.

## Career Outreach Slide Presentation Package

The Committee made significant progress this year on its plan to provide downloadable PowerPoint slides for outreach presentations to middle school, high school, and undergraduate students. The current concept is to assemble a wide variety of graphic, pictorial and word slides that illustrate the nature of physiology and the diversity of career opportunities in physiology. The individual "slides" will be appropriate for different age groups, so that APS members could pick and choose a selection of slides appropriate for their individual use. The package will include two major sections: a section on career opportunities in physiology, and a section on "physiology in action." The latter section will consist of modules organized around a phys-

iological topic or disease. Each section will include some slides on background material for the topic and additional slides showing how a physiological study has contributed to our understanding on some specific issue related to that topic.

## APS Careers Web Site

Last year the Careers Committee developed a new APS Careers Web site. This website 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, new investigators, established investigators, and the general public. Within each section, the user finds resource categories customized to their needs and the specific resources (such as biographies, hands-on experiments, career resources, etc.) are written at the appropriate educational level.

In the past year, over 50 new resources (or links to new resources) have been added to the Careers web site. These include new information at all of the levels, but primarily undergraduate, graduate/professional, postdoctoral, and new investigator levels.

## Fall Committee Meeting

In 2001, the Committee launched the new Undergraduate Summer Research Fellowship (UGSRF) program and held the first of three two-day fall meetings (2001-2003). As a result of those meetings, the Committee has in three years, completed the following projects:

- continued organizing the annual Careers Symposium at EB and, as of 2004, began coordinating the Careers Symposium with the Women in Physiology Committee Skills workshop and focusing the Careers Symposium on skills listed in the APS-ACDP Listing of Professional Skills;

- developed and distributed a new career poster for undergraduate biology departments, highlighting the new APS Career Web;

- developed a Career Web that includes more than 700 web pages and nearly 5,000 links to external web resources for physiology and scientific career development;

- developed and disseminated more than 15,000 copies of a new career brochure designed to stimulate pre-college students' understanding of and interest in physiology careers. This brochure replaced the previous version, an expensive and out-

dated brochure developed more than 10 years ago that was distributed in only limited quantities due to cost. The new brochure costs less than a sixth of the cost of the old brochure and directs students to the new APS Career Web for more information;

- launched and expanded the new UGSRF program, including conducting both formative and summative evaluations of impacts in the first three years of the program; developed draft versions of PowerPoint presentations on careers in physiology and physiology research topics for talks to K-12 and undergraduate students; and

- participated in the development of the APS/ACDP Listing of Professional Skills.

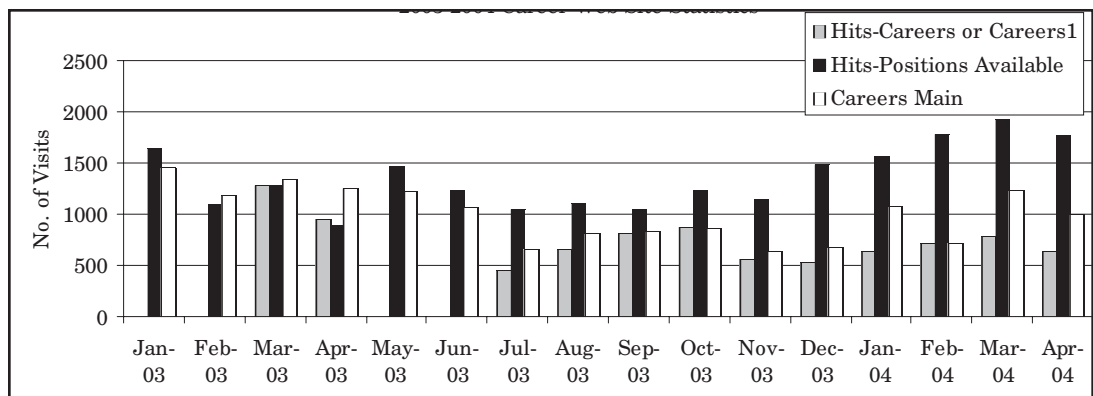
At a time when careers in science are becoming more diverse and when career issues are critical not only for the newly minted scientist but for mid- and late-career scientists as well, it is important for the APS to have a Committee proactively working to support the career development of the physiology community. In the coming years, the Committee anticipates:

- planning an international symposium for IUPS 2005; completing and disseminating the PowerPoint presentations on careers in physiology and physiology research topics for talks to K-12 and undergraduate students; developing a new career poster for distribution to undergraduate departments; overseeing the annual survey of doctoral recipients in physiology, conducted by the Education Office, including preparation of a five-year report on the survey results; overseeing the proposed new project, "Professional Skills for Minority Students in Biomedicine," which involves the development of online professional skills courses based on the APS-ACDP Listing of Professional Skills; and continuing to improve and evaluate the Undergraduate Summer Research Fellowships program.

## APS Staff

Over the past several years, the Career Committee's activities have been expanded, with the various projects going well beyond just putting together a session for the EB meeting. The Committee would like to acknowledge the continued support and assistance that has been required and received during the past year from **Marsha Matyas** (APS Education Coordinator), **Melinda Lowy** (Higher Education Projects Coordinator), and other Education Office staff, as

Figure 1. 2003-2004 Career Web Site Statistics



well as **Martin Frank** (Executive Director). ❖

*William R. Galey, Chair*

Council accepted the report of the Career Opportunities in Physiology Committee.

Council approved the Careers in Physiology sponsored symposium at the 2005 IUPS Congress.

Council approved the necessary funding for 12 Summer Undergraduate Research Program Fellowships for summer 2005.

Council authorized the necessary funding to reprint the careers poster for mailings for the next two years.

Council approved the necessary funding to support a meeting of the Career Opportunities Committee in Bethesda in fall 2005.

## Communications Committee



In 2004, the Communications Committee, chaired by **Andrea Gwosdow**, furthered its goal of developing programs and tools to garner more publicity for the Society and physiological research. The six-person committee monitored Communications Office activities, developed a new program to increase the Society's visibility, and is in the process of organizing the

third consecutive Communications symposium. The Committee looks forward to a successful 2005 working with the new APS Communications Officer Mayer Resnick to promote APS research news and with Communications Specialist Stacy Brooks who focuses on internal communications initiatives.

### Year At-A-Glance

APS continues to aggressively distribute press releases and materials on the research reported in its journals and APS awards and programs. The Communications Office performed a newspaper clip analysis of the thousands of clips collected since 2001. The analysis showed that the Society's media outreach efforts have contributed significantly to the amount of media coverage attained.

The *Timeline of Physiology* has been printed and is becoming a popular marketing tool for increasing the Society's visibility.

Recognizing that the website is an increasingly important public face of the Society, the Committee is studying how to best group materials pertinent to general audiences in an easy-to-use format.

The Committee successfully hosted its second EB symposium and is currently planning the symposium approved for IUPS 2005. The Committee has begun to develop information modules on specific diseases, conditions and physiological issues that can be used as backgrounders for mem-

bers, general audiences, or the media. They also selected this year's APS-sponsored Mass Media Science and Engineering Fellow and performed an evaluation of the fellowship before recommending that Council continue to support the program.

### Media Outreach

The Communications Office distributed monthly press releases highlighting new research in the APS journals. To date, research from all APS journals has been promoted. The Communications Office also performed media outreach for the 2003 APS Conference in Augusta, GA ("Understanding Renal and Cardiovascular Function Through Physiological Genomics") and for Experimental Biology 2004.

Additionally, the Communications Office continues national and local distribution of press releases and announcements for APS awardees and other programs. Press releases were written for the 2004 Young Investigators Awardees, the Frontiers in Physiology program, 2004 Distinguished Lectureship Awardees, the NIDDK Travel Fellows, the APS-sponsored AAAS Mass Media Fellowship, and the new 2004 APS President, President-elect and Councilors.

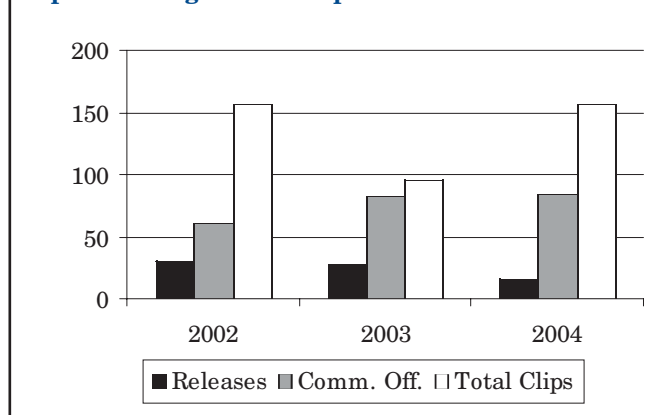
The Communications Office also helped organize a press conference and developed materials for the release of the DC Principles, a free-access effort spear-headed by APS.

Physiological press releases have been well-received in recent years, partly in response to increased interest in health and science news. Clip data shows that the Communications Office efforts have steadily and positively influenced the amount of media impressions the Society and its journals have received over the past three years. Stories written about APS research have run in hundreds of media outlets, including recent mentions in *Time* Magazine, *Newsweek*, *Science Daily*, *San Diego Union Tribune*, *New York Post*, and WebMD to name a few.

### Timeline of Physiology

The Communications Committee guided the development of the *APS Timeline of Physiology*, which was printed in time for EB 2004. It was one of the most popular items at the APS booth and was received enthusiastically by APS

**Figure 1. Comparison of Q2 2002-2004 of news clips resulting from APS press releases.**



members. The *Timeline* is now available in HTML format on the APS website and the poster is available for purchase in the APS Store. The Public Affairs Office has requested additional copies to distribute to State Societies for Biomedical Research, which represents another way for APS to raise awareness of physiology and the accomplishments of the discipline to the wider scientific community.

## APS Website

The APS website is the major tool we use to communicate with current members and to attract new members. To successfully communicate physiology to the public, the website needs to be readable by different audiences and easy to navigate. APS web site users include many non-scientists (or non-experts in a given field of physiology) looking to obtain valuable information about journal research and Society educational activities.

To cater to these users, the Communications Committee proposed the development of a Public Information website that would house information of public interest. After development, the site could easily be linked to or incorporated into the APS Web site.

## Communications Symposium

The Communications Committee hosted its second symposium entitled "Making Science News" at EB 2004. The two-part program was intended to familiarize scientists with the media, demonstrate the steps involved in making physiology newsworthy, and provide practical tips for getting scientific research reported by the media. The first part of the program featured a media panel comprised of **Bethany Halford**, (*Chemical & Engineering News*), **Henry Fishman**, (AP Broadcast and WMAL), and **Kathy Fowler** (ABC affiliate WJLA-TV) discussing the fundamentals of each medium and practical advice on presenting scientific information to journalists. In the second section, Medical Publicist Donna Krupa led a workshop on how scientists can organize the components of one's research into a media-friendly format.

The Communications Committee was pleased with its second symposium. The symposium attracted a wide range of attendees, including graduate students, postdoctoral fellows, junior and senior faculty, editors, industry and government scientists. Twenty-one evaluation forms were collected. The respondents rated the Communications symposium highly, with 96 percent (20/21) saying they obtained a greater understanding of the news process from the session. The evaluations indicate the significance of holding this type of symposium at EB.

The Committee is currently planning its next symposium, tentatively titled "Developing and Implementing a Communications Strategy: the Basics for the Basic Scientist." The IUPS 2005 program would provide an overview of the key elements required to translate a basic science message to the public. This session would be beneficial to basic scientists in institutional settings, particularly those with little or no experience interacting with institutional public relations staff or journalists from the media.

## Physiology Information Modules

To communicate physiology to the public, the Communications Committee has begun an outreach program developing topic-based resource modules on a variety of physiological issues. These units include new research papers "hot-linked" from APS journals, statistical data and a list of APS members who can serve as expert spokespeople. The information can be modified to a number of uses including story ideas for the media and general audience resource documents. Members can also use them as "get-smart" tip sheets in areas with which they may not be familiar. So far, the Committee has developed modules for obesity, comparative physiology and the life and science of Ivan Pavlov. The goal of this program is to inform, teach and gather public support for physiology research and to publicize physiological research to the public.

## Mass Media Fellowship

The Communications Committee oversees this program that encourages an exchange between science and journalism. This year, the committee evaluated 19 fellowship applications and recommended funding for **Nicole Garbarini** who spent 10 weeks at *Scientific American* in New York. Garbarini is an APS student member and a PhD candidate in neuroscience at Vanderbilt University. She has returned to her graduate studies and plans to continue expanding public understanding of science through freelance scientific journalism.

2004 marks the sixth year of APS support of a Mass Media Fellow. Now in its 30th year, this highly-competitive program has supported more than 450 fellows. The Communications Office contacted the seven former fellows to gather their thoughts about the program. Four out of seven responded. Whether remaining in science or pursuing a career in science journalism or communications, all sung the praises of the program.

**Kawanza Griffin** (1999) finished her PhD studies and now works as a full-time medical reporter for the *Milwaukee Journal Sentinel*. She wrote, "I believe that the AAAS Mass Media Fellowship is a great tool for scientists who are looking either for an alternative career or to strengthen their communications skills." **Alison Burggren** (2003) will likely go back to bench research, but says, "I truly feel that my internship enriched my career path with a greater understanding of how scientists are interpreted by the general public."

**Emily Singer** (2002) said, "My summer at the *L.A. Times* was the best possible training I could get. What I learned there about the profession in three months rivals what I learned at the University of California, Santa Cruz in nine months (in a graduate level science writing program)." She is currently pursuing a career in science journalism that has included a stint at *New Scientist* magazine in London. **Rachel Davis** (2001) said of her mass media internship, "The fellowship has given me more confidence in my writing and has taught me good reporting skills. My life has certainly been enriched by this experience." Davis returned to the research realm and is now working as a lab manager at Rockefeller University. The Committee recommended continued funding of the program. ❖

Andrea Gwosdow, Chair

Council accepted the report of the Communications Committee.

Council approved the request for a Communications Committee sponsored symposium at the 2005 IUPS Congress.

Council approved the necessary funding to print 2000 additional copies of the *Timeline of Physiology*.

## Committee on Committees



The Committee on Committees is composed of representatives elected by the Steering Committees of each of the 12 APS sections as well as two Councillors. Its primary duty is to nominate individuals to serve on other APS standing committees, as well as to outside bodies where the APS is represented.

This year, the Committee on Committees continued with the new nomination process that had been instituted in 2003. The Committee members remain dedicated to the concept that their role is twofold: to identify and promote members of their section who might serve on committees, but then to set aside section affiliations to work with the committee as a whole to nominate the best-qualified individuals to serve the Society, keeping in mind the desire to promote diversity and the involvement of younger members in the committee structure. Two sources of information are available to the Committee in discharging this responsibility. First, the two-page Candidate Information form, which those interested in committee service can complete as a self-nomination, includes information about prior activities relevant to the committee on which the individual wishes to serve, a statement of interest, information about prior APS service, and citations to two recent publications as well as a statement of academic interests. This is then supplemented by the one-page Endorsement Form, which is used by someone who knows the candidate, to comment on the ability of that individual to carry out committee responsibilities. Only one Endorsement form is accepted per nominee. Candidates can secure their own endorser, or submit their information without an endorsement. In this latter case, the primary section with which the interested party is affiliated is asked to provide an endorsement from among their leadership or membership. This task falls primarily to the sectional representative to the Committee on Committees, who is an excellent resource to those interested in serving the Society and/or seeking information as to the charge of a given committee. The process is also facilitated by being conducted electronically. Both Candidate Information and Endorsement forms are available on the APS website, as well as links to the "job descriptions" for each of the soci-

ety's standing committees. The electronic process also greatly facilitates dissemination of nomination materials to the Committee on Committees prior to its formal meeting at EB. No nominees are removed from consideration prior to the Committee's face-to-face meeting, providing the broadest pool for the Committee to discuss on the basis of detailed insights from its members. The Committee on Committees also seeks input from the Chairs of standing committees as to the suitability of nominees in forwarding their committee's charge.

The Committee on Committees remains pleased with the revised process for identifying candidates interested in serving the Society, and at its meeting at EB, likewise worked effectively to identify those most qualified to serve, setting aside any parochial sectional loyalties. However, several section representatives commented that, while high-quality nominations are received for many slots, it is sometimes difficult to recruit interested candidates for committee service, particularly for those committees considered more "thankless" in nature. However, the chair would like to stress the in-depth consideration given by Council to the activities and concerns of all of the standing committees of the Society, and the value that is accorded to all committee service. Indeed, the opportunity to contribute to Society affairs is perhaps one of the most tangible benefits of Society membership, and can be rewarding not only in terms of a sense of accomplishment, but also when it comes time for a member's review for academic advancement in their home institution, or other career opportunities. Thus, the Committee, and the Council, is eager that the broadest possible representation of the membership will consider serving the Society as a committee member or chair. Overall, the process as currently constituted is "self-driven," although the section representatives to the Committee on Committees are happy to provide information to their constituencies, or assistance with securing endorsements. Overall, the Committee on Committees is most eager to consider the qualifications of all APS members with an interest in serving the Society, and hopes that many will consider applying in the coming year. This applies particularly to younger members, or those who have may have joined the Society more recently.

Based on the process described and the committee's lively deliberations at the Experimental Biology meeting, the Committee on Committees recommended individuals to fill vacancies on a range of APS standing committees, as follows:

Committee	Number of Positions
Animal Care and Experimentation	2
Awards	2 plus chair
Career Opportunities in Physiology	2
Communications	1 plus chair
Ray G. Daggs	2 plus chair
Education	3
Finance	2
International Physiology	1 plus chair
Long-Range Planning	3
Membership	1 plus chair
Perkins Memorial Fellowship	1 plus chair
Porter Physiology Development	2 plus chair

Public Affairs	2
Publications	2
Senior Physiologist	2
Women in Physiology	2
AAAS	2
	(biology and medicine)

AAMC	1
FASEB Finance Committee	1
FASEB EB Board	1
FASEB Publications & Communications	1

The Committee on Committees charge, as discussed above, is to identify the best individuals to fill committee vacancies, regardless of sectional affiliation. However, all other things being equal, the committee seeks to instill diversity in the committee structure on the basis of section of membership, geography, gender and seniority. Thus, the APS members nominated to fill vacancies had the following sectional affiliations:

Cardiovascular Section	7
Cell & Molecular Physiology Section	5
Central Nervous System Section	3
Comparative and Evolutionary Phys Section	0
Endocrinology & Metabolism Section	3
Environmental & Exercise Physiology Section	6
Gastrointestinal & Liver Physiology Section	2
Neural Control & Autonomic Regulation Section	4
Renal Section	4
Respiration Section	1
Teaching of Physiology Section	4
Water & Electrolyte Homeostasis Section	6
No section selected	2

There were nine members less than 45 years of age nominated for committee vacancies (excluding alternate position nominations) and 19 women nominated (excluding alternate position nominations).

We hope that many 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 (with or without an accompanying endorsement form) by **January 14, 2005**, although earlier submissions are welcome. Applications received without an endorsement will be forwarded to the section of primary affiliation for support. Nominations are then reviewed by chairs of committees on which there are vacancies, and by the Committee on Committees as a whole. At their meeting at Experimental Biology, the Committee on Committees develops their recommendation for each committee vacancy, along with alternates, and submits this for approval by Council at their July meeting. Approved nominees begin their term of appointment the following January. Those who are unsuccessful at securing a committee appointment initially are encouraged to re-submit their credentials for consideration for the same or another committee in the next cycle. ❖

Kim E. Barrett, Chair

Council accepted the report of the Committee on Committees.  
Council approved the slate of nominees for committee vacancies with minor exceptions.

## Education Committee



In 2003-2004, the Education Committee continued and expanded its activities, focusing on the 2000 APS Strategic Plan Goal, "To promote awareness, understanding, and education in physiology at all levels." Highlights of some of the major activities are outlined here.

### Graduate Student Education

At the graduate level, the Committee's activities are currently focused on improving the overall graduate education of physiology trainees. Two new initiatives were launched this year toward this end.

*Listing of Professional Skills:* A working group representing the Education Committee, Career Opportunities in Physiology Committee, Women in Physiology Committee, and Association of Chairs of Departments of Physiology, developed a listing of the professional skills that should be developed by trainees at the graduate, postdoctoral, and early career levels. The group was co-chaired by **Robert Carroll** (for APS) and **William H. Dantzler** (for ACDP), and included **Francis L. Belloni** (Careers Committee), **Vernon S. Bishop** (ACDP), **Carole M. Liedtke** (Women in Physiology Committee), and **William S. Spielman** (ACDP). The APS and ACDP membership provided feedback on the draft listing and it was approved by both the APS Council and the ACDP at their November and December 2003 meetings, respectively.

The APS/ACDP List of Professional Skills for Physiologists and Trainees is available at the APS website as a downloadable file (<http://www.the-aps.org/education/skills.htm>). In the coming year, the List will be available as a print document and as an html document with extensive links to some of the nearly 5,000 career resources available at the APS Career Web.

*Trainee Member Listserv:* A listserv for student members of the APS was developed in May 2003. The listserv is coordinated by the Education Office and provides monthly updates on awards, fellowships, meetings, and job opportunities for student members of the APS. For additional information, contact the APS Education Officer, Marsha Matyas ([mmatyas@the-aps.org](mailto:mmatyas@the-aps.org)).

### Medical Physiology Education

The Committee's focus for medical physiology is on providing resources and information to both improve and enrich medical physiology education. Resources focus on both content and teaching methods.



*APS Archive of Teaching Resources:* In its first full year of operation, the Archive (<http://www.apsarchive.org>), APS' free digital library of teaching resources, has grown in both size and diversity of resources. About 60% of the Archives' 380+ resources are appropriate for use at the graduate and professional school levels. These resources include not only fully catalogued and searchable *Advances in Physiology Education* articles (N=197) but also graphics, simulations, webs, PowerPoint presentations, laboratory activities, and other resources contributed by individual physiology educators. They also include resources from the Human Anatomy and Physiology Society (HAPS), the APS Archive's first partnering organization. The use of the Archive continues to grow; it now averages more than 62,000 "hits" (pages accessed) per month by an average of about 1,000 users per month. In addition, the number of persons electing to download teaching resources from the Archive has more than tripled in one year, from 730 users to 2,100 users.

Additional submissions to the Archive are being sought via exhibits, workshops, poster presentations, email listservs, and one-on-one contact. In the past year, the Archive has been promoted by the Education Office staff through workshops and/or exhibits at six education meetings in the US and Canada, as well as through the regular scientific meeting exhibits of the Marketing Department. The Archive continues to participate as a founding partner of the AAAS' BiosciEd Net (BEN) partnership which now has more than 20 partnering societies and projects (see <http://www.bioscienet.org>). The Archive receives partial support from a grant from the National Science Foundation.

*EB 2004 Refresher Courses:* The 2004 Refresher Courses on Cellular Homeostasis were organized by **Michael Romero** (morning session) and **Jeffrey Freedman** (afternoon workshop). The morning session was extremely well attended, attracting over 250 attendees, with most staying for the entire session. The majority of those attending were faculty at medical schools or colleges/universities, as well as a large number of postdoctoral fellows and graduate students. Nearly ¾ of those providing feedback indicated that cellular homeostasis was not their primary area of specialization. As this is the target group for the Refresher Course, the Committee is pleased that the courses continue to draw the participants for whom they were designed. Over half of the attendees completed a feedback form, giving the program an average rating of 4.3 on a 5 point scale. An afternoon workshop was held to expand on the topic of the morning session, providing opportunities for participants to try three "mini-labs" for teaching about the membrane potential in a cell physiology course. These mini-labs provide students with hands on experience with certain basic physiological phenomena, reinforce the concepts presented in lectures, and introduce certain physiological methods and techniques.

*Use of Animals in Medical Education:* At Council's direction, the Education Committee, in conjunction with the ACE Committee, will work to develop a report and policy statement on the educational value of animal laboratories. This report will describe how the use of laboratories, specifically including animal laboratories, provides a unique and

effective educational experience for physiology education at all levels. There is a significant body of educational research supporting participatory learning, and institutions that do use animals have collected and are willing to share student comments evaluating the proper use of animals.

## Undergraduate Physiology Education

At the undergraduate level, Committee activities encourage both excellence in undergraduate education and encouragement and support for student participation in research.

*New EB Undergraduate Poster Session:* The Education Committee sponsored a new EB poster session for undergraduate students. The Session, held on Sunday afternoon, allows many of the undergraduates who are not able to stay for the entire EB meeting to present their posters. Of the 88 undergraduates submitting abstracts as first authors, 75 displayed at the session. Refreshments were provided by APS. Approximately 100 APS members came to see the posters and talk with the students. The Committee plans to hold this event annually at EB.

*David Bruce Awards:* EB 2004 was also the first year for selection of the David S. Bruce Awards for Excellence in Undergraduate Research. The Awards recognize excellence in undergraduate research and honors David S. Bruce (1939-2000) who served as Chair of the APS Teaching Section and as a professor of physiology at Wheaton College from 1978-2000. Bruce was a dedicated physiology educator who played active roles in both the APS and the Society for Integrative & Comparative Biology. As an undergraduate educator at Wheaton College, Bruce had a particular interest in engaging undergraduate students in scientific research. He not only encouraged and supported his students in participating in research, but also regularly brought undergraduate students to the Experimental Biology meeting to present their research findings. In 2000, Bruce died at the age of 61 of complications following a kidney transplant. The David Bruce Award honors Bruce's commitment to promoting undergraduate involvement in research, in the APS annual meeting, and, ultimately, in research careers.

A total of 19 applications were received for this first year. The Committee selected 12 finalists based on the abstract and a one-page letter submitted by the undergraduate students. The 12 finalists each made oral presentations with their posters to a group of Committee members during the EB meeting. Four awardees were selected. The Committee members participating noted that all the finalists were very competitive and deserving of the award based on the quality of the work. **Robert Carroll**, Chair of the Education Committee, and Janet Bruce presented certificates to the eight finalists and certificates and \$500 checks to the four awardees during an award presentation held during the APS Undergraduate Research Poster session. Based on the response to that special undergraduate poster session and with more time to announce the award, the Committee is looking forward to a much larger number of applications for the 2005 David Bruce Award.

*Explorations in Biomedicine 2003 Retreat:* In September 2003, a Fall Retreat, "Weeding, Cultivating, and Replanting: Tools for Growing a Student-Centered Science Curriculum," was held at Little Big Horn College in Crow

Agency, MT. The retreat focused on resources and strategies for transforming the curriculum to be more student-centered, that is, placing the student at the center of teaching and learning. Participants explored how to transform “cookbook” lessons and labs into ones in which students develop their own hypotheses and methods and actively explore the targeted concepts. They also explored how to make their lessons appeal to those with a wide variety of learning styles and from different cultures. Participants used tools to not only find outstanding resources on the Web but also to effectively integrate them into lessons so they enhance learning. Specifically, the retreat:

- provided tools that can be used by individuals or groups to review and revise their curricular materials;

- offered opportunities to practice using these tools in a collaborative group setting; and

- provided tools to help teachers integrate effective Internet activities in their lessons.

The workshop was led by APS Education Committee members **Walter Ward** and **Thomas Pressley** along with past Summer Research Teachers **Margaret Shain** and **Sheree Watson**. Results of the retreat evaluation were very positive. Participants were asked on both the entry and exit surveys to rate their own understanding of topics that were the focus of the Retreat. Self-ratings increased significantly for participants’ understanding of:

- current recommended science teaching practices ( $p < .001$ );

- identifying activities that do and do not contribute to a student-centered curriculum ( $p < .05$ ); and

- recognizing and making the most of students’ cultures and backgrounds ( $p < .01$ ).

*Collaboration with HAPS:* The APS participates in and supports the annual meeting of the Human Anatomy and Physiology Society (HAPS), an association of physiology educators, primarily from community and four-year colleges by sponsoring an exhibit, conducting workshops, and sponsoring a keynote research update speaker. At the June 2004 HAPS meeting in Calgary, Alberta, Canada, **Paul Kubes**, Professor, Departments of Physiology & Biophysics and Medicine, Faculty of Medicine, University of Calgary gave an Update Seminar entitled, “The Inflammatory Response.” Kubes’ presentation was very well-received by the HAPS participants. APS staff members **Marsha Matyas** and **Melinda Lowy** staffed the APS exhibit and presented the following workshops on creating a student-centered curriculum and using the APS Archive of Teaching Resources.

## K-12 Science Education

At the pre-college level, the APS seeks to improve science education, stimulate student interest in biomedical research careers, and promote understanding of the use of animals in research.

*APS Summer Research Program for Teachers:* The Summer Research Program continues to work with teachers from across the nation:

- engaging them in biomedical research;

- building connections at the local level between teachers, students, and researchers;

- improving the teaching methods and curricular materials

used by the teachers; and

- deepening the understanding of both teachers and students of how biomedical research is done and how animals are used in research.

The program, now in its 14th year, has funding from three NIH institutes: NCRR, NIGMS, and NIDDK, in addition to the support provided by the APS. In addition, an APS member, **George Tempel**, at the Medical University of South Carolina (MUSC), coordinates the participation of two to four teachers annually in the program. These teachers are supported by a grant to MUSC from the National Science Foundation. This diversity of funding sources both serves as an indicator of the success of the program and contributes to its longevity. In 2004, the program is supporting 25 teachers from 12 states in an intensive, yearlong professional development program.

Member support for this program continues to be strong, with many members volunteering to host teachers in their laboratories, providing the needed lab materials and supplies for each teacher’s research and, frequently, providing part of the stipend and travel costs for the teacher. For example, nearly 60% ( $N=10$ ) of the APS members who hosted the 17 teachers in their labs last summer contributed not only the lab materials and supplies that the teachers needed, but also are contributed an average of \$1,320 (\$13,200 total) toward their stipends and/or EB travel. For 2004, nearly 55% ( $N=14$ ) of the members who will host 26 teachers in their labs this summer will contribute an average about \$1,820 (\$25,500 total) toward stipends and/or EB travel.

In 2002, APS received three additional years of funding from the NCRR-SEPA program to continue and expand the program, with a special focus on the development of local site models in physiology departments, similar to the collaboration with MUSC described above. Initially, this development and dissemination project will work with APS members **Duanne Proppe** and **Walter Ward** at UTHSC-San Antonio and **C. Subah Packer** at Indiana University School of Medicine in Indianapolis, IN. Program activities will include summer research fellowships for teachers, training and planning meetings for Frontiers Local Site Teams, and professional development workshops for local teachers that focus on integrating inquiry-based teaching, equity strategies, and effective integration of Internet technology in the life sciences classroom.

*EB Workshop for Teachers and Students:* Education Committee member **Thomas Pressley** coordinated the 2004 APS Workshop for High School Teachers and Students. DC-area teachers and their students attended the workshop along with APS members, 2003 Frontiers and Explorations Research Teachers (RTs), graduate students, other awardees, and APS staff for an approximate total of 150 people. **Greg Florant** of Colorado State University presented his research on the physiology of hibernating marmots. He was followed by a Careers Panel that included APS members **Rudy Ortiz**, **Gregory Florant**, and **Jennifer Pluznick**. **Margaret Shain** (Past Research Teacher) led the career panel discussion. Twenty 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.

The afternoon student session was lead by **George Ordway** and a number of APS member volunteers. 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 (as well as the 2003 Research Teachers) participated in a workshop focusing on nutrition, diabetes, and the sense of taste. **Diane Ford** (2003 Explorations Research Teacher) modeled her "Dietary Decisions" lab, which uses nutrition labels to create a menu for a diabetic and non-diabetic persons. Also **Marsha Matyas** and **Melissa Gildehaus** (2004 Frontiers Research Teacher) presented the Project WISE Taste Lab, an exploration of the anatomy and physiology of the sense of taste. As in the past, feedback from both teachers and students was very positive and students were especially excited to meet physiologists one-on-one.

*International Science and Engineering Fair (ISEF) Awards:* The Intel ISEF brings together over 1,200 students from 41 nations to compete for scholarships, tuition grants, internships, scientific field trips and the grand prize: a trip to attend the Nobel Prize Ceremonies in Stockholm, Sweden. The 55th Annual International Science and Engineering Fair was held in Portland, OR in May 2004. Special Awards were given by 93 scientific, professional, industrial, educational, and governmental organizations in the form of scholarships, tuition grants, summer internships, scientific field trips, and equipment grants. The APS participates as a Special Awards Sponsor for ISEF, recognizing outstanding high school research projects in the physiological sciences, including cellular physiology, animal physiology, and neurophysiology. Four students received cash awards (\$1,000 First Prize, \$500 Second, Third, Fourth Place), T-shirts, and a year's subscription to *NIPS* and *The Physiologist*. APS is one of only seven biomedical research organizations that give awards to students from among 63 organizations making special awards.

## Summary and Conclusions

The Education Committee is meeting the objectives laid out in the 2000 Strategic Plan, with significant activities supporting each of the Plan's objectives. I would like to thank Council for their support. Our activities would be impossible without the expert leadership of **Marsha Matyas** and her staff in the APS Education Office. Many members of Council interact with the Higher Education Coordinator **Melinda Lowy**, as she directs programs related to undergraduate, graduate, and medical education. **Kathleen Kelly** manages the Education Committee outreach activities in the K-12 environment, which increase the vitality and perception of physiology. **Brooke Bruthers** coordinates all meetings, travel, and exhibits for all Education programs.

I especially thank the Education Committee and the APS members who have helped with the many projects, and invite anyone with an interest in physiology education to contact me and to join the fun. ❖

Rob Carroll, Chair

Council accepted the report of the Education Committee.

Council authorized \$60,000 for summer research fellowships for high school and middle school science teachers for 2005.

## Finance Committee



The Society's financial condition remains strong through sound management and investment practices. The Society's income has been growing slowly, but expenses are growing at a faster rate than revenue. The three-year Financial Forecast is showing a steady trend from \$563,000 in Net Revenue in 2001, to a projected \$379,000 Net Expenses in 2007. This is a significant improvement from a year

ago, when the annual deficit was projected to be approximately \$1 million in 2006. Contributing to the improvement was a concerted effort by the Society to hold down expenses in 2003 without cutting programs. The Society finished the year with net revenue of \$311,373, \$518,670 over a budgeted deficit of \$207,297. This was accomplished despite that fact that the Society had to absorb a bad debt of approximately \$280,000 due to the bankruptcy of RoweCom, one of its largest subscription agents. The 2004 budget, approved by Council at its spring meeting, is projecting net revenue of \$312,662, very close to the actual amount for 2003.

As directed by Council, the Society uses up to four percent of the value of its investments annually as operating income. Only that amount required to offset the cost of Society programs, other than the Journals Program, is withdrawn and the remainder continues in actively managed investment accounts. The Journals Program, by a 1995 Council mandate, is expected to generate a return of 10% annually. In the early 1990's, the reserves, which the Society depends on for approximately seven and one half percent 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. With the 2003 market turnaround, the Society's reserves returned to its December 31, 1999 value of \$30 million.

## White Paper on the Financial State of the Society

The Finance Committee was asked by Council to develop a white paper to be used as a planning document for the next APS strategic planning meeting. The white paper written by the committee is designed to give a "view from 35,000 feet" of the Society's financial history, its current financial status, and several challenges facing the Society.

## Society Budget

The chair reviewed the 2003 budget versus actual income and expenses and presented the modified 2004 budget based on the 2003 results, as reviewed and approved by the Finance Committee at its spring meeting. 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, Public Affairs, Marketing, and the Executive, Information Technology, and Business Offices. For 2003, the year ended with income of \$16,333,646 (including \$1,242,933 allocated from the Society's reserves) and direct expenses of \$14,361,754, plus general and administrative (G&A) costs of \$1,660,519, for total expenses of \$16,022,273. 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. Including the \$1,242,933 investment allocation, total operating revenue exceeded total operating expenses, resulting in net revenue of \$311,373.

The Council approved a 2004 budget of \$16,984,550. After applying the entire investment allocation of \$1,245,065 and the net revenue from Publications of \$1,287,844, the budget shows net revenue of \$312,662.

## Journal Subscription Pricing

Council reviewed the Publications and Finance Committees' recommendations for 2005 journal subscription prices. It should be pointed out that journal publication is the major source of revenue for the Society and is key to its financial well-being. In 1995, the Council recommended that the journals' prices be set so as to generate a margin of approximately 10% to help defray the costs of the various Society programs. The Finance Committee agrees with the Publications Committee who recommended that

2005 subscription prices be raised by an overall rate of five percent, with the exception of *Physiology* (formerly *NIPS*), and *Physiological Genomics*, whose 2005 rates will be increased 10% to help offset the higher costs incurred by those journals. A comparison of 2005 and 2004 domestic institutional prices is shown in the table below.

## Society Reserves

At its spring meeting, the Finance Committee reviewed the performance of the Society's investment managers. The investments are administered by four managers under the direction of our investment consultant, Smith Barney. As of December 31, 2003, the accounts had the following market values: APS Reserves \$30,157,277, APS General Endowment Fund \$3,086,485, Giles F. Filley Memorial Fund \$802,104, Rife/Guyton Fund \$566,428, Caroline tum Suden Fund \$557,418, Perkins Memorial Fund \$312,417, IUPS Fund \$308,302, Shih-Chun Wang Fund \$143,802, and the Lazaro Mandel Fund \$140,549. The return on the managed accounts was 19.17% for the year ended December 31, 2003. The market value of the managed accounts at December 31, 2003 was \$36,074,782.

Due to variable performance in the four managed accounts, each manager held between 24% and 26% of all invested assets. Based on a recommendation from the Finance Committee that was approved by Council, the accounts were rebalanced so that each of the four fund managers will be allocated approximately 25% of all assets as of March 31 in accordance with the Society's investment strategy.

## 2003 Audit

The Finance Committee received the annual audit performed by Grant Thornton, LLP. In the opinion of the auditors, based on generally accepted accounting principles, the financial statements that follow present fairly the financial

**Table 1. A comparison of 2005 and 2004 domestic institutional prices.**

Journal	2005			2004		
	Print + Online	Print Only	Online Only	Print + Online	Print Only	Online Only
<i>AJP Consolidated</i>	\$3,490	\$3,335	\$2,860	\$3,325	\$3,175	\$2,725
<i>AJP-Cell Physiology</i>	655	620	530	625	590	505
<i>AJP-Endocrinology &amp; Metabolism</i>	450	430	375	430	410	355
<i>AJP -Gastrointestinal &amp; Liver Physiology</i>	495	465	405	470	445	385
<i>AJP-Lung Cellular &amp; Molecular Physiology</i>	440	420	355	420	400	340
<i>AJP-Heart &amp; Circulatory Physiology</i>	910	860	740	865	820	705
<i>AJP-Regulatory, Integrative &amp; Comparative Physiology</i>	620	600	515	590	570	490
<i>AJP-Renal Physiology</i>	450	430	375	430	410	355
<i>Journal of Applied Physiology</i>	1,105	1,060	910	1,050	1,010	865
<i>Physiological Reviews</i>	415	400	340	395	380	325
<i>Journal of Neurophysiology</i>	1,260	1,200	1,030	1,200	1,145	980
<i>Physiological Genomics</i>	270	260	225	245	235	205
<i>News in Physiological Sciences</i>	225	210	180	205	190	165
<i>Advances in Physiological Education</i>	N/A	50	N/A	N/A	45	N/A
<i>The Physiologist</i>	N/A	95	N/A	N/A	90	N/A

## APS Statement of Activities for the year ended December 31, 2003

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
<b>Operating revenue:</b>		-		
Subscriptions	\$ 9,210,453	-	\$ -	\$ 9,210,453
Author charges	3,375,029	-	-	3,375,029
Membership dues	693,144	-	-	693,144
Grants	623,496	-	-	623,496
Conferences and meetings	492,466	-	-	492,466
Contributions	175,050	60,927	-	235,977
Advertising	121,709	-	-	121,709
Back issues	58,255	-	-	58,255
Other income	267,967	-	-	267,967
Net assets released from restrictions	<u>161,188</u>	<u>(161,188)</u>	<u>-</u>	<u>-</u>
Total Operating Revenue	<u>15,178,757</u>	<u>(100,261)</u>	<u>-</u>	<u>15,078,496</u>
<b>Operating expenses:</b>				
Publications	12,242,813	-	-	12,242,813
Society general	2,089,656	-	-	2,089,656
Society programs	1,207,457	-	-	1,207,457
Education	531,956	-	-	531,956
Marketing	<u>222,684</u>	<u>-</u>	<u>-</u>	<u>222,684</u>
Total Operating Expenses	<u>16,294,566</u>	<u>-</u>	<u>-</u>	<u>16,294,566</u>
Operating change in net assets	(1,115,809)	(100,261)	-	(1,216,070)
Net realized loss on investments	(1,348,264)	-	-	(1,348,264)
Net unrealized loss on investments	6,813,405	-	-	6,813,405
Interest and dividends	1,216,359	-	-	1,216,359
Investment management fees	<u>(424,161)</u>	<u>-</u>	<u>-</u>	<u>(424,161)</u>
Total Investment Income	6,257,339	-	-	6,257,339
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Change in net assets	5,141,530	(100,261)	-	5,041,269
Net assets, beginning of year	<u>30,291,269</u>	<u>843,753</u>	<u>12,500</u>	<u>31,147,522</u>
Net assets, end of year	<u>\$ 35,432,799</u>	<u>\$ 743,492</u>	<u>\$ 12,500</u>	<u>\$ 36,188,791</u>
	\$ -	-	-	-

## APS Statement of Financial Position as of December 31, 2003

ASSETS		LIABILITIES AND NET ASSETS	
Cash and cash equivalents	\$ 699,604	Accounts payable and accrued expenses	\$ 1,256,392
Investments	41,352,074	Unearned revenue	
Accounts receivable	1,812,020	Subscriptions	6,973,110
Pledges receivable	98,150	Dues and other	<u>465,900</u>
Accrued interest receivable	157,843	Total liabilities	<u>8,695,402</u>
Advances to section editors	583,600		
Prepaid expenses	78,109	Net Assets:	
Furniture, fixtures, and equipment	<u>102,793</u>	Unrestricted	35,432,799
<b>Total assets</b>	<b><u>\$44,884,193</u></b>	Temporarily restricted	743,492
		Permanently restricted	<u>12,500</u>
		Total net assets	<u>36,188,791</u>
		<b>Total liabilities and net assets</b>	<b>\$ <u>44,884,193</u></b>

position of the Society as of December 31, 2003. No problems were found by the auditors.

### Fundraising Guidelines for Distinguished Lectureships

At the spring Council meeting, there was a discussion of the lack of income from APS meetings, especially EB. Council requested that the Finance Committee make a recommendation as to how much funding should be requested to sponsor a distinguished lectureship. The Committee is currently reviewing guidelines that will provide incentive to the sections for raising money in support of distinguished lectureships at EB. The Committee will present its recommendation to Council for consideration in the fall. ❖

*Peter Wagner, Chair*

Council accepted the report of the Finance Committee.

### International Physiology Committee



For the past six years, the International Physiology Committee has been committed to the mission of supporting the development of the Physiological Sciences in Latin America and of improving the relationship between US and Latin American Physiologists. To accomplish this goal, the International Physiology Committee launched the "Latin American Initiative" under the auspices of the APS council. This initiative has the

purpose of annually supporting with \$5,000/each, up to four courses and/or symposia related to physiology to be held in

Latin America with the participation of APS members. To date, considering the two symposia recommended for approval during the next calendar year, the initiative will have supported 18 courses/symposia in five Latin American countries including six courses in Argentina, four in Brazil, six in Mexico and one each in Venezuela and Guatemala.

The "Latin American Initiative" has grown to become an important source for the support of courses and symposia in the Americas. This is reflected by the number and quality of the applications supported. The challenge for the future consists on expanding the Initiative for supporting fellowships for Latin American graduate students, postdoctoral fellows and young investigators for attending the annual Experimental Biology meeting that is held in the US.

During 2004 the APS funded the following courses/symposia under the "Latin American Initiative":

"Nitric Oxide and Oxygen Free Radicals in the Regulation of Cell Physiology, XII Meeting, International Society for Free Radical Research."

Organized by **Alberto Boveris** (Univ. of Buenos Aires, Argentina), held in Buenos Aires, Argentina.

"Plasticity and Regeneration of the Nervous System; From Neuron to Brain." Organized by **Elaine Aparecida Del Bel** (University of Sao Paulo, Brazil), held in Sao Paulo, Brazil.

"Central Neural Control of the Circulation." Organized by **Benedito H. Machado** (Univ. of Sao Paulo, Brazil), held in Sao Paulo, Brazil.

"Heart Failure 2004: An Integrated Basic and Clinical Approach, Satellite to World Congress of International Society for Heart Research." Organized by **Alicia Mattiazzi** (Univ. of La Plata, Argentina), held in Iguazu Falls, Argentina-Brazil. ❖

*Hector Rasgado-Flores, Chair*

Council accepted the report of the International Physiology Committee.

Council approved the necessary funding to support the two Committee-approved applications for the "Latin American Initiative" for 2005.

Council approved the request that \$10,000 be used to support 10 fellowships (\$1,000/each) for Latin American students and/or young investigators to attend the 2005 IUPS Congress.

## Joint Program Committee



### Experimental Biology 2004

EB 2004 was held in Washington DC, April 17 through 21, 2004. All scientific and poster sessions were well-attended and overall enthusiasm for the meeting remains high. The APS portion of EB 2004 featured two unopposed Techniques and Technology in Physiology Workshops on Saturday and four "Cross-Sectional" Symposia. As in past meet-

ings, APS hosted six guest societies: The Micro-circulatory Society (MCS), the Biomedical Engineering Society (BMES), the American Federation for Medical Research (AFMR), the Society for Experimental Biology and Medicine (SEBM), and the Association of Latin American Physiological Societies (ALACF).

Meeting attendance was excellent. Out of a total of 6,339 volunteered abstracts submitted, 2,433 (38%) were programmed by APS. The total meeting attendance was 13,598. This figure includes 10,776 registered scientists, 2,037 exhibitors (and their guests), 195 high school students and teachers, 471 undergraduates and 119 guest and press registrants.

EB 2004 marked the ninth Physiology InFocus program. Organized by the APS President **John Williams**, the program topic "Large Scale Systems Biology" included four symposia scheduled throughout the meeting. These were entitled "High Throughput Genomics," "Next Generation Technologies for Proteomics," "New Approaches to Large Scale Systems Biology," and "Applications of Systems Biology to Function and Disease." The InFocus program was preceded by a workshop entitled "Microarrays, Proteomics and Mass Spectrometry" which was organized by **Susan Old**.

EB 2004 was the fifth year to introduce two Techniques and Technology in Physiology Tutorial/Workshops. The first, on proteomics is indicated above. The other tutorial was entitled "The Promised Land or Fatal Attraction? A Practical Overview of the Present and Future of Genetically Engineered Mice" and was organized by **Donald Kohan**. In addition, there were four "Cross-Sectional" Symposia developed to cut across sections: "Biological Applications of Nanotechnology," "The Heme-

Heme Oxygenase-Carbon Monoxide System and the Control of Cardiovascular and Renal Function," "The Mechanisms and Impact of Fetal Physiological Programming," and "Intracellular Trafficking of Membrane Proteins in Renal Epithelia."

Other special programming included the Guyton Memorial Symposia entitled "Arthur C. Guyton: The Man and His Science" organized by **Joey Granger** and **D. Neil Granger**. Speakers included **John Hall**, **Allen Cowley**, **Gabriel Navar**, and **Harris Granger**. **Robin Davisson**, **Christine Seidman** and **Kevin Fitzgerald** presented the Bowditch, Canon and Randall lectures, respectively. Four "late breaking" featured topics were also developed. These arise from a critical mass of submitted abstracts in a specific area and are presented without funding in available rooms. This year they were entitled "Heme Oxygenase/Vascular Control," "Urinary Concentrating Mechanisms," "Controversies in Cardiac Preconditioning," and "Hot Topics in Lung Endothelial Biology."

### APS Conferences

Two APS conferences were held in 2003: 2003 APS Conference, September 19-14, Banff, Alberta, Canada, "Adrenal Steroid Hormone and Control of Extracellular Fluids: from Genetics to Physiology," organized by **Daniela Rotin** and **Douglas Eaton**; 2003 APS Physiological Genomics Conference, October 1-4, Augusta, GA, "Understanding Renal and Cardiovascular Function through Physiological Function," organized by **David Pollock**, **Jennifer Pollock**, **Elizabeth Nabel**, **Clinton Webb**, and **Josephine Briggs**.

The Adrenal conference had 133 registrants and the PG conference had 152 registrants.

Scheduled APS Conferences for 2004 and 2005 include: 2004 APS Translational Research Conference, September 8-11, Snowmass, CO "Immunological and Pathophysiological Mechanisms in Inflammatory Bowel Disease," organized by **Matthew Grisham** and **Fabio Cominelli**; 2004 APS Intersociety Meeting, October 6-9, Austin, TX, "Integrative Biology of Exercise," organized by **Ronald Terjung**, Chair; 2005 APS Conference, July 16-20, 2005, Sheraton Steamboat Resort & Conference Center Steamboat Springs, CO, "Neurohypophyseal Hormones: From Genomics and Physiology to Disease," organized by **Celia Sladek**.

### JPC Strategic Planning

The APS is planning to enter a new phase of strategic planning in the next year. A special meeting of the JPC was held on July 9, 2004 in Chicago. The purpose of this meeting was to update the committee members on plans for programming abstracts for IUPS and to discuss issues related to programming APS Conferences and EB meetings.

The first half of this meeting was dedicated to APS conferences. The APS began this program in 1992 and has sponsored 20 conferences and five intersociety meetings. Since September 2001, there has been a decline in attendance with attendance. There are clear financial issues as the number of attendees at conferences declines from loss of registration revenue and penalties from conference sites.

The JPC has made a number of attempts to increase the number of conference proposals.

The JPC discussed APS conferences at length and made the following recommendations.

## 1. Formation of an APS Conference Committee

Six to eight committee members with representation from different sections; JPC Chair sits on committee as ex officio; specifically charged with development and evaluation of APS Conferences; conference proposals come from two sources. Solicited: individuals in an interest area targeted by the committee; unsolicited: short letters of intent from the membership reviewed by the committee and then formally solicited. A solicitation indicates a very high interest in the subject area toward the development of the conference; recurrence of meeting possible if successful. The committee would be charged with defining measures of success.

## 2. Financial

Conference allocation includes registration for invited speakers (currently in addition to allocation); allocation increased from \$25,000 to \$30,000; finance committee and APS conference committee develops plan for how extramural funds are attributed to the conference, i.e., allocated to defray APS allocation; allocated to conference organizer for travel awards, reimbursements etc.

The JPC also discussed a number of issues related to EB meetings.

**Featured Topics:** It is felt that the organization of a FT needs to be centralized, that is performed by members of the JPC and not the FT organizers. In many cases, the FT organizer is not aware of the responsibilities associated with a FT including: selecting abstracts, informing abstract presenters of oral presentation. In addition, the FT organizer only has access to those abstracts submitted directly to a FT topic category and not many other abstract submitted to general categories which may fit into the topic being covered. The JPC offers the following recommendations:

JPC representatives take charge of programming abstracts for FTs; FTs be eliminated from topic category lists; a list of FTs will be included in call for abstracts along with instructions for potential topic categories; JPC informs selected abstracts of inclusion in FT and reminds them of the intended spirit of providing an opportunity for young investigators to make oral presentations at a national meeting; JPC interfaces with FT organizer.

**Poster Sessions:** The JPC on a number of occasions has discussed the organization of posters at the EB meeting. This was sparked by a request from an APS member to integrate posters of common interest with other societies. This is reminiscent of the "theme" program previously used. It was initially suggested that one or two specific topic areas that cut across societies be used as a trial balloon (i.e., oxidative stress or signal transduction). However, upon discussion it was felt that most attendees enjoy the atmosphere created by all APS posters being grouped together in a single area and that it increases our identity as a society. Moreover, even important and large targeted areas such as oxidative stress or signal transduction could result in the isolation of those posters and their presenters away from the main APS area. The JPC therefore recommends not pursuing this further.

Discussion of shorter duration was made on a number of other topics which should be deferred to additional strategic planning sessions or added to the agenda for the strategic planning retreat: reallocation of slots to sections; allocation of additional slots to the teaching section; corporate sponsorship of lectureships; corporate sponsorship of other program activities; new programmatic activities. ❖

Curt D. Sigmund, Chair

Council accepted the report of the Joint Program Committee.

Council approved a motion to increase the allocation for APS conferences from \$25,000 to \$30,000. The funds will be used for travel, per diem, and speaker registration at the discretion of the conference organizer.

## Liaison With Industry Committee



The Liaison With Industry Committee (LWIC) met at the Experimental Biology 2004 meeting in Washington, DC. The committee is chaired by **Glenn Reinhart** and is composed of representatives from most of the active Society Sections, nominated to serve by their sections. The current committee membership is composed of **Robert McCall** (Neural Control and Autonomic Regulation);

**Stephen Wood** (Comparative Physiology); **Jeffrey J. Zachwieja** (Environmental and Exercise Physiology); **Peter Morsing** (Renal); **Christine Schnackenburg** (Water and Electrolyte Homeostasis); **William Martin** (Central Nervous System); **Joshua C. Anthony** (Endocrinology and Metabolism); **Pamela I. Hornby** (Gastrointestinal); **Jodie Krontiris-Litowitz** (Teaching of Physiology); **Chahraz Montrose-Rafizadeh** (Cell and Molecular Physiology).

**Workshop 2004:** At EB 2004, the committee sponsored a workshop titled, "High Content Biology: Multiplexing in Cell Physiology," organized and chaired by **Chahrazad Montrose-Rafizadeh**, held on the afternoon of April 19, 2004. Speakers were **A.F. Hoffman**, **P. Tagari**, **E.R. Mardis**, and **R. Zivin**; topics covered included: functional characterization of GPCRs in models of obesity, signal transduction assays, high-throughput mutational profiling in human samples and assessing patterns of phosphorylation as a cellular response signature. This is the fourth workshop sponsored by the Committee since its reorganization and we are pleased to report that attendance was excellent.

The Fourth Annual Physiologists in Industry Mixer was held April 19, again with seemingly record-breaking atten-



dance. Thanks once more to Linda Allen for sending timely email notices to those EB '04 registrants who identified themselves as working in Industry.

**Novel Disease Model Award:** The award typically recognizes one graduate student (\$500) and one postdoctoral fellow (\$800) submitting the best abstract describing a novel disease model. Two students and six postdoctoral students applied (a total of eight abstracts were received in 2003 for 2004, an increase from six in 2002). The top two abstracts included both a student and a post-doc and awards in both categories were made.

**Workshop 2005 (IUPS):** Since the LWIC wishes to continue its annual tradition of sponsoring high quality workshops/symposia relevant to industry and academic physiologists alike, the committee proposed a symposium on Metabolic Syndrome ("Metabolic Syndrome: From Clinical Insights to New Therapies") for IUPS '05. The symposium was organized by **Christine Schnackenberg** and has commitments from four international scientists. The workshop and has been programmed by the International Scientific Programming Committee for IUPS 2005.

**Miscellaneous:** The committee remains committed to raising the profile and participation of Industry scientists in APS and recognizes Council's initiative in directing the Sections to place their LWIC representative on their respective programming committee. In addition, the LWIC will work with the APS Education Officer to provide additional membership benefits behind the Members Only firewall, including students and postdocs, and will also rebuild the LWIC website, providing information on careers in Industry-information that is important to trainees, their mentors and APS Leadership. Another objective is for the LWIC web page to provide web-based links to relevant APS Education and Careers pages, providing members a seamless access to the various and important perspectives regarding scientific research in the private sector. ❖

Glenn A. Reinhart, Chair

Council accepted the report of the Liaison with Industry Committee.

Council approved the necessary funding for an LWIC mixer at the 2005 IUPS Congress.

## Long Range Planning Committee



The Long Range Planning Committee met on April 18, 2004 at the Experimental Biology meeting in Washington, DC. In addition to **Gabriel Navar, David Brooks, Ken Baldwin, Carmen Hinojosa-Laborde, Helen E. Raybould** and **Bob Price** were present at the committee meeting. The Committee reviewed the report from previous years and discussed the

council actions resulting from previous recommendations. In addition, various aspects related to the upcoming IUPS

Congress were discussed. Concerns were raised about the difficulties in fund raising.

The following topics are recommendations of the committee:

**International Members:** The committee discussed the continued perception by international members (designated as members not residing in US and Canada) that they are not fully assimilated into the Society. It was noted that in 2003, there were increases in the number of international members on editorial boards of APS journals and on APS committees. However, in 2003 there were still only 10 out of 208 committee members from outside the US and Canada. In addition, the total number of international members declined a bit so it is important to intensify efforts to increase the total number of international members. We would also encourage a special article in *The Physiologist* encouraging the international members to become more involved in APS activities.

**Total Membership:** The Long Range Planning Committee is concerned that the total APS membership has dropped and fallen below the 10,000 mark. One possible problem is that membership dues sent via email seem to have less impact than hard copy dues notices. We need to analyze other reasons for the declines and develop improved recruitment incentives to encourage increased attendance. Many of the original incentives developed for recruitment efforts were never fully implemented.

In this regard, it is worthwhile to recognize the emerging popularity of the "systems biology" term that is being used with greater frequency. While a rose by any other name is still a rose, a physiologist who identifies with "systems biology" may not identify with APS unless we embrace the term and give it a home and identity. We propose that APS be more proactive in this arena and schedule symposia, featured topic sessions, poster and oral sessions as well as workshops in "systems biology."

**Composition of APS Committees:** Although not uniformly held, there are perceptions among some section members and section leaders that they are not equally represented on the various APS committees. While this may often be due to the failure of the Section head or leadership group to nominate qualified or any candidates, the perception needs to be corrected. We need to correct the misperception that some sections are not appropriately represented.

**Undergraduate Majors in Physiology:** The Committee considers that one of the most important actions that will help ensure the long-term viability and the future success of APS is the development of more undergraduate programs in physiology. One possibility is to link Systems Biology and Physiology. Incentives for institutions that have or initiate undergraduate programs leading to BS in Physiology and Systems Biology should be provided.

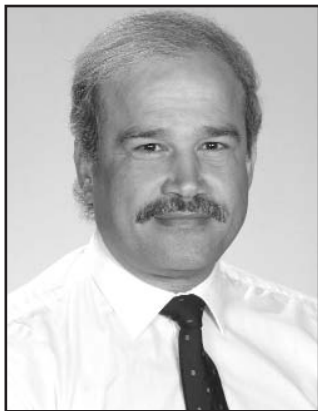
**Members from Industry:** While our Committee spent a lot of time discussing ways to ensure equitable representation from international members, it was also noted that many of the same perceptions exist among APS members from industry, government and the corporate sector. ❖

L. Gabriel Navar, Chair

Council accepted the report of the Long Range Planning Committee.

Council approved the motion to try to appoint more international members onto APS standing committees.

## Membership Committee Report



2003 has been a relatively successful year in terms of recruitment of new members. Over a period of six months, from October 2003 to March 2004, a total of 307 regular members and 229 student members have been approved. The new members represented a large and broad group of physiologists. Our recruiting efforts have been very successful in attracting more female members. There has also been sig-

nificant increase in Asian, Hispanic, Black, and American Indian members, indicating that the society is reaching to members of all different racial backgrounds and heritages. The vast majority of members hold a PhD and/or MD. Members with other degrees such as DVM, DM, MBBS, MSc, MA, and EdD are also represented. The new members represent a good cross section of all academic positions and ranks including Professors, Research Scientists, Postdoctoral and Research Fellows, as well as Chairpersons, Vice Presidents, Associate Deans, and Teachers.

During the same reporting period, there was a decrease in regular membership by 849 and in student membership by 1,190. That resulted in a net decrease in the number of members by 1,552 or 14%. The decrease in membership could be attributed to three factors: 1) the usual attrition of membership that we experience each year; 2) the increase in regular membership dues, although this effect may not be completely apparent until 2006 (two years after dues are in arrears); and 3) the fiscal year dues changes from July-June to January-December cycle.

The Membership Committee met in Washington, DC at the April Experimental Biology 2004 meeting. The primary topic of discussion at the meeting was how the Committee might best serve the Society so that it can continue to attract and recruit new members. Although there was an agreement among members that the observed decrease in membership could be largely due to fiscal year dues changes, the Committee felt that possible measures may need to be considered in order to retain the current members and to decrease the dropout rate.

One of the issues raised at the meeting was to emphasize the importance of being an APS Member. Being a member of APS is an honor and a great privilege. Members would have great pride if they could be identified among other attendants of a scientific meeting as APS Members. It was proposed that the ID badge at the Experimental Biology meeting would include the term "APS MEMBER". The term should be written in an attractive color and large font and should be clearly visible.

It was also suggested that established and senior physiologists should be invited to write a brief note in the *American Journal of Physiology* or *The Physiologist* indi-

cating from their own experience the benefits they achieved from being APS members. Postdocs could also be invited to write a note indicating their personal experience and how the student membership helped them in their early careers.

The decreased membership number over the past six months was carefully discussed. It was suggested that additional statistical data should be collected to determine whether there is a possible inverse relation between the number of years of membership and the dropout rate. It was also recommended that the members' mailing addresses should be updated regularly. Dropouts should be contacted first at the address provided in their application. Failure to respond after five trials would initiate a direct contact with the institution and request for a forwarding address. The increased dropout rate was particularly evident among student members. It was noted that 84% of the student members being dropped for nonpayment of dues have never paid dues. However, it was also noted that the student group is the most likely to relocate, and special measures should be taken to maintain an updated and revised student mailing list.

Members are contacted a maximum of five times in order to encourage dues payment. The Society sends three email notifications and two mailed, paper dues notices. The Committee suggests that included in these communications are bullet points outlining the benefits of membership. Additionally, the mailed dues notice letter should include a letter from an established physiologist (for regular members) and a postdoc (for student members) describing their personal experience and the benefits they gained from being members of APS. If a member still fails to pay dues after the fifth contact, the Society should send a questionnaire asking why the member does not wish to maintain membership in the Society. The questionnaire should ask what other societies the individual belongs to. The list of members being dropped for nonpayment of dues should be sent annually to the Membership Committee so they can directly contact members and convince them to retain their membership.

In summary, this is a time of change for the Membership Committee. The duties related to review of applications has been streamlined, freeing up time for the Committee to focus on other important goals, especially those related to recruitment and retention. On behalf of the Committee members, I would like to say that we continue these important duties with great enthusiasm. ❖

Raouf A. Khalil, Chair

Council accepted the report of the Membership Committee.

Council approved a motion requesting that those members be dropped receive a letter from the members' section chair encouraging him/her not to drop their APS membership.

Council approved the request that the list of dropped members be sent to the Membership Committee each year for possible follow-up from the Committee

## Perkins Fund Committee



The John F. Perkins Jr. Memorial Fund was established in 1967 to provide supplementary aid to families of foreign scientists working in US laboratories. The fund aims at keeping the family together during the scientist's visit and to introduce the spouse and children to the country and culture of the United States. Families may request up to \$ 5,000 per year/application. Next to scientific merit, award criteria

include financial need, the duration of the scientific visit (preference given to visits over three months), and the opportunity for children to attend school or kindergarten.

One fellowship award was made in the past year. The award went to **Chikodi Anibogu** for work in the laboratory of **David C. Randall** in the Department of Physiology at the University of Kentucky.

APS members are encouraged to make donations to the John F. Perkins Jr. Memorial Award. Donations can be targeted to Perkins Memorial Fund on the annual APS membership renewal form. Donations will open doors to the scientific and cultural horizons of the United States. The committee normally conducts its business via email communications, evaluating and voting on applications received from APS. In addition, the committee meets once a year at the EB meeting. It met at the EB 2004 meeting in Washington DC on April 20, 2004. Present were **Jane Kent-Bruan**, **Norma C. Adragna**, and **Klaus W. Beyenbach**. ❖

*Klaus W. Beyenbach*

Council accepted the report of the Perkins Memorial Fund Committee.

Council approved the motion to add a new link on the website to Past Perkins Award Recipients for the past two years.

## Porter Physiology Development Committee



The Porter Physiology Development Committee is pleased to provide this report of the Committee's activities during the year. The purpose of the Porter Physiology Development Program is to stimulate and support the development of minority students engaged in graduate study in physiology through the awarding of predoctoral fellowships. In addition, the program provides assistance in the improvement of under-

developed American departments of physiology, particularly in those colleges and medical schools with predominantly minority enrollment. Duties of the Porter Physiology Development Program Committee are to: supervise administration of the Porter Physiology Development Fund; approve visiting scientists and professorships; approve teaching and training fellowships; recommend to the William Townsend Porter Foundation specific needs for laboratory and teaching equipment; counsel underdeveloped physiology departments on curriculum and other improvements; provide annual written reports to Council and the William Townsend Porter Foundation; rank applications of minority students to attend meetings of the Society, which are collated by the Executive Director and/or Education Officer; and solicit outside funds for support of the program

### The Porter Physiology Development Committee Fund (Financial Status)

On March 2004, The Porter Physiology Development Committee Fund had a budget of \$216,317. During 2003, the fund received the following contributions: \$20,000 from Merck, \$85,017 from the William Townsend Porter Foundation, \$40,000 from the APS, \$210 in private contributions and \$497 from interest revenue. The Committee expresses its sincere appreciation for this continued support that makes the important work of the committee possible. Given remaining commitments for 2002-2003 Porter Fellows of \$37,500, the fund had a balance of \$176,817 for new fellowships and activities.

### Minority Travel Fellows Selection

In January 2004, the Committee served as the review panel for the APS Minority Travel Fellowship Awards. Fifty-five (55) travel fellows were funded to attend Experimental Biology 2004 in Washington, DC. Thirteen (13) additional travel fellowships were awarded to attend various APS conferences.

### Committee Meeting

The Porter Physiology Development Committee met April 18, 2004 during EB '04. Attending the meeting were:

returning members, **Pamela Gunter-Smith** (Co-Chair), **Rayna Gonzales**, **Marsha Matyas** (ex officio) and **Brooke Bruthers** (APS); and new members, **Johnny Porter** and **Heidi Collins**. The Committee thanks former members **Mouhamed Awayda**, **Cynthia Jackson** and **Irving Joshua** for their years of service to the Committee.

## Porter Physiology Development Fellowships

The number of new applications received for Porter Fellowships continues to reflect the substantial increase noted following the change in fellowship guidelines approved by Council several years ago. Present funds are sufficient for eight fellowships, four renewal and four new fellowships. The Committee's ability to award eight fellowships can be attributed, in part, to the generous and recent one-time supplemental contribution made by the William Townsend Porter Foundation. The number of Porter Fellowships that the Committee can support will soon decline, a trend that will accelerate if the Porter stipend is to keep pace with the level recommended by the NIH for predoctoral stipends (\$26,573 by 2006). Thus, the Committee's need to raise additional funds to support and expand Committee goals is becoming increasingly more critical.

## Review of Porter Fellowship Applications

The Porter Development Committee reviewed two renewal applications and seven new applications from the January 15, 2004 application deadline. Both of the renewal applicants were awarded a second-year fellowship. Two new fellowships were awarded and decisions for three were deferred until the June cycle. Given current practice, at least two new fellowships will be funded during the next round of reviews. In addition, the opportunity exists to fund two additional non-renewable (e.g., terminal graduate school year) new fellowships.

## Renewal Application Awardees

**Adrienne Bratcher** (MERCK Fellow), second-year graduate student, Department of Physiology and Biophysics, University of Louisville School of Medicine; Research mentor: **Irving G. Joshua**; Dissertation project: The role of dietary salt in the changes in arteriolar responsiveness with the development of hypertension.

**Gary Morris**, fifth-year graduate student, Department of Medical Pharmacology and Physiology, University of Missouri at Columbia; Research mentor: **Stephen Beebe**; Dissertation project: Structure function differences between the catalytic subunits C $\alpha$  and C $\gamma$  to the cAMP-dependent protein kinase.

## New Awardees

**Jessica Clark**, third-year graduate student, Physiological Sciences Interdisciplinary Program, University of Arizona Health Sciences Center, College of Medicine; Research mentor: **Bohuslav Dvorak**; Dissertation project: The protective role of epidermal growth factor in neonatal necrotizing enterocolitis.

**Damon Jacobs**, third-year graduate student, Department of Cell and Molecular Physiology, University of North Carolina-Chapel Hill, School of Medicine; Research mentor: **Richard Cheney**; Dissertation project: Identification of Myo5c associated organelles and Myo5c function. Damon is our first Native American Porter Fellow.

## Review Criteria for Porter Physiology Fellowships

The increase in the number of meritorious applications for a limited amount of funds has significantly increased competition for these awards. Council charged the committee with the development and articulation of a common set of factors to be considered in reviewing applications to assist the Committee in reaching a consensus regarding funding decisions. The Committee developed a set of guidelines and criteria based upon those used by other APS fellowship review committees and a historical perspective of Porter Committee practices.

## Porter Reception

Council approved and provided funding for a reception for travel fellows and their mentors and past and current Porter Fellows. This recommendation was made with the goal of building stronger connections between minority students and the larger community of APS scientists, especially minority scientists. The Porter reception was extremely successful with an increase in attendance. Importantly, the reception continued for more than two hours as participants interacted and networked with one another. In addition there was an increase in the number of former Porter Fellows who attended.

## APS Awards for Undergraduates at the Annual Biomedical Research Conference for Minority Students (ABRCMS)

This meeting attracts minority undergraduate and graduate students across the country and provides an opportunity to recruit students into the physiological sciences and the APS. The Committee requested and received \$1,000 for four \$250 cash awards for the most outstanding undergraduate presentations in physiology.

## Presidential Award

On May 6th, the American Physiology Society received the 2004 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. The award was given to APS based upon its longstanding commitment to increasing the representation of minorities in the sciences through various educational programs including those supported through the Porter Physiology Development Committee. The Committee takes great pride in its role in this achievement. Committee Co-Chair, **Pamela Gunter-Smith**, was on hand for the awards ceremony along with APS President-Elect **Douglas Eaton** and APS staff members **Martin Frank** and **Marsha Matyas**. The \$10,000 award will be applied to Porter Physiology Development fund for continuation of its programs.

## Goals for Next Year

This report marks the last that I will give as the committee's Co-Chair. On behalf of the Committee, I welcome the new Co-Chair and look forward to the new directions and ideas s(he) will bring. ❖

*Pamela Gunter-Smith, Chair*

Council accepted the report of the Porter Physiology Development Committee.

Council approved the funding for the APS awards at the Annual Biomedical Research Conference for Minority Students (ABRCMS).

Council approved the necessary funding for a Past Porter Fellows reception at the 2005 IUPS Congress.

Council approved the new "Guidelines for Reviewers of Porter Physiology Fellowships."

## Public Affairs Committee



The Public Affairs Committee advises the APS Council on policy issues and how best to address them. The Committee also informs Council of specific initiatives undertaken by the Committee itself. The Committee recognizes the importance of careful integration of its activities with Council's goals as well as with activities of the Animal Care and Experimentation Committee, the Communications Committee, and the Science Policy

Committee of the FASEB. It has worked closely with these groups to define and reach common goals. Likewise, the Public Affairs Committee works closely with the APS Office of Public Affairs both to coordinate activities and to more effectively communicate relevant issues to Council and, when appropriate, to the general membership.

A major focus of the Public Affairs Committee is to advocate for federal funding of biomedical research. Results of the past year's advocacy have been disappointing in that regard. With much of the legislative and executive attention being devoted to funding the wars in Iraq and Afghanistan and with the economy's having inhibited discretionary spending, funding for NIH in particular suffered and lost some of the ground that had been gained during the preceding five-year period when its budget had been doubled. Prospects for the NIH budget are reportedly more dismal for the upcoming fiscal year. Some projections even suggest that the Administration will seek to propose an actual reduction of the NIH budget. APS and its Public Affairs Committee continue to work with elected representatives to assure their having all the information that they need to realize that stagnant (or declining) funding of NIH, VA, and NSF would have a negative short- and long-term impact on the health of research in our country. However, it is essential that members of the Society take every possible opportunity to act as their own advocates in that regard.

In order to promote advocacy among its members, APS had developed and enhanced a Legislative Action Center or LAC on the APS web site. In the past year the Federation of American Societies for Experimental Biology (FASEB) purchased software that further enhanced the capabilities of the LAC and, with the support of APS, accepted respon-

sibility for maintaining that site. The LAC can now be accessed on the FASEB web site at <http://capwiz.com/faseb/home/>. The Public Affairs Committee urges APS members to act through that site to promote issues that they feel are critical for American biomedical science.

The Public Affairs Committee and APS continue to work closely with FASEB on numerous other public affairs issues. These include scientific ethics, peer review, use of animals in research, postdoctoral training and postdoctoral support. Liaison with FASEB's Office of Public Affairs is affected through membership on the FASEB Science Policy Committee (SPC). The Chair of the Public Affairs Committee is a permanent member of the SPC, which meets monthly. In the past year the SPC voted to have the Chair of the APS Public Affairs Committee serve as the Chair of the SPC subcommittee on use of animals in research and to have the Chair of the APS Animal Care and Experimentation (ACE) Committee serve as an ad hoc member. The subcommittee is currently developing a new entry, one that deals with animals in research, to the FASEB website and anticipates having that site open within the next year. The FASEB website on animals will be linked to the APS website as well as to others that promote and inform about the value of animal research. In the past year the Chair of the Public Affairs Committee has also been actively involved in FASEB's efforts to work with the Department of Veterans Affairs (DVA) to promote funding for, and philosophical support for, basic research within that agency. There has been a dramatic change in leadership within the DVA and the new leadership has shown great willingness to partner with the scientific community in directing DVA research. It will be critically important for APS and FASEB to continue their support for DVA research as well as for NIH and other federally supported research programs inasmuch as a number of members of Congress have openly criticized administration of these agencies and have stood in the way of the budgetary support that the agencies need to keep American science at the forefront.

The Public Affairs Committee continues to work with officials at NIH in efforts to promote training and retention of scientists in integrative or systems physiology. APS efforts have complimented those of other FASEB societies such as ASPET and AAA. The organizations seek to emphasize the need for development of scientists who can bring the innovations allowed by molecular biological approaches to whole animal research and the study of mechanisms that underlie systems physiology. Such a multifaceted approach to the study of physiology is in keeping with the NIH Roadmap and promotes integrative and systems science as a partner with more cellular approaches.

The Public Affairs Committee recognizes that it is an instrument of the Society as a whole and must work to respond to the needs of the Society as directed by its leadership. Within the next year Council and the Executive leadership of APS will seek to revitalize the Society's strategic plan. To promote Public Affairs and make it even more responsive, the Committee will seek to enhance further its communication with Council and with the Section Advisory Committee, thus providing an expanded avenue

for membership to have the needs that it recognizes addressed. Implicit in that responsibility, however, is recognition that advocacy cannot be effectively applied through committees. It is the responsibility of each member of the Society to speak forth on issues that affect us all. Public Affairs will continue to seek to provide members the most "user-friendly" means to do so. ❖

William T. Talman, Chair

Council accepted the report of the Public Affairs Committee.

Council approved the necessary funding for a joint meeting between the Public Affairs Committee, the Executive Cabinet and the PA Committee's Council Liaison to be held, if necessary, after the Strategic Plan meeting.

Council approved the request to continue participation in the "Bridging the Sciences" coalition.

## Publications Committee



The goals for the Publications Program as developed during the APS Strategic Planning retreat in November 1999 and approved by Council in the spring of 2000 continue to direct the department's activities.

### APS Journals the Best in Their Field

*Impact Factors.* The Journal Impact Factors made a strong showing again in 2002. Although *PRV* fell from

a 4th to 12th ranking among all journals, it remains the highest ranked journal in Physiology.

*Letter to ISI from APS President.* Last year, the APS Presidents communicated with the President of Thompson Scientific about creating and marketing measures of journal quality other than the Impact Factor, since it is by itself an imperfect measure of journal quality. Following this correspondence, ISI is allowing APS to review new reports they are developing for the web version of the Journal Citation Report.

*Reports.* Created in 2002 to replace Rapid Communications, this article type has continued to grow, particularly in the *Journal of Neurophysiology*, which started accepting Reports in 2003.

*News in Physiological Sciences (NIPS).* The completely overhauled version of *NIPS*, including a new design with professionally redrawn figures in every article, new front-section features, and a new title, *Physiology*, will appear starting with the August 2004 issue.

### Physiological Genomics

The new editor, **Allen Cowley**, met with his associate editors in August 2003 and made plans for increasing the

impact of *Physiological Genomics*. Submissions are up 80% from this time last year.

### Publication Efficiency

*Interior redesign.* Subtle changes were made to the text and headings style of all original research journals, including *Journal of Neurophysiology*, in the January 2004 issues. The title pages of each article have a much more modern look, and each page will include information important for both the print and online versions.

*SGML up-front workflow.* An SGML up-front workflow was implemented in the composition of the journals with the Spring 2004 issues. This should afford some efficiencies in production and the ability to use publishable article files before the print issue is created.

*Production module.* Work continues on the production module, which will allow electronic tracking and trafficking of files to streamline journal production.

### Financial Stability and Increased Accessibility

*Subscription Sales.* Journal prices for 2005 were once again set using a cost-based model. The price increase for 2005 was set at 5% for all the journals except for a higher increase of 10% for *Physiology* (formerly *NIPS*) and *Physiological Genomics* because of the higher costs in producing these journals and the relatively inexpensive starting subscription price.

*Consortia.* APS continues to respond to requests from consortia of libraries or institutions, giving them a 5-15% graduated discount for 6-31+ online subscriptions, if we are not losing subscription dollars by doing so. Sales of \$368,857 were made to 14 consortia in 2003.

*European Sales Agent.* APS contracted with David Charles to sell institutional subscriptions in Europe, especially licensing agreements to consortia and corporate customers. David Charles was responsible for approximately \$500,000 in new sales (this includes sales of Legacy Content) in 2003. Staff has begun negotiations with a similar sales agent, iGroup, in Asia.

*Legacy Content.* The second phase of Legacy Content, going back to 1966, was put online in 2003. The Legacy Content was sold as a product with a one-time price of \$1,500 in 2003, with a price increase to \$2,000 in 2004. To date, 280 copies have been sold.

*Open Access.* In an effort to respond to the needs of the market, APS began an experiment with *Physiological Genomics (PG)* in July 2003, giving authors the choice of paying no author fees to have their online articles published under traditional subscription access (free after 12 months), or pay \$1,500 to have their articles published with open access from the time of publication. The open access experiment for *PG* began in July of 2003, with 16% (11 of 68) of accepted manuscripts published as open access in that year. Thirty-six percent (4 of 11) of these were authored by *PG* Editors. So far in 2004, 6 of 57 (10%) have chosen open access. There is not much difference in the number of hits per article for articles that are open or subscription access.

*DC Principles.* **Martin Frank** lead a group of not-for-profit publishers in a press conference at the National Press Club on March 16 to announce the DC Principles for Free Access to Science. The DC Principles were developed

as a response to the open access movement, in which the good that society publishers do to disseminate research widely was getting lost in the rhetoric around open access and the pricing policies of some commercial publishers. This has proven very effective—since its release, APS has received many invitations to speak and to meet with other groups, such as the Medical Library Association, to represent the “middle ground” in this debate.

## Reducing Member Costs

APS members started receiving free online access to all journals in 2002. APS members continue to take increased (approximately 25% increase a year) advantage of the free color policy.

## Electronic Handbook of Physiology

Plans to create a new online physiology handbook were tabled, but negotiations between HighWire and Google lead to the ongoing testing of scanned images of the published Handbook content for online searching and, perhaps, viewing.

## Innovative Use of Electronic Publications

*Supplemental Material.* To date, there have been 163 instances of supplemental material published, 82 of them in *Physiological Genomics*. Of the 163, 47 are video clips; 2 of the videos are in *Physiological Genomics*, the rest are large data sets.

*HighWire Interface.* The journal home pages on the HighWire site were completely redesigned in 2003 to be more attractive, useful, and to highlight new functionality.

*Classic Articles Collection.* As an outgrowth of the Legacy Content project, a Task Force was formed to develop a list of classic physiology articles from the APS original research journals. Chaired by **Hershel Raff** of the Publications Committee, the Committee commissioned 23 essays for publication online and within the appropriate journals if the Editor agrees. Each essay will be linked to one of the 39 classic articles chosen, which will be made free online. The goal is to have the collection posted in August 2004, when all of the legacy content is online.

## Translational Research

*Call for Papers.* A Call for Papers on Translational Physiology has run since the June 2001 issues of all the APS research journals. The papers are being published as they are accepted under a special heading in the journal it was submitted to. Across all the journals, 77 papers were submitted and 54 papers were published under the Translational Research heading in 2003.

*Physiology in Medicine.* An agreement was made in 2001 to publish the Physiology in Medicine (PIM) series in *Annals of Internal Medicine*, with **D. Ausiello** as the Editor of the series, and **Benos** serving as Deputy Editor. Five PIM articles were published in *Annals* in 2003.

## Other Items of Significance

### Ethical Issues.

*Conflict of Interest:* All authors with financial ties to companies or products featured in their articles are now

required to fill out and sign a Conflict of Interest form. This enforces our policy and allows our copy editors to ensure that a conflict is noted in the article. These potential conflicts are no longer included in the Acknowledgement section of the article, but have their own heading.

*Human subject policy:* In order for our policy to clearly reflect that human physiology experiments are not always done on patients, and that all study subjects need to have their rights protected, the phrase “including healthy volunteers” was added to the policy on the Use of Humans and Animals in Experiments.

*Personal Communication:* A policy was set that the use of Personal Communications is discouraged, and if used, the author must have a letter granting permission from the communicant in his or her files to send to APS upon request.

*Bioterrorism Policy:* It was decided that rather than adopt a formal policy such as that adopted by *PNAS* and other journals, the Committee would raise the awareness of the Editors to the danger of allowing potential bioterrorism information to be published.

*Retraction Policy:* If a published article is retracted due to fraud or other reason, a Retraction statement will be published as a corrigendum, and the article will be tagged online as Retracted. ♦

Dale Benos, Chair

Council accepted the report of the Publications Committee.

Council authorized the necessary funding to develop a coalition of the members of the DC Principles to build a reserve to fight open access.

## Section Advisory Committee



The Section Advisory Committee (SAC), chaired by **Susan M. Barman**, has held two meetings in the past year in which 10-12 sections were represented. The first meeting was held in Bethesda in December. A major objective of this meeting was to update SAC members on recent Council activities and to initiate discussion about the Fall, 2005 Strategic Planning Meeting that will involve SAC participation. The first step in this process is a Members Needs Survey that will be distributed to the membership. Several SAC members participated in formulating the survey. Following this meeting, section Chairs met as the Nominating Committee to select candidates for President-elect and Council. SAC met separately and in joint-session with Council at Experimental Biology (EB) 2004 in Washington DC. A synopsis of SAC's major activities is reported below.

## SAC Responsibilities

According to the APS Bylaws, one of the duties of SAC is to interact with the Long-Range Planning Committee. In an effort to strengthen the relationship between the two committees, in 2003 Council approved a request by SAC to designate the SAC Chair as an ex-officio member of the Long-Range Planning Committee. This change should promote more effective information transfer regarding future plans that impact on the membership. It is expected that the SAC Chair will be able to inform the Long-Range Planning Committee of any concerns from the sections that relate to the ongoing and planned activities of the Society.

In accordance with the Section Operating Procedures, most of the sections have a Journal representative on their steering committee. In some cases, this has been a very positive experience with the Editor or Associate Editor having an active role in promoting the activities of the Section. In other cases, there has been very limited interaction with a Society Journal. As noted below, SAC has come up with new ideas on how to strengthen the cooperation between APS Journals and the Sections.

## Annual Section Reports

During the SAC meeting, each section Chair was asked to report what they considered to be their section's biggest success and failure in the past year. Among the positive outcomes: several Sections continue to have success in obtaining financial support for their activities and awards, and others have seen an increase in the number of applications by qualified individuals for their awards. Interestingly, the opposite was expressed by other sections. Specifically, some sections are concerned by the few (if any) applicants for the New Investigator Award. As indicated below, SAC has identified ways to promote this Award. An area that is a recurring concern for many Sections is the inability to get their members to be willing to serve on APS committees or to submit ideas for programming at EB.

## Section Awards

*New Investigator Award:* Several SAC members reported that no applications were received for the APS Section "New Investigator Award." A brief description of the Award criteria are: "Candidates should be investigators who have made meritorious contributions to the area represented by the APS Section to which they are applying. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g., Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.)." Several suggestions were made for getting the word out to potential applicants: advertise the Awards in APS Journals and on the Journal web sites, prepare a flyer for distribution, personal contact, send a notice to Physiology Chairs for them to let their junior faculty know about the New Investigator Award. SAC will work with

Council and Publications Committee to explore the feasibility of some of these proposals.

Also with regards to the New Investigator Award, SAC members expressed an interest in highlighting the Award winners. Some sections offer their award recipient the opportunity to publish their lecture in an APS Journal. There was strong support for all sections to adopt a similar policy. For those not presenting a lecture, **Mike Wyss** (Chair, Central Nervous System Section) has come up with a proposal to have a mini-review published by the award winner in *Physiology*. This plan has been discussed with **Dale Benos** (Chair, Publications Committee). He was supportive of this idea and has subsequently corresponded with **Walter Boron** (Editor, *Physiology*). As an alternative, he also communicated with **Dee Silverthorn** (Editor, *Advances in Physiology*). SAC is excited about pursuing this method of highlighting the New Investigator Award and is hopeful that Council will endorse this plan as a mechanism by which Sections can more effectively interact with the APS Publications and also promote the careers of outstanding APS junior investigators.

*Section abstract-based awards:* For the past few years, an attempt has been made to prevent an individual from receiving more than one abstract-based APS award at the same EB meeting. Although the situation has improved, in an effort to further limit multiple awards going to the same individual in one year, SAC discussed a proposal to require applicants of these awards to submit their abstract to one of that Section's Topic Categories. This idea and others will continue to be discussed in anticipation for some changes for EB 2006.

Section steering committee members are proud of the many outstanding applicants and winners of their Section awards. Currently, names of the Proctor and Gamble, Caroline tum Suden, and NIDDK Travel award winners are listed in the August issue of *The Physiologist*. SAC has requested that all Section-based award winners be given the same recognition. This is a small way to recognize our future science leaders.

Upon learning that Proctor & Gamble would no longer provide support for a graduate student award at EB, **Mike Wyss** has proposed a new plan for a student Award. Award selection would be based on each Section's post-meeting choice of the best graduate student presentation of a poster that was programmed by that Section. This new student award is viewed as a great tool to better engage graduate students in the meeting and to forge long-term loyalties to the APS. This is in a planning stage, and again, input from the membership is strongly encouraged.

## Trainee Members of Section Steering Committees

In the past year, all Sections have identified a trainee member of their steering committee. These members comprise the new Trainee Advisory Committee. Sections have been encouraged to identify ways to interact with these young APS members to encourage their continued participation in activities of the Society. Several Sections have included their trainee member on the Section Program Committee and allowed them to organize a Featured Topic.



Other Sections have included these members on other Section subcommittees (e.g., Awards) or included a Trainee page on the Section Newsletter. Trainee members of APS are encouraged to communicate with members of the Trainee Advisory Committee or SAC to identify ways to assist them in their professional development.

## International Members on Section Steering Committees

In response to the request by the International Members Committee, many of the Sections have now included an international APS member on their Steering Committee. These members are also serving on Section subcommittees, including Program and Awards. International members are encouraged to communicate with their Sections to provide ideas on how to promote an effective interaction.

## Section Name Change

Comparative Section members recently voted to change their name to Comparative, and Evolutionary Physiology. Council approved this change in an effort to better represent the scope of the section, to broaden its appeal, and to encourage comparative scientists who are not presently APS members to join the Society and become involved in the section's activities.

## Getting Involved in APS Section Activities

APS members are encouraged to become active participants in their Section activities. Each APS member can select one primary affiliation and as many secondary affiliations as fit their interests. For those who are interested in becoming more involved in sectional activities, you can contact SAC members at: <http://www.the-aps.org/committees/members/sac.htm>. For further information on the 12 Sections, go to [http://www.the-aps.org/sect\\_groups.htm](http://www.the-aps.org/sect_groups.htm).

*Susan M. Barman, Chair*

Council accepted the report of the Section Advisory Committee.

Council approved the request to publish the names of all Section Award recipients (including photos if available) in *The Physiologist*.

Council approved the plan by Section Chairs to enhance the New Investigator Award by providing the award recipient an opportunity to publish a mini-review in an APS-sponsored publication.

Council approved a request to encourage the Chairs of Physiology (ACDP) to nominate their young faculty for the Section New Investigator Awards.

Council approved the request to invite the ACDP President to meet with Council at the APS Spring Council Meeting.

## Senior Physiologists Committee



The primary responsibility of the Senior Physiologists Committee is to contact members who reach their 70th, 80th, 90th, or 100th birthdays during the year. The letter of greeting includes an invitation to inform the membership of the APS about the whereabouts and activities of the senior physiologist. The invitation is usually open-ended, and is meant to encourage the senior physiologist to include

historical and philosophical commentary. In 2003 a total of 179 individuals were contacted by members of the Committee; 27 response letters were printed in *The Physiologist*. Some of the recipients are members of the Committee.

Anecdotal evidence, insufficient for peer review in the Society's journals, attests to the popularity of the publication of these responses. The members of the Committee were asked a few years ago to survey the non-senior membership at their institutions about the popularity of the feature. Graduate students, fellows, and younger faculty reported that they read the letters regularly, and more senior faculty also report their delight at the many interesting stories the letters contain.

The Senior Physiologists Committee also reviews applications for the Senior Physiologists Award, a \$500 grant named for G. Edgar Folk, Jr., which is designed to support the activities of a senior member.

*Donald J. Marsh, Chair*

Council accepted the report of the Senior Physiologists Committee.

## Trainee Advisory Committee



This is the Trainee Advisory Committee's (TAC) first annual report to the APS Council. In its first year, the Committee has sought to generate ideas for projects, prioritize those ideas, and assign Committee members to begin work on each. The Committee's discussions were focused by the charge from the APS Council. The Committee met twice during its first year, once via conference call and subsequently at

the 2004 Experimental Biology meeting.

Duties of the Trainee Advisory Committee are to: elect a chairperson, who is a member of the committee or has served on the committee within the past three years; meet annually at the spring meeting of the Society and as needed during the year; investigate the needs of trainees, both pre-doctoral and postdoctoral, to determine how the Society can provide necessary support and assistance; organize an annual symposium or workshop at EB designed to assist trainees in their development of independent careers; publish an email newsletter for trainees and establish a web site for trainees on the APS Home Page; bring relevant matters to the attention of Council and act on Council recommendations; encourage the active membership of trainees in the Society; coordinate activities with other such APS committees to enhance the status of trainees and to respond to the needs of trainees.

Each of the Committee activities listed below is related to one of the Committee's charges.

## **TAC Trainee Survey**

The TAC is currently finalizing a Trainee Survey with the help of APS staff. The survey includes ranking the importance of several issues (e.g., balancing work and family, mentoring, granting, teaching) and a few short answer questions. The Committee agreed that the survey should be general in nature and include issues/questions relevant to both graduate student and postdoctoral experiences, including those of trainees from abroad studying in the US. Responses from both trainees and non-trainees will be requested (along with status identification) to allow assessment of needs from both perspectives.

The survey will be done online and will be brief, keeping in mind the APS full membership needs survey planned for later this year. Each member of the TAC will send the survey out to his/her own section listserv, asking members to respond and pass the survey along to trainees in their labs or departments. This should help increase the response rate.

## **Trainee Advisory Committee Symposium, Experimental Biology 2006**

The TAC discussed the upcoming symposium slot and the subject and type of symposium that would be best. It was agreed that the TAC will work with the Women in Physiology and Career Opportunities in Physiology Committees to make sure the three sessions do not overlap in content. Ex officio committee liaisons have been established (see Committee Liaisons below) who will oversee that process. Members of the TAC recommended that their symposium be an interactive session or a round table discussion of specific issues. Additionally, it was agreed that it would be important to include issues facing non-US citizens working in the US. Ortiz and Bavis will serve as session organizers.

## **Trainee Email Newsletter and Web Page**

*Email Newsletter:* The TAC deferred a full discussion of establishing a separate listserv for trainees until the Committee's fall meeting. The Committee requested staff to investigate having the Trainee listserv be added to the Members-only web page, which would allow those postdoctoral fellows and others who are regular members to sign

up for the listserv. In the meantime, the Committee will use the previously established trainee listserv, which was initially populated with all student members. Messages are sent out on a monthly basis by APS Education Office staff and include relevant APS and other news, notice of award opportunities, and postdoctoral position openings.

*Web Page:* The Committee reviewed the home pages of the current APS Career Web for graduate students and postdoctoral fellows and agreed that there was no need to establish a new separate web site. Instead, the Committee will work with APS staff and funnel any material that would be relevant to a specific section on the careers web to them for posting. Announcement of the new material can be sent out via the listserv.

## **Committee Liaisons**

The members of the TAC discussed which APS Committees should have a liaison with the TAC. Currently, two APS Committees, other than Section Steering Committee, have Trainee Representatives: the Women in Physiology and the Animal Care and Use Committee. Those two representatives were invited to be ex-officio members of the TAC and attended the Committee's meeting at EB 2004. In addition, the Career Opportunities in Physiology Committee requested a member from the TAC to sit as ex-officio on that Committee.

## **Sectional Responsibilities**

Most of the TAC members have been asked by their sections to write short articles on the Committee's activities for their section newsletter. All members were encouraged to do so to increase the visibility of the Committee and of trainees. As each member writes something, they will post it to the Committee listserv and share with others on the Committee. Then the others can include that article and either expand on it or focus on another aspect of the Committee's activities, allowing for more material to be in each section's newsletter.

Because all of the TAC members are appointed by their respective section, each section needs to have in place a method by which to identify their TAC member's replacement. Even though every member might not be replaced at the same time, Committee members will begin working within their sections to start discussing the best way to appoint replacement members to the Committee.

## **Postdoctoral Issues**

Sussman attended the National Academy of Sciences Committee on Science, Engineering, and Public Policy (COSEPUP) Convocation on Enhancing the Postdoctoral Experience for Scientists and Engineers and National Postdoctoral Association (NPA) meetings held just prior to EB in Washington, DC, on behalf of the Committee.

The COSEPUP Convocation grew out of a report by the Committee in 2000 addressing concerns about the current state of Postdoctoral Training in this country and its impact on young scientists and the advancement of science. Some effects of the report include raises in NIH Postdoctoral stipends, the comprehensive Sigma XI Postdoctoral survey, and the creation of the NPA. The purpose of the meeting was to promote communication among

COSEPUP members, postdoctoral scientists, and other interested parties (e.g., Sigma XI, NIH, other funding agencies, Medical School Administrators). Salient issues that were addressed include reduction of time to complete both graduate and postdoctoral training, encouraging trainees to pursue non-academic and non tenure-track careers, standardization of compensation and benefits, and increasing opportunities for postdocs to achieve greater financial, and therefore research independence, i.e., obtain grants covering supplies as well as compensation.

The annual meeting of the NPA included further discussion of many of the same issues as the COSEPUP Convocation. The NPA is working to advance interests of postdocs through both national and local activities by promoting the formation of local Postdoctoral Associations and Postdoctoral Offices and courting their membership in the NPA. Additional concerns for the NPA are to give postdocs a national voice for communicating with COSEPUP, NIH, and other funding agencies, provide support and information services to postdocs, and grow to a sustainable size and achieve financial solvency before their charter grant from the Alfred P. Sloan Foundation runs out. The NPA has offices housed in the AAAS building in Washington, DC, two staff members, a web page, an executive board composed of NPA members (primarily founding members), and several committees made up of executive board members and other NPA members.

The relationship of the NPA to professional societies is evolving. They are actively collaborating in at least one project with the AAMC postdoc committee (to generate a "toolkit" for institutions focused on professional development issues) and are offering membership in the NPA to professional societies. There is much work to be done regarding the development of this relationship to ensure complementarity without redundancy. For example, the NPA could provide societies with guidelines for promoting trainee involvement, and societies could advertise their trainee activities on NPA publications. To facilitate development of these issues, Sussman has been communicating with two relevant NPA Committees, Diversity and Outreach.

The Sigma XI survey is a comprehensive survey of postdoctoral research activities, career goals, and perceptions. Sigma XI has involved psychologists, lawyers, the National Academy of Sciences, and the NPA in the development of the survey. It is extremely comprehensive in nature. For a fee, institutions have the opportunity to contribute additional questions and receive results from their postdocs to these and the standard survey questions. Sigma XI will consider requests to provide the same service to professional societies

## Fall Meeting

The TAC was previously given approval by Council for a 1.5-day fall meeting. This will be held in September 2004. This meeting will allow the Committee to have a significant amount of time to plan their future activities and directions and discuss what issues should be dealt with in a more substantial manner. ❖

Caroline R. Sussman, Chair

Council accepted the report of the Trainee Advisory Committee.

Council approved a Trainee Advisory Committee sponsored symposium/workshop at EB 2006.

Council approved the allocation of \$500 for a society membership in National Postdoctoral Association.

## Women in Physiology Committee



*Meetings:* The Committee held a luncheon Business meeting at the Experimental Biology (EB) 2004 in Washington, DC on April 19, 2004 and also conferred by conference call to discuss the Bodil Schmidt-Nielsen Distinguished Mentor and Scientist Award on November 14, 2003, Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award applications on January 30, 2003. In addition, members conferred by teleconference on August 21, 2003, September 29, 2003 and February 10, 2004 to discuss committee activities, plans for the EB 2004 workshop cosponsored by the Women in Physiology Committee and ASPET Committee on Women in Pharmacology and other committee business.

*Bodil Schmidt Nielsen Distinguished Mentor and Scientist Award.* Six nominations for the first Bodil

Schmidt-Nielsen Distinguished Mentor and Scientist award were received by APS office and reviewed by the Women in Physiology Committee. **W. Clinton Webb** of the Medical College of Georgia was selected as the awardee. The award carries a stipend of \$1,000 plus travel expenses to attend the EB meetings. The awardee gives a 30-minute lecture on mentoring to young physiologists and their mentors and writes an article based on the lecture for publication in *The Physiologist*. The lecture followed a luncheon to which were invited **Bodil Schmidt-Nielsen**, former mentees of Webb, APS council members, and others specified by the awardee.

*APS/ASPET Workshop on Mentoring:* One of the roles of the APS Women in Physiology Committee is to coordinate activities with other such committees within FASEB. For EB 2004, the Women in Physiology Committee co-sponsored a workshop with ASPET Committee on Women in Pharmacology on "Life After the PhD: Finding a Postdoctoral Fellowship." Two representatives from the Women in Physiology Committee (**Carole Liedtke** and

**Kathleen Berecek**) and a member of the Committee on Women in Pharmacology (**Joan Lakoski**) served as co-organizers. The workshop was designed to inform young physiologists of decision-making and goal setting in considering a postdoctoral fellowship as the next step in their professional development. Four speakers discussed the following topics: **Kathleen Berecek**, "To Be or Not To Be a Postdoc;" **Angela Grippo**, "Searching for a Postdoctoral Position: How to Find What is Right for You;" **Lisa Nisenbaum**, "Types of Postdocs: What Do I Want to Be When I Grow Up?;" and **Donna Korzick**, "Interview and Follow-Up." Due to an accident, Berecek did not attend EB 2004. **Sue Barman**, former chair of the Women in Physiology Committee, presented Berecek's talk. Over 200 young and more senior scientists attended the session, with many remaining for discussions during a breakout session of six groups. Each group was well represented by members of APS (**E. Zambraski**, **D. Silverthorn**, **B. Goodman**, **D. Seals**) and by members of the APS Women in Physiology Committee and ASPET Committee on Women in Pharmacology. Each attendee to the workshop received a handout of resource material for the topics discussed by the speakers. Comments after the session were very enthusiastic.

*Plans for an APS/APSET Workshop on Leadership Skills and Development.* APS Women in Physiology and ASPET Women in Pharmacology Committees will once again partner to organize a mentoring workshop for IUPS/EB2005 in San Diego, CA. One of the charges to the Women in Physiology Committee is to distribute information to young scientists regarding strategies for a successful career in science. Another is to coordinate activities with other such groups within FASEB. This workshop will fulfill the charge to the Women in Physiology Committee and, in addition, bolster the career development goals of the ASPET Women in Pharmacology Committee. The focus of the workshop is Leadership Skills and Development with specific topics yet to be designated. The target audience is young scientists to junior faculty of both genders interested in learning skills for their future careers. The workshop also offers a venue for networking between junior and senior scientists.

*Mentoring Program:* Under the aegis of the APS Education Office, an APS Mentoring Program has matured into a program directed toward young physiologists in training and to junior faculty. Working with Melinda Lowy, committee members committed themselves to a six month period to review and assist in matching mentor-mentees.

*Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards:* The Women in Physiology Committee received 106 applications for the Caroline tum Suden/Frances Hellebrandt Professional Opportunity Awards. This number of applications is comparable to that received in the past few years. 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. The applications include an abstract submitted for presentation at EB and a supporting letter from the applicant indicating the goals of their research project, their specific role in the project described in the abstract, and the reasons why they are

deserving of the award. Each Committee member critically reviewed and rated 36 applications (each application was reviewed by three Committee members). The Awardees were invited to attend the APS Business Meeting where they each received a certificate and a check for \$500. The Committee is grateful to Council for funding the 36 fellowships; members again noted that with this number of awards certainly most, if not all, of the highly deserving candidates were able to receive an award.

*FASEB Excellence in Science Award:* The Chair of the Women in Physiology Committee serves as the APS representative to the FASEB selection committee for this prestigious award that carries a \$10,000 cash prize (supported by Eli-Lily) and the opportunity to present a plenary talk at a FASEB-sponsored meeting. Competition is very rigorous for this award, and most nominees have extensive dossiers documenting their numerous contributions to research, education, service, and mentoring. **Janet Rossant** of the Samuel Lunenfeld Research Institute in Toronto, Canada was selected the winner of the 2004 award.

*Serving on APS Committees:* The Women in Physiology Committee actively encourages women to be active members of the APS by, for example, serving on APS Committees. The Committee is particularly interested in those women who are elected within sections to leadership positions. The Committee is delighted that this year **Carole M. Liedtke** joins two women currently serving on APS Council, **Helen Raybould** and **Virginia Miller**. The committee also commends **Kim Barrett** for her service as Councillor from 2001 to 2004. The Committee also noted that Barman chairs the Section Advisory Committee and at least three sections are chaired by women.

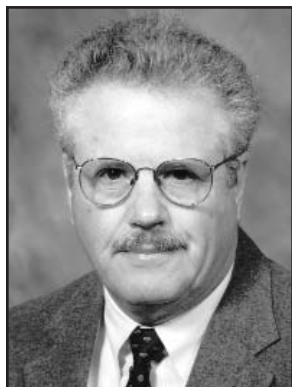
*APS Graduate Skills project:* A task force consisting of the Chairs of the Education, Women in Physiology, and Career Opportunities Committees and three members of the Association of Chairs of Departments of Physiology completed a project on Core Competencies. The document details nonacademic professional skills necessary for young physiologists to learn during their formal training.

*Other activities:* The Women in Physiology Committee remains active through conference calls to identify ways to promote the advancement of women and young physiologists in APS, to engage in the identification of mentors and mentees, to encourage nomination of women for committees of APS and for APS and FASEB awards, and to select awardees for the Bodil Schmidt-Nielson Distinguished Mentor and Scientist Award and Caroline tum Suden Opportunity Award. ♦

*Carole M. Liedtke, Chair  
Sirbhinya Benyajati, Incoming Chair*

Council accepted the report of the Women in Physiology Committee.

Council approved the funding for a lunch and lecture by the Bodil Schmidt-Nielson Distinguished Mentor and Scientist Awardee at the 2005 IUPS Congress.



PHYSIOLOGY IN PERSPECTIVE:  
THE WALTER B. CANNON  
AWARD LECTURE (SUPPORTED  
BY THE GRASS FOUNDATION)

**Gerald DiBona**  
Univ. of Iowa

*"The Wisdom of the Body:  
Neural Control of the  
Kidney"*

SATURDAY, APRIL 2, 5:45 PM



HENRY PICKERING BOWDITCH  
AWARD LECTURE

**Ormond MacDougald**  
Univ. of Michigan

*"Role of Wnt Signaling in  
Development of Adipose  
Tissues and Bone"*

SUNDAY, APRIL 3, 5:45 PM



SOLOMON A. BERSON  
DISTINGUISHED LECTURESHIP  
OF THE ENDOCRINOLOGY AND  
METABOLISM SECTION

**Amira Klip**  
Hospital for Sick Children,  
Toronto, Ontario, Canada

*"Regulation of Glucose  
Transporters in Muscle  
Cells: Epurr si Muove"*

FRIDAY, APRIL 1, 10:30 AM



CARL W. GOTTSCHALK  
DISTINGUISHED LECTURESHIP  
OF THE RENAL SECTION

**Soren Nielsen**  
Univ. of Aarhus, Denmark

*"Aquaporin Water  
Channels in Kidney:  
Physiology and  
Pathophysiology"*

FRIDAY, APRIL 1, 2:00 PM



HORACE W. DAVENPORT  
DISTINGUISHED LECTURESHIP  
OF THE GASTROINTESTINAL  
SECTION

**Ann Hubbard**  
Johns Hopkins Univ., MD

*"The Ins and Outs of  
Membrane Traffic in  
Polarized Epithelial Cells"*

FRIDAY, APRIL 1, 3:15 PM

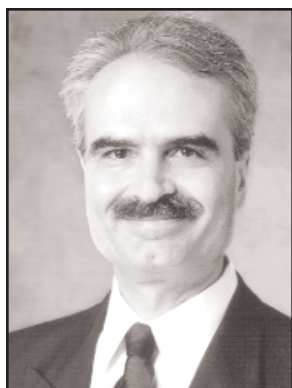


ERNEST H. STARLING  
DISTINGUISHED LECTURESHIP  
OF THE WATER AND  
ELECTROLYTE HOMEOSTASIS  
SECTION

**Giuseppe Bianchi**  
Univ. Vita Salute San  
Raffaele, Milan, Italy

*"The Genetic Control of  
Renal Na Handling in  
Primary Hypertension"*

SATURDAY, APRIL 2, 10:30 AM



ROBERT M. BERNE  
DISTINGUISHED LECTURESHIP  
OF THE CARDIOVASCULAR  
SECTION

**Roberto Bolli**  
Univ. of Louisville, KY

*"Preconditioning:  
A Paradigm Shift in the  
Biology of Myocardial  
Ischemia"*

SATURDAY, APRIL 2, 2:00 PM



CLAUDE BERNARD  
DISTINGUISHED LECTURESHIP  
OF THE TEACHING OF  
PHYSIOLOGY SECTION

**Ann Sefton**  
Univ. of Sydney, Australia

*"Charting a Global Future  
for Education in Physiology"*

SATURDAY, APRIL 2, 3:15 PM



CARL LUDWIG  
DISTINGUISHED LECTURESHIP OF  
THE NEURAL CONTROL AND  
AUTONOMIC REGULATION  
SECTION

**Julian Paton**  
Univ. of Bristol,  
United Kingdom

*"Genes and Proteins in the  
Blood Brain Barrier Affecting  
Arterial Pressure Regulation:  
Implications for the Etiology of  
Hypertension"*

SUNDAY, APRIL 3, 10:30 AM



EDWARD F. ADOLPH  
DISTINGUISHED LECTURESHIP OF  
THE ENVIRONMENTAL  
AND EXERCISE PHYSIOLOGY  
SECTION

**Erik A. Richter**  
Univ. of Copenhagen,  
Denmark

*"AMPK and Other Exercise-  
Induced Signaling in Skeletal  
Muscle: Relationship to  
Metabolism and Gene  
Expression"*

SUNDAY, APRIL 3, 2:00 PM



JOSEPH ERLANGER  
DISTINGUISHED LECTURESHIP  
OF THE CENTRAL NERVOUS  
SYSTEM SECTION

**Sten Grillner**  
Karolinska Institute,  
Stockholm, Sweden

*"The Selection and Intrinsic  
Function of Motor Programs:  
From Microcircuits to  
Integrative Function"*

SUNDAY, APRIL 3, 3:15 PM



JULIUS H. COMROE, JR.  
DISTINGUISHED LECTURESHIP  
OF THE RESPIRATION SECTION

**Gabriel Haddad**  
Albert Einstein College of  
Medicine, New York

*"Tolerance of Low O<sub>2</sub>:  
Lessons From Invertebrate  
Genetic Models"*

MONDAY, APRIL 4, 8:00 AM

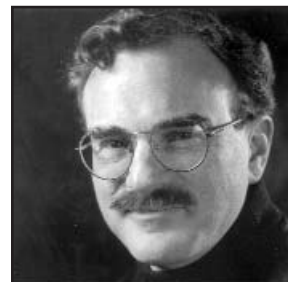


AUGUST KROGH  
DISTINGUISHED LECTURESHIP  
OF THE COMPARATIVE  
PHYSIOLOGY SECTION

**Roy Weber**  
Univ. of Aarhus, Denmark

*"The Amazing World of  
(Hemo-)Globins: Models in  
Physiological Adaptation"*

MONDAY APRIL 4, 10:30 AM



HUGH DAVSON  
DISTINGUISHED LECTURESHIP  
OF THE CELL AND MOLECULAR  
PHYSIOLOGY SECTION

**Randy Schekman**  
Univ. of California, Berkeley

*"Mechanism and  
Regulation of Cargo Protein  
Sorting in the Secretory  
Pathway"*

MONDAY, APRIL 4, 2:00 PM

## Walter C. Randall Lecturer in Biomedical Ethics

Robert Williamson, Murdoch Children's Research Institute

Tuesday, April 5, 2:00-3:00 PM

*"Ethics, the Human Genome and Physiology:*

*Designer Babies and Human Clones"*

The full IUPS Scientific Program with speakers and titles may be viewed online at <http://www.iups2005.org>.

## Thursday, March 31, 2005—6:00 PM

### Lecture:

*The Wallace O. Fenn Lecture*

Speaker: **Peter Agre**

## Friday, April 1, 2005—8:00 AM

### Refresher Course:

*Integrating Genomics Into Physiology Courses:*

*A New Paradigm or Just More Information?*

Education Track

Chaired: **Daniel E. Lemons and Anne Kwitek**

### Symposium:

*Angiogenesis*

Vascular Physiology Track

Chaired: **Brant Weinstein**

### Symposium:

*Cardiac Electrophysiology and Arrhythmia Mechanisms*

Cardiac Track

Chaired: **Denis Noble**

### Symposium:

*Functional Genomics of Macromolecular Damage*

*Responses and Environmental Stress Adaptation*

Ecophysiology for the 21st Century Track

Chaired: **George Somero**

### Symposium:

*The Making of the Vertebrate Lung*

Tissue Dynamics in the Lung Track

Chaired: **Jeffrey A. Whitsett**

### Symposium:

*Molecular Bases of Energy Balance and Fuel Partitioning*

Feeding, Fuel and Fat: Energy Metabolism Track

Chaired: **Jeffrey M. Friedman**

### Symposium:

*Novel Mechanisms of Transporter Regulation*

Epithelia Track

Chaired: **Rene Bindels and Irene Schulz**

### Symposium:

*Skeletal Muscle Plasticity*

Muscle-Exercise Track

Chaired: **John Holloszy**

### Featured Topic:

*Genetic Basis of Cardiopulmonary Disorders*

Genomics Track

Chaired: **Scott Weiss**

### Featured Topic:

*HIF-1 and Molecular Regulation of Oxygen Homeostasis*

Chaired: **Gregg L. Semenza**

## Friday, April 1, 2005—10:30 AM

### Lecture:

*Solomon A. Berson Distinguished Lectureship of the APS*

*Endocrinology & Metabolism Section*

Speaker: **Amira Klip**

### Symposium:

*Cardio-Respiratory Physiology of Diving: Extreme*

*Physiology at Depth*

Ecophysiology for the 21st Century Track

Chaired: **Patrick J. Butler**

### Symposium:

*Central Role of Ion Channels in the Regulation of Vascular Tone*

Vascular Physiology Track

Chaired: **Mark T. Nelson**

### Symposium:

*Epithelial Polarity: Development to Disease*

Epithelia Track

Chaired: **Catherine Fuller and Michael J. Caplan**

### Symposium:

*Excitation-Contraction Coupling*

Cardiac Track

Chaired: **Andrew Marks**

### Symposium:

*Life and Death: Metabolic Rate and Lifespan*

Thermoregulation and Energetics Track

Chaired: **Kim Hammond**

### Symposium:

*Molecules and Genes: Brainstem Development Underlying Breathing*

Regulatory Brain Track

Chaired: **Martyn D. Goulding**

### Symposium:

*Signaling Pathways in Gut Mechanosensitivity*

Chaired: **Fievos Christofi and Michael Schnemann**

### Featured Topic:

*Reactive Oxygen Species in the Vasculature*

Chaired: **Michael Wolin and Paul Vanhoutte**

## Friday, April 1, 2005—2:00 PM

### Lecture:

*Carl W. Gottschalk Distinguished Lectureship of the APS*

*Renal Section*

Speaker: **Soren Nielsen**

**Lecture:**

*The Microcirculatory Society Landis Award Lecture*  
Speaker: **Virginia Huxley**

## Friday, April 1, 2005—3:15 PM

**Lecture:**

*Horace W. Davenport Distinguished Lectureship of the APS Gastrointestinal & Liver Physiology Section*  
Speaker: **Ann Hubbard**

**Symposium:**

*Cell Biology of Sodium Transport in Kidney*  
Renal Control of Blood Pressure Track  
Chaired: **Francois Verrey and Rebecca Hughey**

**Symposium:**

*The Microcirculatory Society President's Symposium: Vascular Regulatory Abnormalities in Obesity: Consequences of the Epidemic*  
Chaired: **Glenn H. Bohlen**

**Symposium:**

*Scaling of Metabolic Rate with Body Size: How and Why?*  
Thermoregulation and Energetics Track  
Chaired: **Ewald Weibel and Anthony J. Hulbert**

**Symposium:**

*Spring Molecules*  
Muscle-Exercise Track  
Chaired: **Henk Granzier**

**Symposium:**

*Stem Cells in the Developing and Adult Brain*  
Supported by: Elsevier, Inc.  
Chaired: **Pasko Rakic**

**Featured Topic:**

*Acid-Base Transporters*  
Chaired: **Michael Romero**

**Featured Topic:**

*The Phylogeny of Dual Respiratory Rhythm Generating Networks in Vertebrates*  
Regulatory Brain Track  
Chaired: **William K. Milsom**

**Featured Topic:**

*Role of Reactive Oxygen and Nitrogen Species in Lung Injury and Diseases*  
Chaired: **Bruce R. Pitt and Brooke T. Mossman**

## Friday, April 1, 2005—5:45 PM

**Lecture:**

*IUPS President's Lecture*  
Speaker: **Allen W. Cowley**

## Saturday, April 2, 2005—8:00 AM

**Symposium:**

*Epithelial Cells and their Neighbors*  
Epithelia Track  
Chaired: **Hannah V. Carey and Helen E. Raybould**

**Symposium:**

*Force Generation*  
Muscle-Exercise Track  
Chaired: **Jim Spudich**

**Symposium:**

*Genomics of Transport and Sensory Functions*  
Genomics Track  
Chaired: **Kevin Strange**

**Symposium:**

*Oxygen Sensing and Hypoxia: Development, Adaptation and Disease*  
Chaired: **Nanduri Prabhakar**

**Symposium:**

*Renal NaCl Reabsorption: Molecular Insights into Human Blood Pressure Control*  
Renal Control of Blood Pressure Track  
Chaired: **Paul A. Welling**

**Featured Topic:**

*Endothelial Nitric Oxide and Cardiovascular Disease*  
Chaired: **David Lefer and Joseph Loscalzo**

**Featured Topic:**

*Impact of Gravity on Physiological Systems*  
Chaired: **Robert W. Phillips**

**Featured Topic:**

*Molecular Mechanisms of Fuel Sensing*  
Feeding, Fuel and Fat: Energy Metabolism Track  
Chaired: **Luciano Rossetti and David Grahame Hardie**

**Featured Topic:**

*New Aspects of Endothelial-Cell Matrix Interactions: The Glycocalyx*  
Vascular Physiology Track  
Chaired: **Herbert H. Lipowsky and Fitz-Roy Curry**

**Featured Topic:**

*Respiratory Long-Term Facilitation: Mechanisms and Implications*  
Regulatory Brain Track  
Chaired: **Gordon S. Mitchell**

**Featured Topic:**

*The Role of Student Practical Laboratories in Physiology Education Track*  
Chaired: **Dee Silverthorn and Maria Jose Alves da Rocha**



## Saturday, April 2, 2005—10:30 AM

### Lecture:

*Ernest H. Starling Distinguished Lectureship of the APS  
Water & Electrolyte Homeostasis Section*

Renal Control of Blood Pressure Track

Supported by an unrestricted educational grant from:

GlaxoSmithKline

Speaker: **Giuseppi Bianchi**

### Symposium:

*Cellular and Molecular Mechanisms of Synaptic Plasticity*

Chaired: **Roger A. Nicoll**

### Symposium:

*Computational Biology of Cardiac Arrhythmias: From Ion  
Channel to Therapy*

Chaired: **Andrew McCulloch and Wayne Giles**

Sponsored by: The Biomedical Engineering Society

### Symposium:

*Effective Uses of Information Technologies in Physiology  
Education*

Education Track

Chaired: **Simon Carlile**

### Symposium:

*Emerging Modes of Ca<sup>2+</sup> Signaling in the Regulation of  
Smooth Muscle Contractile Proteins*

Vascular Physiology Track

Chaired: **Avril V. Somlyo**

### Symposium:

*Sex and Gender Differences in Pain and Analgesia*

Chaired: **Karen J. Berkley**

### Symposium:

*Structure-Function of Mechano-Gated Ion Channels  
Mechano-/Chemotransduction Track*

Chaired: **Masahiro Sokabe and Frederick Sachs**

### Featured Topic:

*Adipose Tissue: Fat Depot, Fuel Stat, and Endocrine  
Organ*

Feeding, Fuel and Fat: Energy Metabolism Track

Chaired: **Susan K. Fried**

### Featured Topic:

*Molecules Underlying Diseases of the Central and Enteric  
Nervous Systems*

Regulatory Brain Track

Chaired: **George Richerson**

### Featured Topic:

*Transport: PKD, Cilium*

Chaired: **Stefan Somlo**

## Saturday, April 2, 2005—2:00 PM

### Lecture:

*2nd Ernst Knobil Memorial Lecture*

Speaker: **Jan-Ake Gustafsson**

### Lecture:

*Robert M. Berne Distinguished Lectureship of the APS  
Cardiovascular Section*

Speaker: **Roberto Bolli**

## Saturday, April 2, 2005—3:15 PM

### Lecture:

*Claude Bernard Distinguished Lectureship of the APS  
Teaching of Physiology Section*

Speaker: **Ann J. Sefton**

### Symposium:

*Comparative Genomics of the Lung*

Tissue Dynamics in the Lung Track

Chaired: **John S. Torday**

### Symposium:

*Discovery of Genes for Polycystic Kidney Disease  
Genomics Track*

Chaired: **Peter Harris**

### Symposium:

*Gene Regulation for Survival at Low Temperatures  
Thermoregulation and Energetics Track*

Chaired: **Jeremy H.A. Fields**

### Symposium:

*Molecular Mechanisms Linking Sodium Retention to  
Hypertension*

Chaired: **Mordecai P. Blaustein**

Sponsored by: The American Federation for Medical  
Research

### Symposium:

*Nuclear Receptor Co-Regulators*

Chaired: **Roland Schule**

### Symposium:

*Stem Cells of Cardiac and Skeletal Muscle  
Muscle-Exercise Track*

Supported by: Elsevier, Inc.

Chaired: **Michael Schneider**

### Featured Topic:

*Locomotor Pattern Generators: Developmental, Molecular  
and Cellular Organization in Vertebrates*

Neural Control of Locomotion: From Genes to Behavior  
Track

Chaired: **Sten Grillner**

**Featured Topic:**

*Regulation of Coronary and Skeletal Muscle Circulation*  
Vascular Physiology Track  
Chaired: **Jos A.E. Spaan**

**Featured Topic:**

*Techniques*  
Calcium Signaling Track  
Chaired: **Tobias Meyer**

**Featured Topic:**

*Urea Transporters in the Post Genomic Era*  
Chaired: **Craig P. Smith and Jeff M. Sands**

## Saturday, April 2, 2005—5:45 PM

**Lecture:**

*Physiology in Perspective—The Walter B. Cannon Memorial Award Lecture*  
Speaker: **Gerald F. DiBona**  
Supported by: The Grass Foundation

## Sunday, April 3, 2005—8:00 AM

**Symposium:**

*Comparative Genomics of Blood Pressure Control: Genetic Maps in Humans, Rats and Mice*  
Renal Control of Blood Pressure Track  
Chaired: **Pierre Corvol and Anne Kwitek**

**Symposium:**

*Lipid Rafts—Floating from Bench to Bedside*  
Chaired: **Thomas L. Roszman and Jens Goebel**  
Sponsored by: The American Federation for Medical Research

**Symposium:**

*Neural Control of Energy Balance*  
Feeding, Fuel and Fat: Energy Metabolism Track  
Chaired: **Roger Cone**

**Symposium:**

*New Advances in Understanding Control of the Cerebral Circulation*  
Chaired: **Donald D. Heistad and David R. Harder**

**Symposium:**

*Proteins*  
Calcium Signaling Track  
Chaired: **Andras Spät**

**Featured Topic:**

*Amino Acid Transporters*  
Chaired: **Yoshikatsu Kanai**

**Featured Topic:**

*Cardiac Metabolism and Energetics*  
Cardiac Track  
Chaired: **Joanne Ingwall**

**Featured Topic:**

*Regulatory Mechanisms of Mechanosensory Cells*  
Mechano-/Chemotransduction Track  
Chaired: **Akimichi Kaneko**

## Sunday, April 3, 2005—10:30 AM

**Lecture:**

*Carl Ludwig Distinguished Lectureship of the APS Neural Control & Autonomic Regulation Section*  
Speaker: **Julian Paton**

**Symposium:**

*Calcium Channels, Tyrosine Kinases and Smooth Muscle Function*  
Chaired: **Hamid I. Akbarali and Michael J. Davis**

**Symposium:**

*Gravity and Evolution: From Cells to Snakes*  
Chaired: **Alan R. Hargens and Peter Norsk**

**Symposium:**

*Phylogeny and Ontogeny of the Renin-Angiotensin System*  
Chaired: **Hiroko Nishimura and Kenneth W. Gross**

**Featured Topic:**

*Cardiac Mechanics*  
Cardiac Track  
Chaired: **Andrew McCulloch**

**Featured Topic:**

*Gender Effects on Arterial Pressure Regulation*  
Renal Control of Blood Pressure Track  
Chaired: **Chris Baylis**

**Featured Topic:**

*Mechanisms of Metabolic Depression: Comparative Aspects*  
Chaired: **Gerhard Heldmaier**

**Featured Topic:**

*The Molecular Basis of Epithelial Disease*  
Epithelia Track  
Chaired: **David N. Sheppard**

**Featured Topic:**

*Pro-inflammatory Signaling in Lung Endothelial Cells*  
Tissue Dynamics in the Lung Track  
Chaired: **Jahar Bhattacharya**

## Sunday, April 3, 2005—2:00 PM

**Lecture:**

*Edward F. Adolph Distinguished Lectureship of the APS Environmental & Exercise Physiology Section*  
Speaker: **Erik A. Richter**

## Sunday, April 3, 2005—3:15 PM

### Lecture:

*Joseph Erlanger Distinguished Lectureship of the APS  
Central Nervous System Section*  
Speaker: **Sten Grillner**

### Symposium:

*International Harmonization of Animal Welfare Standards*  
Chaired: **Kevin Kregel and Pontus Persson**

### Symposium:

*Molecular Basis of Disease*  
Calcium Signaling Track  
Chaired: **Cecilia Hidalgo**

### Symposium:

*Rescue Mechanisms from Hypoxia*  
Ecophysiology for the 21st Century Track  
Chaired: **Peter Lutz**

### Symposium:

*Stem Cells and the Modification of Vascular Functions*  
Vascular Physiology Track  
Supported by: Elsevier, Inc.  
Chaired: **Keith March**

### Featured Topic:

*Complex Pathway of Function and Disease Deduced from  
the Whole Genome Perspective*  
Genomics Track  
Chaired: TBA

### Featured Topic:

*Genetic Models of Hypertension*  
Renal Control of Blood Pressure Track  
Chaired: **Curt Sigmund**

### Featured Topic:

*Gut Interactions with Pancreas and Liver*  
Chaired: **Patricia L. Brubaker and David A. D'Alessio**

### Featured Topic:

*Pyrogen-Sensing and Suppressing Pathways Mediating  
the Febrile Response*  
Thermoregulation and Energetics Track  
Chaired: **Clark M. Blatteis**

### Featured Topic:

*Receptors and Signaling Pathways in Lung Injury and  
Repair*  
Tissue Dynamics in the Lung Track  
Chaired: **Courtney Broadus**

## Sunday, April 3, 2005—5:45 PM

### Lecture:

*Henry Pickering Bowditch Award Lecture*  
Speaker: **Ormond MacDougald**

### Symposium:

*International Collaboration: Science Knows no Boundaries*  
Chaired: **Melinda R. Dwinell and Francisco H. Andrade**

## Monday, April 4, 2005—8:00 AM

### Lecture:

*Julius H. Comroe, Jr. Distinguished Lectureship of the  
APS Respiration Section*  
Speaker: **Gabby Haddad**

### Symposium:

*Cardiac Remodeling*  
Cardiac Track  
Chaired: **Christine Seidman**

### Symposium:

*Diagnosis and Treatment Utilizing Natriuretic Peptides*  
Chaired: **David L. Vesely**  
Sponsored by: The American Federation for Medical  
Research

### Symposium:

*Genetic Determinants of Obesity and Metabolic Disease*  
Feeding, Fuel and Fat: Energy Metabolism Track  
Chaired: **Claude Bouchard**

### Symposium:

*Integrative Aspects: Ca<sup>2+</sup> Signaling in the Nervous System*  
Calcium Signaling Track  
Chaired: **Alex Verkhatsky**

### Symposium:

*PDZ Domain Scaffolding Proteins and their Functions in  
Polarized Cells*  
Epithelia Track  
Chaired: **Mark Donowitz and Yoshihisa Kurachi**  
Sponsored by: *The Journal of Physiology*

### Featured Topic:

*Atherosclerosis: The New Inflammatory Disease?*  
Vascular Physiology Track  
Chaired: **Gary K. Owens**

### Featured Topic:

*The Many Faces of Problem-Based Learning: A Framework  
for Integrative Physiology Education*  
Education Track  
Chaired: **Penny Hansen**

**Featured Topic:**

*Mosso and Muscular Fatigue: 116 Years after the First Congress of Physiologists*

Chaired: **Charles M. Tipton and Thomas Nosek**

**Monday, April 4, 2005—10:30 AM****Lecture:**

*August Krogh Distinguished Lectureship of the APS Comparative & Evolutionary Physiology Section and the Scandinavian Physiological Society*

Speaker: **Roy E. Weber**

**Tutorial:**

*Computational and Bioinformatic Applications to Systems Biology*

Genomics Track

Chaired: **Daniel Beard**

**Symposium:**

*Body Weight Regulation throughout the Life Cycle*

Feeding, Fuel and Fat: Energy Metabolism Track

Chaired: **I. Caroline McMillen**

**Symposium:**

*Modulation of the Locomotor Pattern Generators by*

*Neurotransmitters and by Sensory Afferents*

Neural Control of Locomotion: From Genes to Behavior Track

Chaired: **Keir G. Pearson**

**Symposium:**

*Neural Control of the Circulation in Health and Disease*

Regulatory Brain Track

Chaired: **Patrice Guyenet**

**Symposium:**

*Phospholipid Oxidative Signaling in Regulation of*

*Apoptosis and Phagocytosis*

Chaired: **Valerian E. Kagan**

**Controversy:**

*The Mechanism of Action of the Ca<sup>2+</sup> Releasing Messenger NAADP*

Calcium Signaling Track

Chaired: **Luigia Santella**

**Controversy:**

*Role of Kidney versus Brain in Blood Pressure Control and Hypertension*

Renal Control of Blood Pressure Track

Chaired: **Gregory D. Fink and Thomas Lohmeier**

**Featured Topic:**

*Muscle Dystrophies of the Dystrophin Complex*

Muscle-Exercise Track

Chaired: **H. Lee Sweeney**

**Featured Topic:**

*Sensing Cardiovascular Homeostasis: Novel Molecules as Mechano- and Chemosensors Track*

Chaired: **Donna H. Wang and Donald L. Gill**

**Featured Topic:**

*Sex/Gender, Hormones and Cardiovascular Function*

Supported by: National Center for Gender Physiology

Chaired: **Sue Duckles and Valerie Schini-Kerth**

**Monday, April 4, 2005—2:00 PM****Lecture:**

*Hugh Davson Distinguished Lectureship of the APS Cell & Molecular Physiology Section*

Speaker: **Randy Schekman**

**Monday, April 4, 2005—3:15 PM****Symposium:**

*Atherosclerosis: Immune and Inflammatory Aspects*

Chaired: **Allison B. Reiss and Steven Carsons**

Sponsored by: The American Federation for Medical Research

**Symposium:**

*Biologging: Monitoring the Ecophysiology of Animals in the Marine Environment*

Ecophysiology for the 21st Century Track

Chaired: **Gerald L. Kooyman**

**Symposium:**

*Imprinting, Development and the Programming of Adult Health*

Genomics Track

Chaired: **Kent Thornburg**

**Symposium:**

*Making Science News: A Journalists Roundtable*

Chaired: **Andrea Gwosdow**

**Symposium:**

*Metabolic Syndrome: From Clinical Insights into New Therapies*

Feeding, Fuel and Fat: Energy Metabolism Track

Chaired: **Christine Schnackenberg**

Sponsored by: APS Liaison with Industry Committee

**Symposium:**

*Physiological Proteomics*

Chaired: **Charles A. Blake and Steven R. Goodman**

Sponsored by: The Society for Experimental Biology and Medicine

**Featured Topic:**

*Current Ideas in Pulmonary Ventilation and Blood Flow*

Chaired: **I. Mark Olfert and Kim Prisk**

**Featured Topic:**

*IUPS Grand Rounds on Hypertension*  
Renal Control of Blood Pressure Track  
Chaired: **John Hall**

**Featured Topic:**

*Muscle as an Endocrine Organ*  
Muscle-Exercise Track  
Chaired: **Ronald Terjung**

## Tuesday, April 5, 2005—8:00 AM

**Symposium:**

*Coordinating Interactions between Endothelium and Smooth Muscle*  
Vascular Physiology Track  
Chaired: **Ruddi Busse**

**Symposium:**

*Initiation and Adaptation of the Locomotor Pattern*  
Neural Control of Locomotion: From Genes to Behavior Track  
Chaired: **Tatiana Deliagina**

**Symposium:**

*Integrative Neuronal Mechanisms for Thermoregulation*  
Thermoregulation and Energetics Track  
Chaired: **Kazuyuji Kanosue and Ruediger Gerstberger**

**Symposium:**

*Vascular Inflammation: The Role of Inflammatory Cell Extravasation in Tissue Inflammation and Injury*  
Vascular Physiology Track  
Chaired: **Joel Linden**

**Symposium:**

*Old Receptor: New Functions*  
Chaired: **Jacques Samarut**

**Featured Topic:**

*Mechanical Ventilation and Lung Injury*  
Chaired: **Deborah Quinn**

**Featured Topic:**

*The Nature of Intestinal Adaptations: Cellular Diversity and Versatility*  
Chaired: **Ronaldo P. Ferraris**

**Featured Topic:**

*Regenerative Capacity of the Heart*  
Cardiac Track  
Chaired: **Nadia Rosenthal**

**Featured Topic:**

*The Role of the Choroid Plexus*  
Chaired: **Peter Brown**

## Tuesday, April 5, 2005—9:00 AM

**Lecture:**

*Robert Pitts Lecture*  
Speaker: **Jurgen Schnermann**

## Tuesday, April 5, 2005—10:30 AM

**Symposium:**

*Cellular and Molecular Aspects of Lung Parenchymal and Airway Remodeling*  
Tissue Dynamics in the Lung Track  
Chaired: **Rubin Tudor**

**Symposium:**

*Genomics of Circadian Clocks*  
Genomics Track  
Chaired: **Julian Dow**

**Symposium:**

*How do Emotions and Motivations Interact with Autonomic Functions?*  
Chaired: **Ruud M. Buijs**

**Symposium:**

*Inflammatory Aspects of Hypertension: Insights from the Microcirculation*  
Chaired: **Geert W. Schmid-Schonbein**

**Symposium:**

*Neural Regulation of Hydroelectrolytic Homeostasis*  
Chaired: **Jose Antunes Rodrigues and Maria Jose Alves da Rocha**  
Sponsored by: The Association of Latin American Physiological Societies

**Point/Counterpoint:**

*Is the Creatine Shuttle Critical for Muscle Function?*  
Muscle-Exercise Track  
Chaired: **Martin Kushmerick**

**Featured Topic:**

*Long Term Plasticity and Spinal Cord Injury*  
Neural Control of Locomotion: From Genes to Behavior Track  
Chaired: **Serge Rossignol**

**Featured Topic:**

*Overview: From Organelles to Organ*  
Calcium Signaling Track  
Chaired: **Irene Schulz**

## Tuesday, April 5, 2005—2:00 PM

**Lecture:**

*Walter C. Randall Lecture in Biomedical Ethics*  
Supported by: Taylor University  
Speaker: **Robert Williamson**

## Tuesday, April 5, 2005—3:15 PM

### Special Session:

*Panel Discussion on Ethics and Physiology in the Era of the Human Genome*

Chaired: **Ewald Weibel**

### Symposium:

*Genetic and Developmental Insights into Pulmonary Vascular Pathobiology*

Tissue Dynamics in the Lung Track

Chaired: **Marlene Rabinovitch**

### Symposium:

*Molecular Mechanisms of Thermosensation*

Mechano-/Chemotransduction Track

Chaired: **Ardem Patapoutian**

### Symposium:

*Research in Physiology Education from the Classroom to the Teaching Community*

Education Track

Chaired: **Harold Modell**

### Symposium:

*TRP Channels: Physiological Genomics and Proteomics*

Chaired: **Stewart O. Sage and Bernd Nilius**

Supported by: *The Journal of Physiology*

### Featured Topic:

*Epithelial Genomics, Proteomics and Genetic Models*

Epithelia Track

Chaired: **Mark A. Knepper and J.E. Melvin**

### Featured Topic:

*Molecular Physiology of Diving*

Ecophysiology for the 21st Century Track

Chaired: **Terrie M. Williams**

## Get Involved With APS Committees!

The American Physiological Society provides its membership with opportunities to be involved with the Society through service on its various committees. Committees and committee members are appointed by the Council of APS at the recommendation of the Committee on Committees.

Members are appointed to a three-year term commencing on January 1. Committee appointments are staggered so that only a limited number of the members rotate off a committee at the end of each year.

Members interested in committee service should complete the nomina-

tion form and submit it for consideration by the Committee on Committees and Council. The form is available to be downloaded at <http://www.the-aps.org/committees>.

Deadline for receipt of Candidate Information and Endorsement Forms is January 14, 2005. ❖

## APS to Sponsor 2005 Mass Media Fellowship

For the seventh consecutive year, APS will sponsor an American Association for the Advancement of Science (AAAS) Mass Media Science and Engineering Fellow for summer 2005. Applications are due to the AAAS by **January 15, 2005**.

The APS-sponsored fellow will be one of approximately two dozen AAAS Mass Media fellows who will spend 10 weeks during the summer working in the newsrooms of newspapers, magazines, Internet news outlets, and radio and television stations. Fellows will receive a short training course in science journalism prior to the fellowship, and will spend the summer developing their ability to communicate complex scientific issues to non-scientists and improving public understanding of science. The AAAS arranges placements at participating media outlets as part of the selection

process. The fellowship includes travel to Washington for orientation and evaluation sessions at the beginning and end of the summer, as well as travel to the job site and a weekly stipend based upon local cost of living.

Individuals must be currently enrolled as a graduate or postgraduate student of physiology or a related discipline to apply for the APS fellowship. The application form is available in the "Student Awards" section of the APS website at <http://www.the-aps.org/awards/student.htm#AAAS>.

Additional fellowships are available for students in other scientific and engineering disciplines. Information about the program is posted on the AAAS Education and Human Resources Directorate website at <http://ehrweb.aaas.org/massmedia.htm>. A brochure with additional information about the program is also post-

ed on both web sites.

In addition to the application form, applicants must submit a current résumé, a three- to five-page sample of writing directed to the general public, transcripts of graduate and undergraduate work, and three letters of recommendation. Two of the recommendation letters should be from faculty members, and the third should be a personal reference. The selection process is designed to seek out qualified candidates especially from under-represented communities, including African-Americans, Hispanics, Native Americans, and scientists with disabilities.

For more information, contact Stacy Brooks in the APS Communications Office. (Telephone: 301-634-7253; e-mail: [sbrooks@the-aps.org](mailto:sbrooks@the-aps.org)) ❖

## Cardiovascular

The **Berne Distinguished Lectureship** award is presented to a scientist who is a Fellow of the Cardiovascular Section of the APS, who has made outstanding prior contributions to cardiovascular research, and whose current research is particularly interesting, such that the presentation of this work would be expected to contribute to further interest in the CV Section meeting. This award is in honor of one of the most distinguished members of the Cardiovascular Section, Robert M. Berne. The nomination package, to be sent electronically to Dr. Steven Segal (sssegal@jbpierce.org), Chair of the Awards Committee of the APS CV Section. The complete package should consist of: 1) a letter of nomination; 2) one or more seconding letters (preferably from someone outside of the nominee's institution); and 3) a CV of the candidate. All materials and letters of support should be submitted by **November 30, 2004**.

The **Carl J. Wiggers Award** is presented to a scientist who is a Fellow of the Cardiovascular Section of the APS, who has made outstanding and lasting contributions throughout his/her career to cardiovascular research, and who will bring broader and more international representation to the CV Section meetings. This award is in honor of the Cardiovascular Section's founder, Carl J. Wiggers. The nomination package, to be sent electronically to Dr. Steven Segal (sssegal@jbpierce.org), Chair of the Awards Committee of the APS CV Section. The complete package should consist of: 1) a letter of nomination; 2) one or more seconding letters (preferably from someone outside of the nominee's institution); and 3) a CV of the candidate. All materials and letters of support should be submitted by **November 30, 2004**.

The **Cardiovascular Section Research Recognition Awards** (\$500) are designed to entice submission of abstracts to the Annual Meeting from junior investigators and to aid them in their travel expenses. To be eligible, the investigator must be within 10 years of receiving his/her

PhD or MD degree and have submitted a first-authored abstract to an IUPS cardiovascular-related topic category. Abstracts from eligible individuals will be judged by the Cardiovascular Section Awards Committee. Research Recognition Awards will be made each year based upon those abstracts judged to be most meritorious. Eligible individuals are requested to email a copy of their submitted abstract to the Chair of the Cardiovascular Section Awards Committee: Dr. Steven Segal (sssegal@jbpierce.org) to arrive by **November 30, 2004**.

The **Cardiovascular Section Young Investigator Award Sponsored by Bristol-Myers Squibb** (\$750) is designed to entice submission of abstracts to the IUPS Congress from junior investigators and to aid them in their travel expenses. To be eligible, the investigator must be within 10 years of receiving his/her PhD or MD degree and have submitted a first-authored abstract to an IUPS cardiovascular-related topic category. Abstracts from eligible individuals will be judged by the Cardiovascular Section Awards Committee. BMS Young Investigator Awards will be made each year based upon those abstracts judged to be most meritorious. Eligible individuals are requested to email a copy of their submitted abstract to the Chair of the Cardiovascular Section Awards Committee: Dr. Steven Segal (sssegal@jbpierce.org) to arrive by **November 30, 2004**.

**Hsueh-Hwa Wang Cardiovascular Section Travel Award:** The Hsueh-Hwa Wang Cardiovascular Section Travel Award (\$800) recognizes an outstanding graduate student or postdoctoral trainee involved in cardiovascular research. The award is designed to assist the award recipient to attend the IUPS Congress. Candidates should be graduate students or postdoctoral trainees, who will be presenting cardiovascular research at the IUPS Congress. Graduate students should be in a doctoral degree program, while eligible postdoctoral trainees should be within five years after receipt of their doctor-

ate. Each applicant must have submitted an abstract to an IUPS cardiovascular-related topic category. The Cardiovascular Section Awards Committee will judge abstracts from eligible individuals. Eligible individuals are requested to email a copy of their submitted abstract to the Chair of the Cardiovascular Section Awards Committee: Dr. Steven Segal (sssegal@jbpierce.org) to arrive by **November 30, 2004**.

The **Cardiovascular Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Cardiovascular Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit their curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, by **January 31, 2005**. Applications from eligible individuals will be forwarded to the Cardiovascular Section Awards Committee for review.

## Cell and Molecular Physiology

The **Cell and Molecular Physiology Student Awards** (\$300) are available for up to two pre-doctoral candidates, depending on applicant pool. One award will be given for work done while enrolled as a medical or graduate (doctoral or masters) student. A second award is reserved for

undergraduate researchers. Applicants must be first author on an abstract submitted to the IUPS Congress. The student or their mentor must be a member in good standing of the APS, with a primary affiliation in the Cell and Molecular Physiology section. Members of the CAMP Steering Committee will review all applications. Winners will be announced, and awards presented, at the Cell and Molecular Section Banquet at the IUPS Congress. Applicants must complete the Student Award Certificate form and have the mentor submit a brief (e.g., half page) letter describing why the trainee is deserving of the award. Email or fax a copy of the submitted abstract, the Student Award Certification form, and letter to Peter K. Lauf, Email: peter.lauf@wright.edu, Fax: 937-775-2759. Deadline is **November 30, 2004**.

The **Cell and Molecular Physiology Research Recognition Awards** (\$500) will be given to two successful candidates for work performed while in the first through third postdoctoral year or medical residency. Applicants must be first author on an abstract submitted to the IUPS Congress. The trainee or their mentor must be a member in good standing of the APS, with a primary affiliation in the Cell and Molecular Physiology section. Members of the CAMP Steering Committee will review all applications. Winners will be announced, and awards presented, at the Cell and Molecular Section Banquet at the IUPS Congress. Applicants must complete the Student Award Certificate form and have the mentor submit a brief (e.g. half page) letter describing why the trainee is deserving of the award. Email or Fax a copy of the submitted abstract, the Student Award Certification form, and letter to Peter K. Lauf, Email: peter.lauf@wright.edu, Fax: 937-775-2759. Deadline is **November 30, 2004**.

The **Cell and Molecular Physiology Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contribu-

tions to the scientific areas represented by the APS Cell & Molecular Physiology Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and 3 three reprints to The American Physiology Society, Membership Office, by **January 31, 2005**. Applications will be forwarded to the appropriate section for review.

### Central Nervous System

The **Central Nervous System Section Van Harreveld Memorial Award** (\$300) will be presented by the CNS Section to recognize outstanding research in neuroscience by a graduate student or postdoctoral fellow. The recipient must be first author on an abstract presented at the IUPS Congress. Mail a copy of the submitted abstract and the completed *APS Award Certification Form* to Hans-Rudolf Berthoud, Louisiana State Univ., Pennington Biomedical Res Ctr., 6400 Perkins Rd., Banton Rouge, LA 70808. Deadline for receipt of application is **November 30, 2004**.

The **Research Recognition Award of the Central Nervous System Section** (\$500) provides at least two awards that recognize meritorious research by young investigators who participate in the annual IUPS Congress. To qualify for this award, the applicant must have received a PhD or other professional degree within the past 10 years and must present a poster or talk at the

IUPS Congress. The subject matter of this presentation can be any topic related to the central or peripheral nervous system. Applications are reviewed and rated by the CNS Section Awards Committee. To apply for this award, applicants should submit a copy of their abstract (or a paragraph describing his/her research if it is to be presented in a symposium), and a letter indicating the novelty of the research project described in the abstract, the year he/she received a degree, his/her current position, and whether he/she is a member of the APS. Membership in the APS is not required but is highly recommended. Mail these items to: Hans-Rudolf Berthoud, Louisiana State Univ., Pennington Biomedical Res. Ctr., 6400 Perkins Rd., Banton Rouge, LA 70808. Deadline for receipt of application is **November 30, 2004**.

The **Central Nervous System New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS CNS Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, by **January 31, 2005**. Applications will be forwarded to the appropriate section for review.



## Comparative and Evolutionary Physiology

The **Comparative and Evolutionary Physiology Section Research Recognition Award** (\$500) will provide three travel awards for recognition of meritorious research by young investigators who participate in the IUPS Congress. Candidates must have completed their PhD within the past 10 years, be a member of APS, and must present a talk or poster at the IUPS Congress. The subject matter can be any topic that deals with comparative physiology. Applicants should submit their abstract, abstract submission confirmation page, a one-page CV, and a one-page summary of research accomplishments and goals via email to: James W. Hicks, Chair of the Comparative Section (jhicks@uci.edu) by review by the Section Steering Committee. The award will be presented at the Comparative Section Business Meeting during the IUPS meeting. Deadline is **November 30, 2004**.

The **Comparative and Evolutionary Physiology Section Scholander Award** receives a \$300 cash award, one year APS membership, complementary registration to EB 2006, and a monograph. The award will be presented to an outstanding young investigator presenting a paper in the "Scholander Award" Session at the 2005 IUPS Congress. In addition, the awardee will have an opportunity to organize a Featured Topic at the EB 2006. To be eligible, applicants must: 1) submit their abstract to the Scholander Award Session topic category (see 1111-IUPS Scholander Award Competition); 2) be first author on the abstract and; 3) be not more than five years past the highest degree. Mail a copy of your abstract submission and completed APS Award Certification Form to: Linda Allen, Meetings Department, APS, 9650 Rockville Pike, Bethesda, MD 20814-3991; Fax: 301-634-7241. Deadline **November 30, 2004**.

The **Comparative and Evolutionary Physiology Section New**

**Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Comparative Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g., Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, by **January 31, 2005**. Applications will be forwarded to the appropriate section for review.

## Endocrinology and Metabolism

**Mead Johnson Research Award in Endocrinology and Metabolism:** (certificate plus cash prize, depending on funds available) is intended to recognize a graduate student, resident or postdoctoral fellow who presents the best abstract for research in the area of endocrinology and metabolism at the 2005 IUPS Congress. Applicants must be first author on a submitted abstract and should mail a copy of the abstract, the completed Award Certification Form, and a letter from the sponsor of the abstract indicating the training status of the individual to: Virendra Mahesh, Dept of Physiology and Endocrinology, Medical College of Georgia, Augusta, GA 30912-3000. Abstracts will be judged for scientific content by a committee comprised of the E&M Section members. The successful candidate will be notified approximately 30 days prior to the IUPS Congress and will be

presented the award during the Endocrinology & Metabolism Section Reception. Deadline for application is **November 30, 2004**.

The **Endocrinology & Metabolism Section Research Recognition Award** (\$500) is presented to one or more pre-doctoral graduate students whose investigations in endocrinology and metabolism physiology has been designated by the Steering Committee as being an example of meritorious research. The recipient must be first author on an endocrine/metabolism-related abstract submitted to the 2005 IUPS Congress, and be certified by his/her advisor as being eligible for such an award. The successful candidate will be notified approximately 30 days prior to the IUPS Congress and will be presented the award during the Endocrinology & Metabolism Section Reception. A copy of your abstract submission and a completed *APS Award Certification Form* should be mailed to: Virendra Mahesh, Dept of Physiology and Endocrinology, Medical College of Georgia, Augusta, GA 30912-3000. Deadline for application is **November 30, 2004**.

The **Virendra B. Mahesh Award of Excellence in Endocrinology** (certificate and cash award) is to promote the career development of young investigators pursuing research in the area of Endocrinology. The award will be presented to the graduate student or postdoctoral fellow submitting the best abstract to the 2005 IUPS Congress in the area of endocrinology/metabolism. The recipient must be first author on an endocrine/metabolism-related abstract submitted to the 2005 IUPS Congress and be certified by his/her advisor as being eligible for such an award. The recipient will be notified prior to the meeting and award presented at the Endocrinology & Metabolism Section Reception at the 2005 IUPS Congress. A copy of your abstract submission, a completed *APS Award Certification Form*, and a brief (e.g., half page) letter from the mentor describing why the trainee is serving of the award should be mailed to: Virendra Mahesh, Dept of Physiology and Endocrinology,

Medical College of Georgia, Augusta, GA 30912-3000. Deadline for application is **November 30, 2004**.

**The Endocrinology & Metabolism Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Endocrinology & Metabolism Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, by **January 31, 2005**. Applications will be forwarded to the appropriate section for review.

## Environmental and Exercise Physiology

**The Environmental & Exercise Physiology (EEP) Section Gatorade Young Investigator Award** (\$600 plus registration and EEP Banquet ticket) is presented to a pre-doctoral graduate student whose investigation in either environmental, exercise, or thermal physiology has been designated by the Steering Committee as an outstanding example of experimental research. The recipient must be first author on a submitted abstract to an environmental & exercise physiology-related topic category at the 2005 IUPS Congress, certified by his/her advisor as being eligible for such an award, answer a ques-

tionnaire from the Steering Committee, one who has not received an advanced degree at the date of the abstract deadline, and be present at the EEP Section Awards Banquet. A copy of your abstract submission and a completed *APS Award Certification Form* should be mailed to: Ronald L. Terjung, Dept of Biomed Sciences College of Veterinary Medicine, University of Missouri, Columbia, MO 65211. Deadline for application is **November 30, 2004**.

**The Environmental & Exercise Physiology Section Gatorade Beginning Investigator Award** (\$750 plus registration and EEP Banquet ticket) is presented to a post-doctoral fellow or its equivalent whose investigation in either environmental, exercise, or thermal physiology has been designated by the Steering Committee as an outstanding example of experimental research. The recipient must be first author on an abstract submitted to an environmental & exercise physiology-related topic category at the 2005 IUPS Congress, answer a questionnaire from the Steering Committee, have received their advanced degree within four years of the date of the abstract deadline, and be present at the EEP Section Awards Banquet. A copy of your abstract submission and a completed *APS Award Certification Form* should be mailed to: Ronald L. Terjung, Dept of Biomed Sciences College of Veterinary Medicine, University of Missouri, Columbia, MO 65211. Deadline for application is **November 30, 2004**.

**The Environmental & Exercise Physiology Section Recognition Award** (\$500) is presented to one or more pre-doctoral graduate and post-doctoral students whose investigations in either environmental, exercise, or thermal physiology has been designated by the Steering Committee as being an example of meritorious research. The recipient must be first author on an abstract submitted to an environmental & exercise physiology-related topic category at the 2005 IUPS Congress, and be certified by his/her advisor as being eligible for such an award. A copy of your abstract

submission and a completed *APS Award Certification Form* should be mailed to: Ronald L. Terjung, Dept of Biomed Sciences College of Veterinary Medicine, University of Missouri, Columbia, MO 65211. Deadline for application is **November 30, 2004**.

**The Environmental and Exercise Physiology Section Honor Award** (\$1,250) recognizes a previous or current primary member who has made significant research contributions to the scientific advancement of environmental, exercise, or thermal physiology while enhancing the educational objectives of the section. The recipient receives a plaque, cash prize, reimbursement of the registration fee, and the opportunity to discuss his/her research as the featured speaker at the annual EEP Section Banquet.

**The Environmental & Exercise Physiology Section Military Physiology Award for Beginning Investigators** (\$750) recognizes outstanding research in either environmental, exercise, or thermal physiology by a post-doctoral fellow or equivalent that is relevant to the physiological missions of the US Armed Forces. Applicants must have received their advanced degree within four years of the abstract submission date and must be first author on an abstract submitted to an environmental & exercise physiology-related topic category at the 2005 IUPS Congress. The award recipient must attend the EEP Section Awards Banquet to receive the cash prize and certificate. A copy of your abstract submission and a completed *APS Award Certification Form* should be mailed to: Ronald L. Terjung, Dept of Biomed Sciences, College of Veterinary Medicine, University of Missouri, Columbia, MO 65211. Deadline for application is **November 30, 2004**.

**The Environmental & Exercise Physiology Section Graduate Student Military Physiology Award** (\$600) recognizes outstanding research in either environmental, exercise, or thermal physiology by a graduate student that is relevant to the physiological missions of the US Armed Forces. Applicants must be

first author on an abstract submitted to an environmental & exercise physiology-related topic category at the 2005 IUPS Congress. The award recipient must attend the EEP Section Awards Banquet to receive the cash prize and certificate. A copy of your abstract submission and a completed *APS Award Certification Form* should be mailed to: Ronald L. Terjung, Dept of Biomed Sciences College of Veterinary Medicine, University of Missouri, Columbia, MO 65211. Deadline for application is **November 30, 2004**.

The **Environmental & Exercise Physiology Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Environmental & Exercise Physiology Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, **by January 31, 2005**. Applications will be forwarded to the appropriate section for review.

### Gastrointestinal and Liver Physiology

The **Abbott Distinguished Research Award for Excellence in Gastrointestinal & Liver Physiology** (\$750) recognizes a scientist who has carried out highly meritorious

research in gastrointestinal or liver physiology. The recipient receives a commemorative plaque, a \$750 award, and presents an award lecture at the section's annual business meeting/reception. The recipient is chosen by the Gastrointestinal Section Steering Committee. The section membership is encouraged to submit nominations, which should be sent to the Steering Committee Chair. Nominations consist of a cover letter outlining the candidate's qualifications for the award and his/her curriculum vitae.

The **Gastrointestinal & Liver Physiology Section Student Prize** (\$500) is designed to challenge and reward trainees who are engaged in gastrointestinal and liver research. Two awards will be made at the 2005 IUPS Congress. One will be given for work done while enrolled as a doctoral or medical student. A second award will be given for work performed during the first through third postdoctoral years or during a medical residency. In order to be considered, the applicant must be first author on an abstract submitted for the meeting and either the applicant or sponsor must be a member of APS. A copy of the submitted abstract, accompanied by the signed and completed *APS Award Certification Form* should be sent to: Hugh Nellans, GI Pharmacology & Oral Drug Delivery, Abbott Laboratories, Dept 46V, Bldg AP9, 100 Abbott Park Road, Abbott Park, IL 60064-6122 to arrive on or before **November 30, 2004**.

The **Gastrointestinal & Liver Physiology Section Research Recognition Awards** (\$500) will provide travel support for junior investigators to participate in the 2005 IUPS Congress meeting. To be eligible for the award, the investigator must be within 10 years of receiving a higher degree (PhD, MD or DVM), IUPS Gastrointestinal & Liver-related topic category. To apply for the award, applicants should submit their abstract and a brief statement of research accomplishments by **November 30, 2004** by email to Matthew Grisham, Chair of the GI Section Steering Committee at mgrish@lsuhsc.edu.

The **Gastrointestinal & Liver Physiology Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Gastrointestinal & Liver Physiology Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g., Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress, and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, **by January 31, 2005**. Applications will be forwarded to the appropriate section for review.

### Neural Control and Autonomic Regulation Section

The **Michael J. Brody Young Investigator Award of the APS Neural Control and Autonomic Regulation Section** (\$500) is sponsored by Merck & Co. and recognizes a promising young investigator who has made a significant research contribution to the understanding of neural control and autonomic regulation. The award is open to graduate students (post-candidacy exams), postdoctoral fellows, and clinical fellows who present and are first author on an abstract at 2005 IUPS Congress. Either the applicant or the abstract sponsor must be a member of APS. Applicants must mail a copy of the submitted abstract; the completed *APS Award Certification Form*; a list of publications; a one page summary and evaluation of

research contributions, written by the applicant and; a cover letter signed by both the applicant and sponsor indicating the date, or expected date, of highest degree. The deadline for receipt of applications is **December 1, 2004**. Send applications to Chester A. Ray, Penn State College of Medicine, Division of Cardiology H047, 500 University Dr., Hershey, PA 17033-2390.

The **Neural Control and Autonomic Regulation (NCAR) Research Recognition Awards** (\$500) provide travel support to junior investigators to present meritorious research at the annual Spring Meeting. To be eligible, the investigator must have a PhD, MD, or other professional degree with an academic rank or equivalent not higher than that of Assistant Professor and conduct either basic or clinical research in a field of neural control and autonomic regulation. Junior faculty members are particularly encouraged to apply for this award. To apply, the investigator must submit a first-authored abstract to any appropriate IUPS neural control-related topic category. Award criteria will be based on current work reflected in the abstract and overall contributions to the field. A copy of the abstract and a CV from the investigator must be received by **December 1, 2004**. Send application to Chester A. Ray, Penn State College of Medicine, Division of Cardiology H047, 500 University Dr., Hershey, PA 17033-2390. The abstracts will be judged by the NCAR Steering Committee and the most meritorious applications will be awarded.

The **Neural Control and Autonomic Regulation Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Neural Control & Autonomic Regulation Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g., Scientist, Sr. Scientist, Research Investigator, etc.). They should receive

nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress, and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to Chester A. Ray, Penn State College of Medicine, Division of Cardiology H047, 500 University Dr., Hershey, PA 1703-2390, by **December 1, 2004**.

## Renal

The **Robert W. Berliner Award for Excellence in Renal Physiology Sponsored by Abbott Laboratories** (\$1,000 plus reimbursement of travel expenses to the 2005 IUPS Congress meeting) is given to an outstanding senior researcher and educator in renal physiology. The award winner is also acknowledged at the Renal Dinner.

The **Young Investigator Award for Excellence in Research Sponsored by AstraZeneca** (\$1,000 plus reimbursement of travel expenses to the 2005 IUPS Congress meeting), recognizes an outstanding young investigator, less than 41 years old, or less than 15 years beyond receipt of his/her first doctoral degree. Research topics qualifying consideration include any area of renal physiology, pathophysiology, or hypertension. A nominee for renal physiology is required to have published original work in the *American Journal of Physiology Renal Physiology* or similar journal during the preceding four years. The award winner is acknowledged at the Renal Dinner. Nominations and applications should be sent to the Treasurer of the Renal Section, Jeff Garvin, Henry Ford Hospital, Division of Hypertension Research, 2799 W Grand Blvd, Detroit, MI 48202-2689. jgarvin1@hfhs.org. Deadline for applications is **April 1, 2005** for the 2006 award.

The **Amgen Postdoctoral Excellence in Renal Research Awards** are designed to promote and develop excellence in research pertaining to molecular, cellular, or organ mechanisms involving the kidney. Awards are presented to postdoctoral fellows. Award recipients must be first authors on abstracts focused on kidney research and they must agree to attend the Renal Dinner to participate in the Awards Proceeding sponsored by the APS Renal Section. Prior to the meeting a first level of evaluation is conducted by the Renal Section Awards Committee, based on the submitted abstract; a subset of abstracts are further judged during oral presentation at the meeting. Award winners are announced at the annual Renal Dinner held in conjunction with the meeting. Fellows are strongly urged to participate in the award process. Email or mail the submitted abstract and complete Award Certificate Form to: Heddwen L Brooks, Chair, Renal Section Awards, College of Medicine, 1501 N Campbell Ave, University of Arizona, Tucson AZ 85724-5051, brooksh@email.arizona.edu. Deadline for applications is **November 3, 2004**.

The **Pfizer Predoctoral Excellence in Renal Research Awards** are designed to promote and develop excellence in research pertaining to molecular, cellular, or organ mechanisms involving the kidney. Awards are presented to predoctoral students (including graduate students and medical students). Award recipients must be first authors on abstracts focused on kidney research and they must agree to attend the Renal Dinner to participate in the Awards Proceeding sponsored by the APS Renal Section. Prior to the meeting a first level of evaluation is conducted by the Renal Section Awards Committee, based on the submitted abstract; a subset of abstracts are further judged during oral presentation at the meeting. Award winners are announced at the annual Renal Dinner held in conjunction with the meeting. Students are strongly urged to participate in the award process. Email or mail the submitted abstract and complete *APS Award Certificate Form* to: Heddwen L Brooks, Chair,

Renal Section Awards, College of Medicine, 1501 N Campbell Ave, University of Arizona, Tucson AZ 85724-5051, brooksh@email.arizona.edu. Deadline for applications is **November 3, 2004**.

The **Renal Section Research Recognition Awards** (\$500) recognize the meritorious research by young investigators (junior faculty) who participate in the annual 2005 IUPS Congress Meeting. At least two awards will be given. To qualify for this award, the applicant must have finished postdoctoral work, may not be a senior faculty member, i.e., may not have a faculty rank of Associate or Full Professor, and may not have won this award in previous years. Candidates should either be an author on an abstract submitted to the 2005 IUPS Congress renal-related topic category, or agree to submit a late-breaking abstract if they did not submit one originally and they are selected for this award. Applications will be reviewed and rated by the Renal Section Awards Committee. Membership in the APS is not required, but awardees will be encouraged to join if they are not members. The awards will be presented at the annual Renal Dinner during the IUPS Congress meeting. Applicants and awardees should plan to attend this Renal Section Function. Applicants must submit a copy of their IUPS Congress meeting abstract or a note agreeing to do so if selected, and a note indicating their current position. Applicants who plan to submit an abstract only if selected for this award, must include a note explaining their decision. Alternatively, Renal Section members may nominate candidates for this award by submitting the above items. Send these items by email/mail to Heddwen L Brooks, Chair, Renal Section Awards, College of Medicine, 1501 N Campbell Ave, University of Arizona, Tucson AZ 85724-5051, brooksh@email.arizona.edu. Deadline for applications is **November 3, 2004**.

The **Renal Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candi-

dates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Renal Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g., Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office. Applications will be forwarded to the appropriate section for review. Deadline for applications is **January 31, 2005**.

## Respiration

The **Respiration Section Research Recognition Awards** (\$500) recognize outstanding research by graduate students and postdoctoral fellows who submitted their abstract to a 2005 IUPS Congress respiration-related topic category at the 2005 IUPS Congress meeting. Awardees will be asked present their work at a special evening poster discussion session during the meeting. Applicants must submit their award certification form by **November 30, 2004** to: Linda Allen, APS Meetings Office, 9650 Rockville Pike, Bethesda, MD 20814-3991, FAX: 301-634-7241, email: lallen@the-aps.org. The selection is made by the Respiration Section Steering Committee.

The **Respiration Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contribu-

tions to the scientific areas represented by the APS Respiration Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g., Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit their curriculum vitae, two nomination letters from APS members, and three reprints to The American Physiology Society, Membership Office, by **January 31, 2004**. Applications will be forwarded to the appropriate section for review.

## APS Teaching of Physiology Section

The **Arthur C. Guyton Educator of the Year Award sponsored by the W. B. Saunders Company** (\$1,000, plaque and up to \$750 travel reimbursement to the 2005 IUPS Congress meeting) recognizes a full-time faculty member of an accredited college or university and member of the APS who has independent evidence of: 1) excellence in classroom teaching over a number of years at the undergraduate, graduate, or professional levels; 2) commitment to the improvement of physiology teaching within the candidate's own institution; and 3) contributions to physiology education at the local community, national or international levels. A member of APS must nominate a candidate for this award. The nominator is responsible for completing application materials and forwarding six copies to the chairperson of the Guyton Award Selection Committee, William H. Cliff, Department of Biology, Niagara University, Niagara University, NY 14109-2032, Email: bcliff@niagara.edu. The award winner is announced at the APS Business Meeting during the 2005 IUPS

Congress. The awardee is requested to write an essay on his/her philosophy of education for publication in *The Physiologist*. Deadline for application is **November 15, 2004**.

The **Teaching of Physiology Section Research Recognition Awards** (\$500) will provide two travel awards for outstanding posters presented in the Teaching Poster Sessions at 2005 IUPS Congress. To qualify for this award, the applicant must be first author on the poster, and age 40 or under or within 10 years of receiving the PhD or MD. Applicants must also be APS regular, affiliate, or student members. Abstracts will be reviewed and rated by the Teaching Section Steering Committee. All poster abstracts must be formally submitted to 2005 IUPS Congress by the abstract deadline. To apply for this award, please send a copy of the abstract submission and a completed *APS Award Certification Form* to: Penelope A. Hansen, Memorial University Faculty of Medicine, St. John's, NF, Canada A1B 3V6, Fax 1-709-777-6576. Deadline for receipt of the application is **November 30, 2004**.

The **Teaching of Physiology Section New Investigator Award** (\$1,000) recognizes outstanding investigators in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Teaching of Physiology Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding,

peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend 2005 IUPS Congress and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, 2 nomination letters from APS members, and 3 reprints to The American Physiology Society, Membership Office, **by January 31, 2005**. Applications will be forwarded to the appropriate section for review.

### Water and Electrolyte Homeostasis

The **New Investigator Award in Regulatory and Integrative Physiology** (\$1,000) was established to encourage young investigators to continue research careers in cardiovascular, renal, and neuroendocrine integration. The award is presented annually at the business luncheon of the Water and Electrolyte Homeostasis Section to a new investigator who has made important contributions to our understanding of the integrative aspects of cardiovascular, renal, and neuroendocrine physiology in health and/or disease. Applicants should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry. The recipient will be invited to publish a manuscript on this presentation in the *American Journal of Physiology-Regulatory, Integrative & Comparative Physiology*. Any member of the APS in good standing may apply or be nominated for the award. Applications are reviewed by the Awards Committee of the Water and Electrolyte Homeostasis Section and should include: 1) a curriculum vitae of the nominee; 2) a brief one-page summary and analysis of the research contributions of the nominee; 3) a complete list of publications; and 4) two letters of nomination from members of the APS. Applicants are requested to send information to

Joey P. Granger, Dept of Physiology & Biophysics, Univ of Mississippi Med Ctr, 2500 North State Street, Jackson, MS 39216-4505, Fax: 601-984-1817; Email: jgranger@physiology.umsmed.edu **by January 31, 2005**.

The **Water & Electrolyte Homeostasis Section Research Recognition Travel Award** (\$500) provides support for travel expenses for junior investigators to attend the annual 2005 IUPS Congress. To be eligible, the investigator must be either a predoctoral student or within ten years of receiving his/her PhD or MD degree. Applicants must be first author on an abstract submitted to an IUPS water and electrolyte homeostasis-related topic category. The Section Steering Committee will judge the abstracts. Applicants are requested to send a copy of their submitted abstract to Joey P. Granger, Dept of Physiology & Biophysics, Univ of Mississippi Med Ctr, 2500 North State Street, Jackson, MS 39216-4505, fax: 601-984-1817; email: jgranger@physiology.umsmed.edu **by November 30, 2004**.

### Liaison With Industry Committee

The **Liaison with Industry Committee Novel Disease Model Award** (\$500/graduate student; \$800 postdoctoral fellow) recognizes the graduate student and postdoctoral fellow submitting the best abstracts describing a novel disease model. The model can be cellular or in vivo but should clearly emphasize the potential utility of the system for future research related to a disease process. Applicants must send a copy of the submitted abstract accompanied by the signed and completed *APS Award Certification Form* to: Linda Allen, Meetings Department, American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991; Fax: 301-634-7241; Email: lallen@the-aps.org to arrive before **January 3, 2005**. ❖

## Postdoctoral Positions

**Postdoctoral Position:** A postdoctoral position is available at the University of Cincinnati College of Medicine to study the cellular and molecular mechanisms of hepatic ischemia/reperfusion injury. Projects include signaling mechanisms employed by parenchymal and non-parenchymal liver cells during inflammation, proteomic analysis of signaling pathways and cellular responses, and the interactions of leukocyte populations (macrophages, lymphocytes and neutrophils) during post-ischemic liver injury. Applicants must have a PhD with a strong background in cellular and molecular biology. Experience with small animal surgery/experimentation is preferred. Applicants must have superior communication skills in English and have a publication record in English-speaking journals. A self-motivated, career-oriented independent thinker is desired for this position. Salary will be commensurate with experience. Send curriculum vitae and names of three references to: Alex B. Lentsch, PhD, Department of Surgery, University of Cincinnati College of Medicine, 231 Albert Sabin Way, Cincinnati, OH 45267-0558; Fax: 513-558-8677; Email: alex.lentsch@uc.edu.

### Postdoctoral Positions Available:

Several postdoctoral positions are available in the Vascular Biology Center at the Medical College of Georgia to study the role of inflammatory cytokines and/or psychosocial stress in salt-dependent hypertension. Focus would be on interactions with endothelial-derived factors. A wide range of potential projects is available which includes using cell culture, in vitro perfusion systems, acute and chronic in vivo models. A self-motivated, career-oriented independent thinker and willingness to work with a large dynamic team of investigators is desired. Experience in the protein biochemistry, molecular biology, cell biology and/or physiology of cardiovascular or renal disease is strongly preferred. Applicants must have a PhD

with superior communication skills in English and a publication record in English-speaking journals. Salary will be commensurate with experience. Send curriculum vitae and names of three references via email to: David M. Pollock, PhD, Vascular Biology Center, Medical College of Georgia, Augusta, GA 30912-2500; Email: dpollock@mcg.edu, Fax: 706-721-8545.

### Postdoctoral Training Position:

A postdoctoral position funded through an NRSA training grant is currently available at the University of Alabama at Birmingham to prepare trainees for careers in fundamental and/or clinical research in hypertension and cardiovascular diseases. Opportunities are available in cell signaling, including mechanosensing and mechanosignal transduction; molecular and cellular mechanisms of angiogenesis and vascular response to injury; vasoactive peptides in systemic and pulmonary hypertension; CNS regulation of blood pressure; molecular pathogenesis of cardiac hypertrophy, cardiac failure, arrhythmia and sudden death; pathophysiology and treatment of clinical hypertension; free radicals, oxidative injury and antioxidants in cardiopulmonary diseases; molecular genetics of hypertension; and gene therapy.

**Application Requirement:** The candidate must be a US citizen or permanent resident. Candidate must have a PhD or MD with an interest in cardiovascular diseases. The position is available for one-year with the expectation of renewal pending program director and postdoctoral student's mentor recommendation. Successful candidates should demonstrate a strong commitment to a research career. Individuals are invited to send a current CV, a letter indicating an interest and describing research accomplishments and plans, and the names and contact information of three references. **Funding Available:** Amount of award is dependent upon applicant's experience and follows the NIH guidelines. **Mailing Address:** Suzanne Oparil, MD, Program Director and Professor, UAB Hypertension Program, ZRB 1034, 1530 3rd Avenue South, Birmingham, AL 35294-0007.

**Postdoctoral Position:** An NIH-funded postdoctoral position is immediately available to study the signal transduction process of cardiac ion channels. This laboratory at the University of Iowa Carver College of Medicine, Department of Physiology & Biophysics uses multidisciplinary approaches to study the regulation of sodium, calcium, and potassium channels by a PKA-independent pathway. Applicants must be highly motivated, an independent thinker, have a PhD and/or MD, and a strong background in patch-clamp electrophysiological methods. Salary will be commensurate with the level of experience according to NIH guidelines. Interested applicants should send a cover letter, curriculum vitae, and names of three references to erwinshibata@uiowa.edu or Erwin F. Shibata, PhD, 6-450 Bowen Science Building, Department of Physiology & Biophysics, Carver College of Medicine, The University of Iowa, Iowa City, IA 52242-1109; electronic applications are preferred. Website: <http://www.physiology.uiowa.edu/faculty>. [AA/EEO]

### Postdoctoral Research Position:

Postdoctoral research associate for integration of functional genomics with metapopulation biology. We have a two-year position with the possibility of one- to two-year extension for a recent PhD in a NSF funded "Biocomplexity" project (presently pending final approval). This is a multi-investigator international collaboration that aims to examine physiological and molecular bases of life-history variation in a metapopulation of the Glanville fritillary butterfly (*Melitaea cinxia*), a model system for metapopulation biology. The new research will examine variation in dispersal and fecundity in an integrated fashion, from molecular level to whole-organism traits and to landscape-level metapopulation dynamics. The research group combines expertise in ecology (Hanski), metapopulation theory (Ovaskainen), flight physiology (Marden), molecular endocrinology (Fescemyer) and molecular genetics (Crawford, Frilander). The ideal candidate will have experience in molecular

biology, including standard DNA/RNA techniques, molecular cloning, and an interest in organismal biology and/or ecology. Duties will include: preparation of cDNA libraries, sequencing and construction of a microarray; microarray hybridizations and data analyses; examination of RNA for functional variation in alternative splicing. Most of the work will be performed at the University of Helsinki, along with stints of one to two months (preferably winter months) at the RSMAS laboratory of the University of Miami where sequencing will be performed. Fluency in English is required. The work will require additional short-term visits to Penn State University. For information contact the PI's listed below and/or Dr. Mikko Frilander, University of Helsinki (mikko.frilander@helsinki.fi). Send CV, brief statement of research interests/goals, desired start date, and two letters of recommendation to either of the principal investigators. Start date of the grant awaits final NSF determination, but is likely to be November, 2004. Principal investigators: Dr. Jim Marden, Penn State University jhm10@psu.edu; <http://www.bio.psu.edu/People/Faculty/Marden/index.html>; Dr. Ilkka Hanski, University of Helsinki ilkka.hanski@helsinki.fi; <http://www.helsinki.fi/science/metapop/>. [AA/EEO]

**Postdoctoral Position in Neural Control of Microvascular Function:** The Johns Hopkins University School of Medicine has an immediate opening for an NIH funded postdoctoral position to study vascular communication and the control of network blood distribution. Emphasis is on understanding the neural and cell-cell communication pathways whereby adenosine controls blood flow in living organs. In-vivo potassium channel function will be altered with genetically engineered adeno-viral vectors, and studied with in-vivo fluorescent video microscopy, pharmacology, and immunohistochemistry. Functional studies include arteriolar diameters, blood flow, and real time, in vivo measurements of intracellular calcium and membrane potential. Application Requirement: Candidate must have a PhD or MD with an interest in cardio-

vascular science. The position is available for one-year with the expectation of annual renewal depending on performance. Experience with small animal surgery/experimentation is desired. Applicants should possess superior communication skills in English and have a publication record in English-speaking journals. A self-motivated, career-oriented independent thinker is desired for this position. Individuals are invited to send a current CV, a letter indicating an interest and describing research accomplishments and plans, and the names and contact information of three references. Salary is dependent upon applicants experience and is structured around the NIH guidelines. Please contact: Richard Rivers, MD, PhD, Johns Hopkins University, 600 N. Wolfe St. Ross 351., Baltimore, MD 21287; Email :rrivers3@jhmi.edu; Tel.:410-502-1798.

**Postdoctoral Research positions:** Postdoctoral research positions in Vascular Biology are available within the Heart and Lung Research Institute of the Ohio State University, Columbus, OH. Multiple positions are available to investigate signaling mechanisms of vascular cell function and vascular disease. Our laboratory takes a multidisciplinary approach to investigate vascular function ranging from molecular analysis of cell signaling mechanisms in cultured microvascular cells to image analysis (two-photon laser scanning microscopy) of signaling systems in isolated perfused arterioles. Major projects are analyzing the molecular mechanisms underlying hypertension and Raynaud's disease, as well as mechanisms regulating normal vascular function. Interested applicants should have expertise in molecular/cellular biology or in microvascular physiology. The Heart and Lung Research Institute (<http://heartlung.osu.edu>) is a state-of-the-art Institute with well-equipped imaging and molecular CORE facilities. Salaries and associated benefits will be commensurate with experience. Qualified applicants should contact: Nicholas A. Flavahan, PhD, Deputy Director, Heart and Lung Research Institute, Ohio State

University, 473 West 12 Avenue, Room 110E, Columbus, OH 43210; Email: flavahan-1@medctr.osu.edu.

## Research Positions

**Research Associate/Postdoctoral Fellow:** A Research Associate/Postdoctoral Fellow position is available at the Department of Cell Biology and Physiology, University Of Pittsburgh School of Medicine, to study the molecular mechanisms of ion channel regulation in lung and renal epithelial systems, with emphasis on protein interactions between channels and chaperones that control channel density at the cell surface (see *JBC* 277:28948-58; *JBC* 278:12796-804; *JBC* 279:10085-92). A strong background in protein biochemistry, molecular biology and/or cell biology is required. Salary determined by experience level, according to NIH guidelines. To apply, send curriculum vitae and names of three references with their Email/Fax to: Dr. Raymond A. Frizzell, Department of Cell Biology and Physiology, University of Pittsburgh School of Medicine, S362 BST, 3500 Terrace Street, Pittsburgh, PA 15261; Email: Frizzell@pitt.edu; Fax: 412-648-8330.

**Research Scientist Opportunities:** Guidant Corporation researches, manufactures and markets systems for cardiac rhythm management, vascular intervention and cardiac/vascular surgery worldwide. Our mission is to provide innovative, therapeutic medical solutions of distinctive value for our customers, patients and health care systems around the world. In our industry, we have always been known for leadership and innovation, and for an organizational structure that allows employees freedom to grow. Applications are being accepted from broadly trained integrative neurophysiologists with an interest or experience in cardiovascular function for research scientist positions in our Guidant CRM/St. Paul location. Minimal qualifications include PhD and research experience in integrative neurophysiology, desired qualifica-



tions include PhD with or without postdoctoral experience in integrative cardiovascular neuroscience. Experience in large animal surgery, clinical research, and neural signal processing or neuroprosthetic methods a plus. Guidant offers a company environment of market leadership, product innovation and personal growth, plus excellent benefits, including medical, dental, vision and life insurance, short and long-term disability, paid vacations and holidays, 401(k), retirement ESOP, annual bonus, paid year-end shut down, and tuition reimbursement. If you are seeking to join a successful and professional organization that will enable you to make an impact in the medical device industry, please send CV/resume via email to: amy.keding@guidant.com or visit our website at <http://www.guidant.com> for a complete list of opportunities.

**Assistant Research Scientist:** The University of Iowa Carver College of Medicine Department of Internal Medicine, Division of Rheumatology, is seeking an Assistant Research Scientist to perform basic in an immunology laboratory in which existing theory or methods may be limited or lacking with responsibility for identifying and selecting the problems to be studied, the approach to them and the results obtained. Requires a person in this classification has the academic knowledge of a discipline that is generally associated with a Doctoral degree, or an equivalent professional degree, i.e., MD, DDS or DVM. In addition, the person will have demonstrated the ability to plan and execute a research study through some progressively responsible independent research work. Requires completion of postdoctoral training. Requires experience in immunology, as evidenced by published work. Desires considerable research experience in immunology and signal transduction. Please send resume and cover letter indicating #50556 to: Carol Wehby, Human Resources, Internal Medicine, E400 GH, 200 Hawkins Drive, Iowa City, IA, 52242-1081. [AA/EEO]

**Assistant Research Scientist.** The University of Iowa Carver College of Medicine, Department of Internal Medicine, Division of Hematology/Oncology, The Department of Internal Medicine, Division of Hematology/Oncology, is seeking an Assistant Research Scientist to perform basic research in vascular biology and hematology using molecular, cellular, and genetic approaches. To employ physiological and nutritional investigations in an area of considerable scope and complexity in which existing theory or methods may be limited or lacking with responsibility for identifying and selecting the problems to be studied, the approach to them and the results obtained. Requires a person in this classification has the academic knowledge of a discipline that is generally associated with a Doctoral degree (PhD) in biomedical science, or an equivalent professional degree, i.e., MD, DDS or DVM. In addition, the person will have had postdoctoral research training and demonstrated the ability to plan and execute a research study through some progressively responsible independent research work. Requires completion of postdoctoral training. Requires previous experience in metabolic, hematology, or genetic research. Requires experience with molecular biologic techniques including assays of mRNA and proteins for the study of molecular mechanisms of vascular disease in animal models. Desires experience with animal models including transgenic and gene-targeted mice. Please send resume and cover letter indicating #50638 to: Carol Wehby, Human Resources, Internal Medicine, E400 GH, 200 Hawkins Drive, Iowa City, IA, 52242-1081. [EEO/AA]

## Faculty Positions

**Faculty Position:** New York Chiropractic College (NYCC), a leading accredited college of chiropractic, is seeking to fill an immediate full-time opening in the basic science department. Located in Seneca Falls, NY, in the heart of New York's Finger Lakes Region, NYCC is dedicated to the advancement of the chiropractic

profession by providing students with a quality education that will enable them to deliver excellence in alternative health care. NYCC currently enrolls 700 students in its five degree-granting programs: Doctor of Chiropractic, Master of Science in Acupuncture, Master of Science in Acupuncture and Oriental Medicine, Master of Science in Diagnostic Imaging, and a Bachelor of Professional Studies. Chiropractic enrollment currently constitutes over 90 percent of the student body. Faculty members at NYCC are responsible for the instruction of assigned curriculum, the development of course syllabi/exams, advisement of students, participation in College governance through departmental and institutional committee work, ongoing scholarly activity (including private or institutional research) as well as practice or professional activity. Current institutional research interests include biomechanics and gait analysis, human and primate functional anatomy, motor control, skeletal muscle physiology, sports medicine and performing arts medicine. PhDs and/or Doctors of Chiropractic who possess the education and training to integrate clinical relevance into the basic sciences, and have previous teaching experience along with full-time private practice experience are strongly urged to apply. Excellent interpersonal, communication and organizational skills are necessary. To learn more about NYCC please go to <http://www.nycc.edu>. To learn more about this position click on the tab for Human Resources. Interested candidates, please submit a cover letter, current resume/vitae, and a list of three references to: Office of Human Resources, New York Chiropractic College, 2360 State Route 89, Seneca Falls, NY 13148; Email your response to: [cmcdermott@nycc.edu](mailto:cmcdermott@nycc.edu). Applications will be accepted until a suitable candidate is found. [AA/EEO M/F/V/D]

**Assistant Professor of Biology:** Penn State Erie, The Behrend College, invites applications from invertebrate or cellular physiologists for a tenure-track position. Applicants must have a strong commitment to undergraduate

teaching research. PhD is required; postdoctoral and teaching experience is a plus. Expectations: teach upper-division physiology courses with laboratories (two, in alternate years), a lecture course in biochemistry, share teaching responsibility for a core course in the biology major, establish a research program involving undergraduates, and seek external funding. Competitive start-up funds are available. Penn State Behrend is a four-year and graduate college of Penn State with 3,700 students. The College emphasizes balance between teaching and research, and offers BS degrees in the sciences including biology. Biology teaching and research laboratories are newly renovated, and expanded facilities will become available in 2006. Faculty and students conduct research in ecology, molecular biology, developmental biology, genetics, and microbiology. Pennsylvania Sea Grant is headquartered at Penn State Behrend. Erie, a metropolitan area of 280,000, is a service, tourism, medical, and industrial center on Lake Erie's Presque Isle Bay, two hours from Cleveland, Pittsburgh, and Buffalo. The region offers a variety of cultural, sports and recreational resources with modest living costs and affordable housing. There are five colleges in the area. Send curriculum vitae, copies of graduate and undergraduate transcripts, teaching statement, and research statement explaining suitability of research program to an undergraduate institution, and names and email addresses of three references that the search committee may contact independently. Send to: Dr. Roger Knacke, Director, School of Science, Penn State Erie, Department BIOL-O, 5091 Station Road, Erie, PA 16563-0203. Application review will begin on November 1, 2004, and continue until the position is filled. [AA/EEO]

---

**Assistant or Associate Professor Faculty position:** Plant Abiotic or Biotic Interactions. The Boyce Thompson Institute for Plant Research (BTI), an independent not-for-profit institute located on the Cornell University campus, invites applications for a tenure-track faculty

position at either the Assistant or Associate levels. We are seeking candidates whose research focuses on the interactions of plants with other organisms or on plant responses or signaling related to abiotic stress. Research approaches that include the use of natural variation, genomics, metabolomics and/or proteomics are preferred. The Boyce Thompson Institute (BTI) is located on the Cornell University campus in Ithaca, NY, and offers scenic living in the Finger Lakes region combined with a highly stimulating local research environment (<http://BTI.cornell.edu>). BTI is an active participant in the Cornell New Life Sciences Initiative, which has committed extensive resources (\$600-million) to foster multidisciplinary research throughout the campus (<http://www.lifesciences.cornell.edu>). Other prominent initiatives include the USDA-ARS health-based crop genomics initiative, which will be expected to be housed in a new \$30 million building in the vicinity of BTI within the next five years. Together, BTI, Cornell and the USDA Plant, Soil and Nutrition Lab represent one of the largest, most active plant science communities in the world. BTI faculty have access to state-of-the-art genomics and plant growth facilities at BTI and extensive life sciences facilities throughout the Cornell campus. The successful candidate is expected to establish an outstanding extramurally funded research program and to develop links to appropriate departments at Cornell. Applicants should submit a curriculum vitae, the names of three references and a statement of research interests (two to three-pages) to Maria J. Harrison, Chair, BTI Faculty Search Committee, Boyce Thompson Institute, Tower Road, Ithaca, NY 14853; E. Email: [mjh78@cornell.edu](mailto:mjh78@cornell.edu). Review of applications will begin November 1, 2004. Boyce Thompson Institute is an affirmative action, equal opportunity employer and is committed to increasing the diversity of its faculty and staff. Applications from women and minorities are encouraged.

**Assistant or Associate Professor:** The Department of Biology of the University of Waterloo invites applications for two tenure track positions at the Assistant or Associate Professor level in Animal Physiology. Applicants must have a PhD and postdoctoral experience and be prepared to establish an externally funded active research program. We are particularly interested in candidates using cellular and/or molecular approaches to explore an aspect of Animal Physiology. Duties include research, teaching at the undergraduate and graduate levels, and graduate student supervision. Candidates should be able to teach courses dealing with comparative animal physiology, reproductive animal physiology, endocrinology and/or a specialized topics course within these disciplines. Salary will be commensurate with qualifications and experience. Applicants should send their curriculum vitae, the names of three individuals willing to furnish letters of reference, and an outline (1-2 pages) of their proposed research program to: Chair, Department of Biology, Faculty of Science, University of Waterloo, 200 University Avenue West, Waterloo, Ontario, Canada N2L 3G1. The closing date for applications is **November 15, 2004** with a start date after May 1, 2005. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native peoples, and persons with disabilities. Additional information on the Department is available at <http://www.sci.uwaterloo.ca/biology>.

---

**Faculty Position:** The Department of Physiology & Biophysics at the Case School of Medicine invites applications for Tenure Track Positions at the junior and/or established investigator level with a research program in the areas of renal cell biology/physiology, functional genomics, systems biology, or biophysics. The Department (<http://physiology.cwru.edu>) has considerable strengths in molecular and cellular biology/physiology/pathophys-

iology of the kidney and plans a significant expansion to build a nationally recognized research program. Case School of Medicine (<http://casemed.case.edu>) is currently poised for important expansions. The Department/University offers a very interactive environment, a highly competitive compensation package, ample startup funds and state-of-the-art research facilities. Please submit a complete CV, brief letter of introduction, statement of research interests, three representative reprints and the names/e-mail addresses of four references by e-mail to [DPBrecruit@case.edu](mailto:DPBrecruit@case.edu). If you require further information, please contact Ulrich Hopfer, MD, PhD, Professor of Physiology & Biophysics, at 216-368-2878. [AA/EEO]

**Assistant Professor, Animal Physiologist:** The Biological Sciences Department within the College of Science and Mathematics at California Polytechnic State University is seeking an Animal Physiologist for a full-time, academic year, tenure track position at the assistant professor rank beginning September 2005. Primary teaching responsibilities will include human anatomy & physiology and general physiology. Other teaching responsibilities may include introductory biology, a graduate level course in organismal biology, and other undergraduate and graduate courses as appropriate to background and training. The position is open to all specialties including, but not limited to, neurophysiology (including sense receptors), endocrine/reproductive physiology, and comparative physiology. Use of invertebrate or lower vertebrate research systems is desirable but not required. The successful candidate must have a strong commitment to undergraduate teaching, curriculum development, and implementation of a student-centered research program. PhD in related field required at time of hiring. Salary is commensurate with qualifications and experience. To apply, visit <http://www.calpolyjobs.org>, complete an online application, and submit it to Requisition #100385. Mail curriculum vitae, a statement of teaching philosophy, a statement of

professional goals, and arrange to have official graduate transcripts and three letters of recommendation sent to: Dr. V.L. Holland, Chair, Biological Sciences Department, California Polytechnic State University, San Luis Obispo, CA 93407. Review of applications will begin November 1, 2004. Applicants are strongly encouraged to have all materials submitted by **November 1**; applications received after this date may be considered. For questions, contact the Biological Sciences Department at 805-756-5241. Cal Poly is strongly committed to achieving excellence through cultural diversity. The university actively encourages applications and nominations of all qualified individuals. [EEO]

**Assistant Professor.** Tenure track appointment in Exercise Physiology. Requirements: PhD and/or MD with evidence of ability to conduct research. Post-doctoral experience and successful experience in classroom and laboratory instruction preferred. Duties: Teach undergraduate and graduate courses in exercise physiology and related areas, conducting nationally visible, fundable research and supervising master's and PhD students. Salary and start up funds competitive and commensurate with experience and qualifications. Contact: Send letter of interest, curriculum vitae and three letters of reference by **December 1, 2004** (email and fax applications will not be accepted) to Michelle Provost-Craig, PhD, Search Committee Chair, Human Performance Laboratory, 541 South College Avenue, The University of Delaware, Newark, DE 19716. For inquiries only: Phone: 302-831-6326; fax: 302-831-3693; email: [provost@udel.edu](mailto:provost@udel.edu). The curriculum vitae and letters of reference shall be shared with departmental faculty. [AA/EEO]

**Head, Department of Human Nutrition, Foods and Exercise.** College of Agriculture and Life Sciences, Virginia Tech. Virginia Tech seeks an accomplished, visionary head for its Department of Human Nutrition, Foods and Exercise. The department was established in 1960

and is one of the largest departments within Virginia Tech's College of Agriculture and Life Sciences, with 21 faculty, 12 staff, approximately 600 undergraduate students, and 45 graduate students. The mission of the department is to promote health by the integration of human nutrition, foods, and exercise, focused on the prevention and therapeutic treatment of problems in healthy and vulnerable populations through teaching, research, extension and continuing education. The faculty have been successful in obtaining research grants from NIH, DOD, USDA, and MDA as well as from numerous industry sources. The Department offers an undergraduate Didactic Program and a Dietetic Internship, both accredited by American Dietetic Association. The Virginia Expanded Food and Nutrition Education Program and the Food Stamp Nutrition Education (FSNE) plan are also administered by the department. The department has state of the art laboratories dedicated to research in its mission areas. More information about the department can be found by visiting us on the web at [www.hnfe.vt.edu](http://www.hnfe.vt.edu). Virginia Tech, a land-grant university of the Commonwealth, is located in Blacksburg, adjacent to the scenic Blue Ridge Mountains. The University has a total student enrollment of 25,000, with approximately 2,000 students in the College of Agriculture and Life Sciences. Additional information about Blacksburg, Virginia can be found at <http://www.bev.net>. Qualifications: Desired qualifications include: 1) Earned doctorate in a field related to any of the department's programs, 2) academic records and professional achievement with national and international recognition that supports a tenured appointment to the rank of professor at Virginia Tech, 3) evidence of visionary leadership in supporting and promoting excellence in teaching, research, and extension, 4) effective management of personnel and financial resources, 5) ability to attract external funding, 6) effective organizational and communication skills, and 7) demonstrated ability to foster linkages with other programs and units at the university. Responsibilities: Responsibilities of the Depart-

ment Head include leadership of all department programs and administrative responsibility for visioning, planning, fiscal management and human resources, including recruitment, development, and retention of faculty and staff. The Department Head should provide effective advocacy for the department both within and outside the University and actively support the securing of resources to strengthen and broaden its mission. The department seeks an individual who will foster excellence in teaching, research, and extension, and encourage a positive, collegial climate and participatory decision-making process within the department. Application: The Committee will begin screening applicants on November 8, 2004 and will continue receiving applications until the position is filled. Applicants should submit curriculum vitae, the names of five references and a cover letter summarizing the applicant's administrative philosophy and vision for the position, along with a summary of their leadership abilities. Contact: Apply online at <http://www.jobs.vt.edu> (Job Posting #041304). Direct inquires to Dr. Sharron Quisenberry, Dean, College of Agriculture and Life Sciences, Virginia Tech, 104 Hutcheson (0402), Blacksburg, VA 24061; Phone: 540-231-4152; Fax: 540-231-4163; Email: [sharronq@vt.edu](mailto:sharronq@vt.edu). Virginia Tech has a strong commitment to the principle of diversity and, in that spirit, seeks a broad spectrum of candidates including women, minorities, and people with disabilities. Individuals with disabilities desiring accommodations in the application process or needing this material in an alternate format should notify the Personnel Department, 540-231-5301 by the application deadline.

**Tenure Track Faculty Positions:** Applications are invited for state supported, tenure-track faculty positions in the Department of Physiology and Biophysics at the University of Mississippi Medical Center. Applicants will be considered for ranks of Assistant, Associate, or full Professor and must have a PhD and/or MD degree with appropriate postdoctoral research experience. Special consideration will be given to candidates with strong backgrounds in one or more of the following areas: 1) obesity and/or diabetes, 2) neurophysiology, 3) cardiac physiology, 4) *in vivo* functional/molecular imaging. We are seeking individuals who have research interests that complement existing areas of excellence in cardiovascular, renal, and neuroendocrine physiology, and the pathophysiology of metabolic and cardiovascular diseases. The successful candidate is expected to develop a nationally recognized research program supported by extramural funding and participate in the teaching and service missions of the department. The large group of cardiovascular and renal scientists in the Department and in the Center of Excellence in Cardiovascular-Renal Research offer excellent opportunities for collaboration at molecular, cellular, or systems levels of integration. Additional information about the department can be found at our web site: <http://physiology.ums.edu/>. Applicants should send a curriculum vitae, a statement of research plans, previous and current extramural research funding, and the names of at least three references to: Dr. John E. Hall, Department of Physiology and Biophysics, University of Mississippi Medical Center, Jackson, MS 39216-4505; Email: [jehall@physiology.umsmed.edu](mailto:jehall@physiology.umsmed.edu). [EEO, M/F/D/V].

## Two Faculty Positions in Physiology and/or Neurobiology:

The Department of Physiology and Neurobiology at the University of Connecticut, Storrs, invites applications for two tenure track faculty positions available in Fall 2005 at the Assistant, Associate, or Full Professor level. The successful candidate will be expected to maintain an independent and vigorous research program, and participate in the Department's graduate and undergraduate teaching. Candidates in all areas of Physiology and/or Neurobiology will be fully considered. We encourage applications from individuals who use imaging technology to study fundamental physiological or neural processes at the molecular, cellular or systems level. Applicants must possess a PhD or equivalent, and have completed at least two years of postdoctoral training. Candidates for Associate or Full Professor are expected to have a currently funded and active research program. Review of candidates will begin on **October 1, 2004** and the search will continue until the positions are filled. Send curriculum vitae, a brief summary of current research with a statement of research directions, a statement of teaching interests, and the names of at least three references to: Chair, PNB Search Committee, University of Connecticut, Department of Physiology & Neurobiology, Box U-4156, 3107 Horsebarn Hill Road, Storrs, CT 06269-4156. <http://www.pnb.uconn.edu>. ❖

## Advertise your job vacancy to over 10,000 members and subscribers!

Ads are accepted for either positions available or positions wanted under all categories. The charge is only \$75. All ads are also posted on the APS Career Opportunity Web page upon receipt for a three month period.

If you would like to have your ad listed in *The Physiologist* or on the APS Career Opportunities Web page (<http://www.the-aps.org/careers/careers1/posavail.htm>),

the following items are needed: a copy of the ad, the name of a contact person, and either a purchase order number, credit card number (with expiration date and name of cardholder) or billing address. Send the information to Linda Dresser (Email: [ldresser@the-aps.org](mailto:ldresser@the-aps.org); Tel: 301-634-7165; Fax: 301-634-7241).

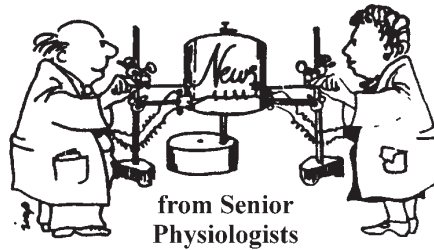
## Letter to Felix Bronner

**Glen Hatton** writes: "Thank you for the invitation to join my fellow 'old guys' and write a piece for 'Senior Physiologists' News.' I have enjoyed reading many of the contributions that have appeared in that section of *The Physiologist* in recent years.

"To be (retired) or not to be (retired) is an interesting question, perhaps, for some. As for me, I have it both ways. When the University of California, Riverside recruited me to start a new Department of Neuroscience in 1992, I had already completed my 27th year on the faculty of Michigan State University (my first job) and was, therefore, eligible to retire from that institution. Taking emeritus status, I reasoned, was a way to raise the likelihood that I would keep in touch with my long time friends and colleagues and with an institution of which I was also quite fond, although not fond enough to pass up such a unique career opportunity. And I have kept in touch with the Michigan State University in several ways that might not have been as open to me if I had simply resigned my position there. I have been invited back to present seminars and to attend a wide variety of functions, including departmental anniversary celebrations, festschrifts, retirement parties, and annual luncheons for distinguished faculty. One can, of course, only accept a fraction of such invitations, especially from a distance of 2000 miles.

"Changing jobs at a rather late stage in one's career may not be recommended for everyone, as it can have myriad effects on one's outlook, I suppose. For me it was energizing and a bit like starting over, with the fresh viewpoint that is implied by that phase. All at once I was hiring new junior faculty, which is one of the more important and exciting things we do for our institutions in academia. Then there was a variety of pressing needs that demanded attention: design a new graduate program, develop new courses, get involved in the politics of a campus and a complex university system that were completely new to me, etc.

"After nearly twelve years of developing and expanding the department



from no one but me to eighteen members, in the autumn of 2002 I stepped down from the chairmanship and returned to my professorial position. This, too, was exhilarating because for once in twelve years I could focus on just those things that I wanted to do. One item in that category was to increase my intimate involvement in my laboratory. Having to write a renewal application for my NIH research grant at that time insured that this process would take place. At some point in a long research career, one has to face the prospect that competition for federal funding may no longer be available for one's proposed projects, and to deal with the implications of that outcome for one's future.

"Happily, my renewal application was funded for the time I requested and my research grant began year 34 in January 2004 (not quite as venerable as that reported by Dave Prince in this section of the December 2003 issue of *The Physiologist*). It would be hard to overestimate the importance of this continuous NIH funding on my research program. Bringing this grant to its current point has involved the hard work and concerted efforts of a number of people over the years. For most of them and certainly for me, the research outcomes under this support have been a major source of personal and professional satisfaction and worth all of the effort.

"So, with NIH funding through the end of 2007, I'm fully engaged in research on things hypothalamic, both the neurophysiology of neuroendocrine cells and interactions between neurons and non-neuronal cell types in the mammalian central nervous system. A young colleague (whom I hired when I was chair) and I have just finished editing a book, in a hot, newly burgeoning area, entitled *Glial Neuronal Signaling*, which was published in May of 2004. It is gratifying,

also, that despite nearing the conclusion of my seventh decade (which will come in December, 2004), invitations to present seminars and to attend international meetings as an invited speaker continue to be a part of my academic life. It is always a special pleasure to see one's former trainees at these meetings and to see how well they are getting on in their careers.

"To round out the report on my activities, I continue to teach at both the graduate and undergraduate levels. In fact, I just last fall organized a new graduate laboratory course in neuroscience. As I look back over my life in academe, it seems that interactions with students, whose ages remain roughly constant while the gap widens between theirs and mine, have been a significant factor in my being able to maintain a fresh and usually optimistic view of the world. To my way of thinking, there are two prongs to the secret of retarding the (mental) aging process: think young and don't mellow."

## Letter to Alan Hofmann

**Johannes Piiper** writes: "I thank you for your kind letter and I am sorry to be late in answering. Your letter stimulated me to write a personal-subjective 'curriculum vitae' that could be of interest to my friends-colleagues.

"To answer your specific questions: I have been planning to write some review-type papers but have given it up (as I believe others will do a better job). I have not continued experimental work. My most important contribution could have been to promote international cooperation by inviting scientists to work in my laboratory and to participate in symposia in Gottingen.

"I owe much to my US colleagues and friends, particularly to my teacher Hermann Rahn for stimulation, encouragement and support. In La Jolla, I have been visiting many times, with John West, Peter Wagner, Frank Powell, Fred White, and other, and meeting Pete Scholander, A.B. Hastings, and Ben Zweifach. La Jolla is a wonderful place, my favorite spot is the Torrey Pines nature reserve." ❖

**Francisco H. Andrade** has affiliated with the Department of Physiology, University of Kentucky, Lexington, KY. Formerly, Andrade was associated with the Department of Neurology, Case Western Reserve University, Cleveland, OH.

**Bradley T. Andresen** is currently a Research Instructor, Department of Pediatrics, Division of Nephrology, Georgetown University, Washington, DC. Andresen was formerly a Postdoctoral Fellow, Oral and Pharyngeal Branch, NIDCR, NIH, Bethesda, MD.

**Robert C. Backus** has joined the Department of Veterinary Medicine & Surgery, University of Missouri, Columbus, MO, as Director, Small Animal Nutrition Program. Backus had been affiliated with the Department of Molecular Bioscience, University of California-Davis, School of Veterinary Medicine, Davis, CA.

**Kenneth S. Campbell** is presently Assistant Professor, Department of Physiology, University of Kentucky, Lexington, KY. Campbell was previously affiliated with the Department of Physiology, University of Wisconsin-Madison, Madison, WI.

**George J. Christ** has recently affiliated with the Department of Urology, Physics, and Pharmacology, Wake Forest University, Winston-Salem, NC. Prior to his new position, Christ had been associated with the Departments of Urology, Physiology, and Biophysics, Albert Einstein College of Medicine, Bronx, NY.

**Richard Debigare** is currently associated with the Department of Rehabilitation, Laval University, Quebec City, Canada. Debigare was previously affiliated with the Renal Division, Emory University, Atlanta, GA, as a Postdoctoral Fellow.

**Victor J. Dzau** has accepted the position of Chancellor for Health Affairs, Duke University Medical Center and Health System, Durham, NC. Dzau had been Hershey Professor, Theory and Practice Medicine and Chairman, Department of Medicine, Brigham &

Women's Hospital, Harvard Medical School, Boston, MA.

**Igor Efimov** recently joined the Biomedical Engineering Department, Washington University, St. Louis, MO. Formerly, Efimov had been associated with the Department of Cardiology, Case Western Reserve University, Cleveland, OH.

**Angelina Yin Fong** is currently affiliated with the Dalton Cardiovascular Research Center, University of Missouri, Columbia, MO. Fong was formerly with the Department of Physiology, Wayne State University, Detroit, MI.

**Jefferson C. Frisbee** has joined the Center for Interdisciplinary Research in Cardiovascular Sciences, West Virginia University, Morgantown, WV. Frisbee was formerly with the Department of Physiology, Medical College of Wisconsin, Milwaukee, WI.

**Masataka Fukue** has affiliated with Shonai Amarume Hospital, as Assistant Director, Department of Surgery, Higashitagawa, Yamagata, Japan. Fukue was previously associated with Ryugasaki Saiseikai Hospital, as an Instructor in the Department of Surgery, Ryugasaki, Ibaraki, Japan.

**Paul Andrew Gray** is currently a member of the Dana Farber Cancer Institute, Harvard School of Medicine, Boston, MA. Gray had been associated with the Department of Neurobiology, UCLA, Los Angeles, CA.

**Norman R. Harris** is now affiliated with the Department of Physiology, Louisiana State University Health Science Center, Shreveport, LA. Harris had been associated with the Department of Bioengineering, Pennsylvania State University, University Park, PA.

**Amy Lynn Johnson** has recently acquired a new surname as well as a new address. Johnson's surname was formerly Hakeman. Johnson has moved to the Department of Biology, Culver-Stockton College, Canton, MO. Johnson was previously affiliated with the Department of Health, Physical

Education and Sport Science, St. Ambrose University, Davenport, IA.

**Steven P. Jones** has accepted a position with the Division of Cardiology, University of Louisville, Louisville, KY. Prior to his new appointment, Jones was associated with the Department of Cardiology, Johns Hopkins University, Baltimore, MD.

**Andrew P. Krivoshik** has joined Abbott Laboratories, Global Pharmaceutical Research and Development as Assistant Medical Director, Physician Development Program, Abbott Park, IL. Krivoshik formerly had been associated with the Department of Pediatric Hematology and Oncology, Duke University Medical Center, Durham, NC.

**Yifan Li** is currently Assistant Professor, Division of Basic Biomedical Sciences, University of South Dakota School of Medicine, Vermillion, SD. Li had been affiliated with the Department of Physiology and Biophysics, University of Nebraska Medical Center, Omaha, NE.

**Pamela G. Lloyd** has accepted a position with the Department of Cellular & Integrative Physiology, Indiana University, Indianapolis, IN. Lloyd had been affiliated with the Department of Medicine, Pharmacology & Physiology, University of Missouri, Columbia, MO.

**Rong Ma** has recently associated with the Department of Integrative Physiology, University of Texas Health Science Center, Fort Worth, TX. Ma was formerly affiliated with the Department of Cell Biology, University of Oklahoma Health Science Center, Oklahoma City, OK.

**Matthias Nahrendorf** has joined Harvard Medical School, CMIR Mass General Hospital, Charlestown, MA. Prior to his new appointment, Nahrendorf was affiliated with the Department of Cardiology, Universitat Wurzburg, Wurzburg, Germany.

**Shridhar Narayanan** accepted the position of General Manager of Biological Research, Glenmark

Pharmaceutical Ltd., Glenmark Research Center, Navi Mumbai, India. Narayanan was previously affiliated with the Department of Pharmacology, Quest Institute of Life Science, Mumbai, India.

**Ricardo Fernandez Perez** joined the Department of Surgery, Yale University School of Medicine, Yale University School of Medicine, New Haven, CT. Perez moved from the Department of Fisologia, Setor Ciencias Bio-Ctro Politecnico, Curitiba, Brazil.

**Blake B. Rasmussen** recently joined the Department of Physical Therapy, University of Texas Medical Branch, Galveston, TX. Rasmussen previously was associated with the Department of Kinesiology, USC, University Park, Los Angeles, CA.

**Thomas Jay Roberts** recently affiliated with the Department of Ecology

and Environmental Biology, Brown University, Providence, RI. Roberts moved from the Department of Zoology, Oregon State University, Corvallis, OR.

**Gary Russo** has joined the Cleveland Clinic Foundation, Cleveland, OH., as Associate Staff. Previously, Russo had been with the Department of Neurology, Emory University, Atlanta, GA.

**Marlowe J. Schneidkraut** recently joined Fujisawa Healthcare as Assistant Director, Biology & Pharmaceutical Sciences, Deerfield, IL. Schneidkraut was formerly Research Manager, Pharmacology and Toxicology, NeoRx Corporation, Seattle, WA.

**Eugene W. Shek**, Research Health Scientist is now associated with the Department of Pharmacological Sciences, Texas Tech University Health

Science Center, Amarillo, TX. Formerly, Shek was formerly affiliated with the VA Medical Center, as a Research Health Scientist, Gainesville, FL.

**Theodore J. Torphy** recently joined Johnson & Johnson as Corporate Vice President for Science & Technology, and Chief Scientific Officer, New Brunswick, NJ. Torphy was previously associated with the Department of Pharmacology, Centocor Inc., Malvern, PA.

**Kazuhiro Yamaguchi** has attained a new position as Vice Director, Department of Medicine, Sano Kosei General Hospital, Tochigi, Japan. Yamaguchi was formerly an Associate Professor, Department of Medicine, Keio University School of Medicine, Tokyo, Japan. ♦

## Books Received

*Electromyography: Physiology, Engineering, and Noninvasive Applications.*

Roberto Merletti and Philip A. Parker.

Piscataway, NJ: IEEE Press, 2004, 494 pp., illus., index, \$99.95. ISBN: 0-471-67580-6.

*Nutritional Aspects of Osteoporosis.* 2nd Edition.

Peter Burckhardt, Bess Dawson-Hughes, and Robert P. Heaney

(Editors).

New York: Elsevier Academic Press, 2004, 458 pp., illus., index, \$99.95. ISBN: 0-12-141704-2.

*ORI Introduction to the Responsible Conduct of Research.*

Nicholas H. Steneck. Rockville, MD: Health and Human Services Dept., 2004, 164 pp., illus., \$12.00. ISBN: 0-16-072285-3.

*Wall-Fluid Interactions in Physiological Flows.*

M.W. Collins, G. Pontrelli, and M.A. Atherton, (Editors).

Billerica, MA: The Wit Press, 2004, 191 pp., illus., index, \$120.00. ISBN: 1-85312-899-6.

### 15th Annual Neurology for the Primary Practitioner

**Date:** December 18, 2004

**Sponsor:** The Johns Hopkins University School of Medicine

**Location:** Renaissance Harborplace Hotel, Baltimore, MD

This one day-course is intended to update primary care practitioners

regarding common Neurologic problems, with emphases on the practical aspects of diagnosis and management.

This activity has been approved for AMA PRA credit.

**Fees:** \$150 Physicians; \$100 Residents, Fellows and Allied Health Professionals.

**Contact:** Johns Hopkins University School of Medicine, Conference Coordinator, Office of Continuing Medical Education, Turner 20, 720 Rutland Avenue, Baltimore, MD 21205-2195. Tel: 410-955-2959; Fax: 410-955-0807; Email: cmenet@jhmi.edu; <http://www.hopkinscme.net>. ♦

## Robert Bosch Foundation Seeks Fellowship Applicants

The Robert Bosch Foundation recognizes the importance of familiarizing American professionals with the political, economic, and cultural environment of Europe and of the Federal Republic of Germany. To further this goal, the foundation sponsors a fellowship program that enables young American professionals to participate in an intensive work and study program in Germany. Although a prime goal of this program is the advancement of American-German/European

relations, it also contributes to the participants' professional competence and expertise, and broadens their cultural horizons.

The program provides young American professionals (23-34) with executive level internships in the federal government and private sectors in Germany. Seminars in Berlin, Frankfurt/M. and Munich as well as visits to Poland, the Czech Republic, Belgium and France provide an in-depth understanding of issues facing

the European Union and Germany today. Candidates are competitively chosen from the fields of business administration, economics, journalism and mass communications, law, political science and public affairs/public policy.

Applications (<http://www.cdsintl.org/fromusa/bosch.htm>) must be received no later than October 15, 2004 for the program beginning in September 2005. ❖

## 21st Annual Computed Body Tomography 2005: The Cutting Edge

**Date:** February 17-20, 2005

**Sponsor:** The Johns Hopkins University School of Medicine, The Russell H. Morgan Department of Radiology and Radiological Science

**Location:** Disney Yacht and Beach Club Resort, Orlando, FL

This seminar, for the radiologist, will provide a comprehensive review of recent advances in computed body tomography. A series of focused lectures has been designed to concentrate on specific topics in depth. Participants will have the opportunity to expand their knowledge of the latest concepts in multidetector-row CT, CT angiography, the value of high resolution CT in the chest, the uses of CT

in the GI tract, clinical application of musculoskeletal CT, cardiac CT, and PET/CT in oncology. There will be time for questions and discussion. Optional hands-on workstation training will be available.

Participants will expand their knowledge in: the latest concepts in the chest and cardiac CT; the newest applications of multidetector/multislice CT; the clinical applications of CT angiography (CTA); the role of CT in GI pathology, including virtual colonoscopy; the latest concepts in liver and renal imaging; and the use of workstations for CT angiography.

The Johns Hopkins University School of Medicine is accredited by the

Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The Johns Hopkins University School of Medicine takes responsibility for the content, quality and scientific integrity of this CME activity.

**Fees:** \$575 Physicians; \$525 Residents, Fellows and Technologists.

**Contact:** Johns Hopkins University School of Medicine, Conference Coordinator, Office of Continuing Medical Education, Turner 20, 720 Rutland Avenue, Baltimore, MD 21205-2195; Tel: 410-955-2959; Fax: 410-955-0807; Email: [cmenet@jhmi.edu](mailto:cmenet@jhmi.edu); <http://www.hopkinscme.net>. ❖

## Fogarty International Center/Ellison Medical Foundation Awards

Would you like a unique chance to experience clinical research training in a developing country? Would you like to work with a strong team of mentors and colleagues on important problems that advance people's health?

The National Institutes of Health's (NIH) Fogarty International Center (FIC) with support from The Ellison Medical Foundation, is offering a one year clinical research training experience for graduate level US students in the health professions. This is an opportunity for highly motivated individuals to experience mentored research training at top-ranked NIH-funded research centers in developing countries. Africa, Asia and The

Americas are regions of the world that, if accepted, you may find yourself experiencing.

This program is designed primarily for students meeting all of the following qualifications:

A strong interest in, and potential for, a career in international health activities and/or clinical research.

Advanced standing in a US medical or osteopathic school; or enrollment in a doctoral level program at a US school of public health, nursing or dentistry. Applicants must have strong academic records and must be US citizens or permanent US residents. Medical and osteopathic students must have completed their basic science courses and one year of clinical

clerkship; public health doctoral students must have completed their coursework and passed their qualifying exams prior to the beginning of the fellowship.

Support of their home academic institution, including a committed mentor.

Each Fellowship will be for a one year period. The term will begin with an intensive orientation program on the NIH campus in Bethesda, MD in July 2005. This will be followed by approximately 10+ months of intense research training at the foreign site.

To access the application and to learn more, please visit <http://www.aamc.org/overseasfellowship>. Applications are due January 7, 2005. ❖



*November 11-13*

**IV International Symposium on Intraoperative Neurophysiological monitoring in Neurosurgery, New York, NY.** *Information:* Tel.: 212-870-9684; Fax: 212-870-9690; Email: [gespana@bethisraelny.org](mailto:gespana@bethisraelny.org) or [vdeletis@bethisraelny.org](mailto:vdeletis@bethisraelny.org); Internet: <http://www.neurophysiology.org>.

*November 12-14*

**3rd Research Conference on Research Integrity (RCRI), Paradise Point Resort, San Diego, CA.** *Information:* Nicholas H. Steneck, Ph.D. Email: [nsteneck@umich.edu](mailto:nsteneck@umich.edu); Internet: <http://ori.hhs.gov/html/programs/RCRIConf2004.asp>.

*December 10-12*

**37th Annual New York Cardiovascular Symposium: Major Topics in Cardiology Today, Hilton New York, NY.** *Information:* American College of Cardiology Foundation, Attn: Resource Center, PO Box 79231, Baltimore, MD 21279-0231; Tel: 800-253-4636, ext. 694; Fax: 301-897-2623; Internet: <http://www.acc.org>.

*December 13-16*

**1st International Conference on Environmental, Industrial and Applied Microbiology (BioMicro World-2004), Badajoz, Spain.** *Information:* Internet: <http://www.format-ex.org/biomicroworld2004/index.htm>.

## 2005

*February 12-16*

**The Biophysical Society 49th Annual Meeting, Long Beach, CA.** *Information:* Internet: <http://www.biophysics.org>.

*March 9-13*

**7th International Conference AD/PD 2005, Sorrento, Italy.** *Information:* Conference Secretariat, 7th AD/PD 2005, Kenes international, 17 Rue du cendrier, PO Box 1726, CH-1211 Geneva 1, Switzerland. Tel.: +41 22 908 0488; Fax: +41 22 732 2850; Email: [adpd@kenes.com](mailto:adpd@kenes.com); Internet: <http://www.kenes.com/adpd>.

*March 31-April 5*

**35th Congress of the International Union of Physiological Sciences (IUPS), San Diego, CA.** *Information:* Internet: <http://www.iups2005.org>.

*May 9-13*

**The Association Francaise contre les Myopathies Scientific Meeting, Nantes, France.** *Information:* Internet: <http://www.myology2005.com>.

*July*

**4th Meeting of The Mammalian Myocardium, University of Leeds, United Kingdom.** *Information:* Internet: <http://www.leeds.ac.uk/mm2005/>.

*September 11-24, 2005*

**Ninth International Conference on Endothelin (ET-9) Park City, Utah, USA.** The conference involves three days of talks and poster sessions dedicated to furthering understanding of the biologic and pathologic roles of endothelin. Key topics include basic synthesis, receptors, signaling pathways, general and organ-specific pathogenic mechanisms, and application of endothelin antagonists to the treatment of human disease. Approximately 300-400 attendees are anticipated, representing over 20 countries. For details see: <http://www.int.med.utah.edu/et9/>. ♦